Package 'MetaGxOvarian'

November 12, 2024

Type Package

Title Transcriptomic Ovarian Cancer Datasets

Version 1.26.0

Date `r Sys.date()`

Description A collection of Ovarian Cancer Transcriptomic Datasets that are part of the MetaGxData package compendium.

License Artistic-2.0

Depends Biobase, AnnotationHub, ExperimentHub, SummarizedExperiment, R (>= 3.6.0)

Imports stats, lattice, impute

Suggests testthat, xtable, rmarkdown, knitr, BiocStyle, markdown

Encoding UTF-8

VignetteBuilder knitr

NeedsCompilation no

biocViews ExpressionData, ExperimentHub, CancerData, Homo_sapiens_Data, ArrayExpress, GEO, NCI, MicroarrayData, ExperimentData

LazyData yes

RoxygenNote 7.1.1

git_url https://git.bioconductor.org/packages/MetaGxOvarian

git_branch RELEASE_3_20

git_last_commit 01219ab

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Contents

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attention	*days_to_death*

Description

This is a note to inform package users that the days_to_death variable is also valid for living pateints. In this case, the value in days_to_death is the number of days since the last follow-up appointment.

Format

A field included in various data files in the this package.

duplicates	*a list containing the names of patients that are believed to be dulicates across datasets*

Description

The object is a list where each element is a patient ID that is believed to be a duplicate of a patient in another dataset. Patients are designated as duplicated if they have Spearman correlations greater than or equal to 0.98 with other patient expression profiles

Format

A list with 130 elements, each of which is a patient ID.

E.MTAB.386	*Angiogenic mRNA and microRNA gene expression signature predicts a novel subtype of serous ovarian cancer.*

Description

Ovarian cancer is the fifth leading cause of cancer death for women in the U.S. and the seventh most fatal worldwide. Although ovarian cancer is notable for its initial sensitivity to platinum-based therapies, the vast majority of patients eventually develop recurrent cancer and succumb to increasingly platinum-resistant disease. Modern, targeted cancer drugs intervene in cell signaling, and identifying key disease mechanisms and pathways would greatly advance our treatment abilities. In order to shed light on the molecular diversity of ovarian cancer, we performed comprehensive transcriptional profiling on 129 advanced stage, high grade serous ovarian cancers. We implemented a, re-sampling based version of the ISIS class discovery algorithm (rISIS: robust ISIS) and applied it to the entire set of ovarian cancer transcriptional profiles. rISIS identified a previously undescribed patient stratification, further supported by micro-RNA expression profiles, and gene set enrichment analysis found strong biological support for the stratification by extracellular matrix, cell adhesion, and angiogenesis genes. The corresponding "angiogenesis signature" was validated in ten published independent ovarian cancer gene expression datasets and is significantly associated with overall survival. The subtypes we have defined are of potential translational interest as they may be relevant for identifying patients who may benefit from the addition of anti-angiogenic therapies that are now being tested in clinical trials.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Bentink S, Haibe-Kains B, Risch T, Fan J-B, Hirsch MS, Holt
  Laboratory: Bentink, Matulonis 2012
  Contact information:
  Title: Angiogenic mRNA and microRNA gene expression signature predicts a novel
  URL:
  PMIDs: 22348002

  Abstract: A 212 word abstract is available. Use 'abstract' method.
```

```
   Information is available on: preprocessing
   notes:
    platform_title:
       Illumina humanRef-8 v2.0 expression beadchip
    platform_shorttitle:
       Illumina humanRef-8 v2.0
    platform_summary:
       illuminaHumanv2
    platform_manufacturer:
       Illumina
    platform_distribution:
       commercial
    platform_accession:
       GPL6104
    version:
       2015-09-22 19:06:44

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: ILMN_1343291 ILMN_1651228 ... ILMN_1815951 (12449
    total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 12449 features, 129 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

      n   events  median 0.95LCL 0.95UCL
 129.00   73.00    3.51    2.68    4.13


---------------------------
Available sample meta-data:
---------------------------

unique_patient_ID:
  DFCI.1  DFCI.10 DFCI.100 DFCI.101 DFCI.102 DFCI.103 DFCI.104 DFCI.105
       1        1        1        1        1        1        1        1
DFCI.106 DFCI.107 DFCI.108 DFCI.109  DFCI.11 DFCI.110 DFCI.111 DFCI.112
       1        1        1        1        1        1        1        1
DFCI.113 DFCI.114 DFCI.115 DFCI.116 DFCI.117 DFCI.118 DFCI.119  DFCI.12
       1        1        1        1        1        1        1        1
DFCI.120 DFCI.121 DFCI.122 DFCI.123 DFCI.124 DFCI.125 DFCI.126 DFCI.127
       1        1        1        1        1        1        1        1
DFCI.128 DFCI.129  DFCI.13 DFCI.130 DFCI.131 DFCI.132  DFCI.14  DFCI.15
       1        1        1        1        1        1        1        1
 DFCI.16  DFCI.17  DFCI.18  DFCI.19   DFCI.2  DFCI.20  DFCI.21  DFCI.22
       1        1        1        1        1        1        1        1
 DFCI.23  DFCI.24  DFCI.25  DFCI.26  DFCI.27  DFCI.28  DFCI.29   DFCI.3
```

```
       1         1         1         1         1         1         1         1
  DFCI.30   DFCI.31   DFCI.32   DFCI.33   DFCI.34   DFCI.35   DFCI.36   DFCI.37
       1         1         1         1         1         1         1         1
  DFCI.38   DFCI.39    DFCI.4   DFCI.40   DFCI.41   DFCI.42   DFCI.44   DFCI.45
       1         1         1         1         1         1         1         1
  DFCI.46   DFCI.47   DFCI.48   DFCI.49   DFCI.50   DFCI.51   DFCI.52   DFCI.53
       1         1         1         1         1         1         1         1
  DFCI.54   DFCI.55   DFCI.56   DFCI.57   DFCI.58   DFCI.59    DFCI.6   DFCI.60
       1         1         1         1         1         1         1         1
  DFCI.61   DFCI.62   DFCI.63   DFCI.64   DFCI.65   DFCI.66   DFCI.67   DFCI.68
       1         1         1         1         1         1         1         1
  DFCI.69    DFCI.7   DFCI.70   (Other)
       1         1         1        30
```

```
sample_type:
tumor
  129
```

```
histological_type:
ser
129
```

```
primarysite:
 ov
129
```

```
summarygrade:
high
 129
```

```
summarystage:
early  late
    1   128
```

```
tumorstage:
  2   3   4
  1 109  19
```

```
substage:
   a    b    c NA's
   5   12   93   19
```

```
age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  21.00   50.00   66.00   60.71   72.00   95.00
```

```
days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
    3.9   516.9   917.1  1007.0  1401.0  2724.0
```

```
vital_status:
deceased    living
```

```
      73        56

debulking:
   optimal suboptimal        NA's
          98          28          3

uncurated_author_metadata:
```

```
                                                        Source.Name: DFCI-100//

                                                            Source.Name: DF

                                                          Source.Name: DFC

                                                  Source.Name: DFCI-103

                                                 Source.Name: DFCI-104/

                                                Source.Name: DFCI-105//

                                                 Source.Name: DFCI-106/

                                                 Source.Name: DFCI-107/

                                                  Source.Name: DFCI-108

                                                Source.Name: DFCI-109//

                                                    Source.Name: DFCI-

                                                  Source.Name: DFCI-11

                                                Source.Name: DFCI-111//

                                                  Source.Name: DFCI-112

                                                  Source.Name: DFCI-113

                                                    Source.Name: DFCI

                                                 Source.Name: DFCI-115/

                                                Source.Name: DFCI-116//

                                                  Source.Name: DFCI-11

Source.Name: DFCI-118///Characteristics.Age.: Age <has_measurement <Measurement

                                                   Source.Name: DFCI-119

                                                   Source.Name: DFCI-11

     Source.Name: DFCI-120///Characteristics.Age.: Age <has_measurement <Measureme
```

Source.Name: DFCI-12

Source.Name: DFCI

Source.Name: DFCI-123/

Source.Name: DFCI-12

Source.Name: DFCI-1

Source.Name: DFC

Source.Name: DFCI-127///Characteristics.Age.: Age <has_measurement <Measure

Source.Name: DFCI-12

Source.Name: DFCI-129///Characteristics.Age.: Age <has_measurement <Measureme

Source.Name: DFCI-1

Source.Name: DFCI-130///Characteristics.Age.: Age <has_measurement <Measurement

Source.Name: DFCI-131///Characteristics.Age.: Age <has_measurement <Measur

Source.Name: DFCI-132///Characteristics.Age.: Age <has_measurement <Measurement

Source.Name: DFCI-1

Source.Name: DFCI-

Source.Name: DF

Source.Name: D

Source.Name: DFCI-1

Source.Name: DFCI-1

Source.Name: DFCI-1

Source.Name:

Source.Name: DFCI-2

Source.Name: DF

Source.Name: DFCI-22///Characteristics.Age.: Age <has_measurement <Measurem

Source.Name: DFCI-23

Source.Name: DFCI-24//

```
Source.Name: DFCI-25

    Source.Name: DFCI

Source.Name: DFCI-2

    Source.Name: DFC

Source.Name: DFCI-2

    Source.Name: DFC

    Source.Name: DFCI

Source.Name: DFCI-3

    Source.Name: DFCI

    Source.Name: DFCI-

    Source.Name: DFCI-

Source.Name: DFCI-3

        Source.Name: DF

Source.Name: DFCI-3

Source.Name: DFCI-38

Source.Name: DFCI-39

        Source.Name: DF

    Source.Name: DFCI-4

    Source.Name: DFCI-

    Source.Name: DFCI-

    Source.Name: DFCI-

        Source.Name: DF

Source.Name: DFCI-4

    Source.Name: DFCI-

        Source.Name: DF

    Source.Name: DFCI
```

Source.Name: DF

Source.Name: DFCI-

Source.Name: DFCI-51

Source.Name: DFCI-5

Source.Name: DFCI-53

Source.Name: DFCI-54

Source.Name: DFCI-

Source.Name: DFCI-56

Source.Name: DFCI-5

Source.Name: DFCI-

Source.Name: DFCI

Source.Name: DFCI

Source.Name: DFC

Source.Name: DFCI-62///Characteristics.Age.: Age <has_measurement <Measure

Source.Name: DFC

Source.Name: DFCI

Source.Name: DFCI-65

Source.Name: DFC

Source.Name: DF

Source.Name: DFCI-6

Source.Name: DFCI-6

Source.Name:

Source.Name: DFCI-

Source.Name: DFCI

Value

An expression set

GSE12418   *Expression analysis of stage III serous ovarian adenocarcinoma dis-*
                            tinguishes a sub-group of survivors.

Description

It is difficult to predict the clinical outcome for patients with ovarian cancer. However, the use
of biomarkers as additional prognostic factors may improve the outcome for these patients. In or-
der to find novel candidate biomarkers, differences in gene expressions were analysed in 54 stage
III serous ovarian adenocarcinomas with oligonucleotide microarrays containing 27,000 unique
probes. The microarray data was verified with quantitative real-time polymerase chain reaction for
the genes TACC1, MUC5B and PRAME. Using hierarchical cluster analysis we detected a sub-
group that included 60% of the survivors. The gene expressions in tumours from patients in this
sub-group of survivors were compared with the remaining tumours, and 204 genes were found to
be differently expressed. We conclude that the sub-group of survivors might represent patients
with favourable tumour biology and sensitivity to treatment. A selection of the 204 genes might
be used as a predictive model to distinguish patients within and outside of this group. Alternative
chemotherapy strategies could then be offered as first-line treatment, which may lead to improve-
ments in the clinical outcome for these patients.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Partheen K, Levan K, Osterberg L, Horvath G.Expression anal
  Laboratory: Partheen, Horvath 2006
  Contact information:
  Title: Expression analysis of stage III serous ovarian adenocarcinoma distingu
  URL:
  PMIDs: 16996261

  Abstract: A 177 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      SWEGENE H_v2.1.1_27k
   platform_shorttitle:
      SWEGENE H_v2.1.1_27k
   platform_summary:
      PartheenMetaData
   platform_manufacturer:
      other
   platform_distribution:
      non-commercial
   platform_accession:
      GPL5886
   version:
```

```
      2015-09-22 19:07:14

  featureData(eset):
  An object of class 'AnnotatedDataFrame'
    featureNames: 28 29 ... 29999 (11304 total)
    varLabels: probeset gene EntrezGene.ID best_probe
    varMetadata: labelDescription
```

Details

```
  assayData: 11304 features, 54 samples
  Platform type:
  --------------------------
  Available sample meta-data:
  --------------------------

  alt_sample_name:
  1035LA0  1047LB 1059LB0  1177DB 1178LB0  1180DB 1186DB0   123DC 1242LC0  1274LC
        1       1       1       1       1       1       1       1       1       1
    134LC  1426LB  1487DB  1528DC  1538DC  1567DB  1568DC 1574LC0   164DC  1658DC
        1       1       1       1       1       1       1       1       1       1
   1760LB  1805DB   193DC   198DC   202DC   211DC    26DC   272DC   405LB   436DC
        1       1       1       1       1       1       1       1       1       1
    452DC   454LC   45LA0   462DB   46LB0    47DC   480DC0   489DC   505DB   541DC
        1       1       1       1       1       1       1       1       1       1
    559DC   563LA   626DC   662DC   719DC  742LC0   755LC   759DC    76DC   789DC
        1       1       1       1       1       1       1       1       1       1
     83LC  918DB0  988LC0   99LC0
        1       1       1       1

  sample_type:
  tumor
     54

  histological_type:
  ser
   54

  primarysite:
  ov
  54

  summarystage:
  late
    54

  tumorstage:
   3
  54

  substage:
   b   c
```

```
19 35

age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  35.00   51.25   59.50   59.56   69.75   84.00

pltx:
 y
54

os_binary:
 long short
   20    34

debulking:
   optimal suboptimal
        13         41

uncurated_author_metadata:
title: 1035LA0///geo_accession: GSM311973///status: Public on Aug 12 2008///subm

     title: 1047LB///geo_accession: GSM311974///status: Public on Aug 12 2008///s

title: 1059LB0///geo_accession: GSM311975///status: Public on Aug 12 2008///subm

          title: 1177DB///geo_accession: GSM311976///status: Public on Aug 12 2

title: 1178LB0///geo_accession: GSM311977///status: Public on Aug 12 2008///subm

          title: 1180DB///geo_accession: GSM311978///status: Public on Aug 12 2

       title: 1186DB0///geo_accession: GSM311979///status: Public on Aug 12 2008

            title: 123DC///geo_accession: GSM311945///status: Public on Aug 12

  title: 1242LC0///geo_accession: GSM311980///status: Public on Aug 12 2008///sub

      title: 1274LC///geo_accession: GSM311981///status: Public on Aug 12 2008///

       title: 134LC///geo_accession: GSM311946///status: Public on Aug 12 2008///

    title: 1426LB///geo_accession: GSM311982///status: Public on Aug 12 2008///s

           title: 1487DB///geo_accession: GSM311983///status: Public on Aug 12 2

            title: 1528DC///geo_accession: GSM311984///status: Public on Aug 12

            title: 1538DC///geo_accession: GSM311985///status: Public on Aug 12

          title: 1567DB///geo_accession: GSM311986///status: Public on Aug 12 2

           title: 1568DC///geo_accession: GSM311987///status: Public on Aug 12
```

```
title: 1574LC0///geo_accession: GSM311988///status: Public on Aug 12 2008///sub
          title: 164DC///geo_accession: GSM311947///status: Public on Aug 12
         title: 1658DC///geo_accession: GSM311989///status: Public on Aug 12
     title: 1760LB///geo_accession: GSM311990///status: Public on Aug 12 2008///s
          title: 1805DB///geo_accession: GSM311991///status: Public on Aug 12 2
          title: 193DC///geo_accession: GSM311948///status: Public on Aug 12
          title: 198DC///geo_accession: GSM311949///status: Public on Aug 12
          title: 202DC///geo_accession: GSM311950///status: Public on Aug 12
          title: 211DC///geo_accession: GSM311951///status: Public on Aug 12
           title: 26DC///geo_accession: GSM311938///status: Public on Aug 12
          title: 272DC///geo_accession: GSM311952///status: Public on Aug 12
      title: 405LB///geo_accession: GSM311953///status: Public on Aug 12 2008///s
          title: 436DC///geo_accession: GSM311954///status: Public on Aug 12
          title: 452DC///geo_accession: GSM311955///status: Public on Aug 12
       title: 454LC///geo_accession: GSM311956///status: Public on Aug 12 2008///
   title: 45LA0///geo_accession: GSM311939///status: Public on Aug 12 2008///subm
          title: 462DB///geo_accession: GSM311957///status: Public on Aug 12 2
   title: 46LB0///geo_accession: GSM311940///status: Public on Aug 12 2008///subm
           title: 47DC///geo_accession: GSM311941///status: Public on Aug 12
       title: 480DC0///geo_accession: GSM311958///status: Public on Aug 12 200
          title: 489DC///geo_accession: GSM311959///status: Public on Aug 12
          title: 505DB///geo_accession: GSM311960///status: Public on Aug 12 2
          title: 541DC///geo_accession: GSM311961///status: Public on Aug 12
          title: 559DC///geo_accession: GSM311962///status: Public on Aug 12
      title: 563LA///geo_accession: GSM311963///status: Public on Aug 12 2008///s
          title: 626DC///geo_accession: GSM311964///status: Public on Aug 12
```

```
                    title: 662DC///geo_accession: GSM311965///status: Public on Aug 12

                    title: 719DC///geo_accession: GSM311966///status: Public on Aug 12

        title: 742LC0///geo_accession: GSM311967///status: Public on Aug 12 2008///sub

            title: 755LC///geo_accession: GSM311968///status: Public on Aug 12 2008///

                    title: 759DC///geo_accession: GSM311969///status: Public on Aug 12

                     title: 76DC///geo_accession: GSM311942///status: Public on Aug 12

                    title: 789DC///geo_accession: GSM311970///status: Public on Aug 12

            title: 83LC///geo_accession: GSM311943///status: Public on Aug 12 2008///

                title: 918DB0///geo_accession: GSM311971///status: Public on Aug 12 2008

        title: 988LC0///geo_accession: GSM311972///status: Public on Aug 12 2008///sub

            title: 99LC0///geo_accession: GSM311944///status: Public on Aug 12 2008///sub
```

Value

An expression set

GSE12470	*Gene expression profiling of advanced-stage serous ovarian cancers distinguishes novel subclasses and implicates ZEB2 in tumor progression and prognosis.*

Description

To elucidate the mechanisms of rapid progression of serous ovarian cancer, gene expression profiles from 43 ovarian cancer tissues comprising eight early stage and 35 advanced stage tissues were carried out using oligonucleotide microarrays of 18,716 genes. By non-negative matrix factorization analysis using 178 genes, which were extracted as stage-specific genes, 35 advanced stage cases were classified into two subclasses with superior (n = 17) and poor (n = 18) outcome evaluated by progression-free survival (log rank test, P = 0.03). Of the 178 stage-specific genes, 112 genes were identified as showing different expression between the two subclasses. Of the 48 genes selected for biological function by gene ontology analysis or Ingenuity Pathway Analysis, five genes (ZEB2, CDH1, LTBP2, COL16A1, and ACTA2) were extracted as candidates for prognostic factors associated with progression-free survival. The relationship between high ZEB2 or low CDH1 expression and shorter progression-free survival was validated by real-time RT-PCR experiments of 37 independent advanced stage cancer samples. ZEB2 expression was negatively correlated with CDH1 expression in advanced stage samples, whereas ZEB2 knockdown in ovarian adenocarcinoma SKOV3 cells resulted in an increase in CDH1 expression. Multivariate analysis showed that

high ZEB2 expression was independently associated with poor prognosis. Furthermore, the prognostic effect of E-cadherin encoded by CDH1 was verified using immunohistochemical analysis of an independent advanced stage cancer samples set (n = 74). These findings suggest that the expression of epithelial-mesenchymal transition-related genes such as ZEB2 and CDH1 may play important roles in the invasion process of advanced stage serous ovarian cancer.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Yoshihara K, Tajima A, Komata D, Yamamoto T, Kodama S, Fuji
  Laboratory: Yoshihara, Tanaka 2009
  Contact information:
  Title: Gene expression profiling of advanced-stage serous ovarian cancers dist
  URL:
  PMIDs: 19486012

  Abstract: A 253 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      Agilent-012097 Human 1A Microarray (V2) G4110B (Feature Number version)
   platform_shorttitle:
      Agilent G4110B
   platform_summary:
      hgug4110b
   platform_manufacturer:
      Agilent
   platform_distribution:
      commercial
   platform_accession:
      GPL887
   version:
      2015-09-22 19:08:17

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 3 5 ... 22571 (15999 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 15999 features, 53 samples
Platform type:
--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
Advanced serous ovarian cancer 10 Advanced serous ovarian cancer 11
                                1                                 1
```

Advanced serous ovarian cancer 15	Advanced serous ovarian cancer 17
1	1
Advanced serous ovarian cancer 18	Advanced serous ovarian cancer 2
1	1
Advanced serous ovarian cancer 20	Advanced serous ovarian cancer 23
1	1
Advanced serous ovarian cancer 24	Advanced serous ovarian cancer 25
1	1
Advanced serous ovarian cancer 27	Advanced serous ovarian cancer 36
1	1
Advanced serous ovarian cancer 37	Advanced serous ovarian cancer 38
1	1
Advanced serous ovarian cancer 39	Advanced serous ovarian cancer 42
1	1
Advanced serous ovarian cancer 43	Advanced serous ovarian cancer 45
1	1
Advanced serous ovarian cancer 46	Advanced serous ovarian cancer 49
1	1
Advanced serous ovarian cancer 50	Advanced serous ovarian cancer 51
1	1
Advanced serous ovarian cancer 52	Advanced serous ovarian cancer 53
1	1
Advanced serous ovarian cancer 54	Advanced serous ovarian cancer 55
1	1
Advanced serous ovarian cancer 56	Advanced serous ovarian cancer 57
1	1
Advanced serous ovarian cancer 58	Advanced serous ovarian cancer 6
1	1
Advanced serous ovarian cancer 60	Advanced serous ovarian cancer 61
1	1
Advanced serous ovarian cancer 62	Advanced serous ovarian cancer 64
1	1
Advanced serous ovarian cancer 7	Early serous ovarian cancer 28
1	1
Early serous ovarian cancer 32	Early serous ovarian cancer 33
1	1
Early serous ovarian cancer 35	Early serous ovarian cancer 5
1	1
Early serous ovarian cancer 65	Early serous ovarian cancer 8
1	1
Early serous ovarian cancer 9	Peritoneum normal 12
1	1
Peritoneum normal 15	Peritoneum normal 16
1	1
Peritoneum normal 18	Peritoneum normal 21
1	1
Peritoneum normal 23	Peritoneum normal 3
1	1
Peritoneum normal 30	Peritoneum normal 4
1	1
Peritoneum normal 7	
1	

```
sample_type:
healthy    tumor
     10        43

histological_type:
 ser NA's
  43   10

primarysite:
ov
53

summarystage:
early  late  NA's
     8    35    10

tumorstage:
   1 NA's
   8    45

uncurated_author_metadata:
  title: Advanced serous ovarian cancer 10///geo_accession: GSM312155///status:

  title: Advanced serous ovarian cancer 11///geo_accession: GSM312141///status:

  title: Advanced serous ovarian cancer 15///geo_accession: GSM312156///status:

  title: Advanced serous ovarian cancer 17///geo_accession: GSM312142///status:

  title: Advanced serous ovarian cancer 18///geo_accession: GSM312143///status:

  title: Advanced serous ovarian cancer 20///geo_accession: GSM312144///status:

  title: Advanced serous ovarian cancer 23///geo_accession: GSM312157///status:

  title: Advanced serous ovarian cancer 24///geo_accession: GSM312145///status:

  title: Advanced serous ovarian cancer 25///geo_accession: GSM312146///status:

  title: Advanced serous ovarian cancer 27///geo_accession: GSM312158///status:

            title: Advanced serous ovarian cancer 2///geo_accession: GSM312138//

  title: Advanced serous ovarian cancer 36///geo_accession: GSM312147///status:

  title: Advanced serous ovarian cancer 37///geo_accession: GSM312148///status:

  title: Advanced serous ovarian cancer 38///geo_accession: GSM312149///status:

  title: Advanced serous ovarian cancer 39///geo_accession: GSM312159///status:
```

title: Advanced serous ovarian cancer 42///geo_accession: GSM312160///status:

title: Advanced serous ovarian cancer 43///geo_accession: GSM312150///status:

title: Advanced serous ovarian cancer 45///geo_accession: GSM312161///status:

title: Advanced serous ovarian cancer 46///geo_accession: GSM312162///status:

title: Advanced serous ovarian cancer 49///geo_accession: GSM312151///status:

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title: Advanced serous ovarian cancer 62///geo_accession: GSM312174///status:

title: Advanced serous ovarian cancer 64///geo_accession: GSM312175///status:

title: Advanced serous ovarian cancer 6///geo_accession: GSM312139///status

title: Advanced serous ovarian cancer 7///geo_accession: GSM312140///status

title: Early serous ovarian cancer 28///geo_accession: GSM312180///statu

title: Early serous ovarian cancer 32///geo_accession: GSM312181///statu

title: Early serous ovarian cancer 33///geo_accession: GSM312182///statu

title: Early serous ovarian cancer 35///geo_accession: GSM312183///statu

title: Early serous ovarian cancer 5///geo_accession: GSM312176///sta

title: Early serous ovarian cancer 65///geo_accession: GSM312185///statu

```
                    title: Early serous ovarian cancer 8///geo_accession: GSM312178///sta

                    title: Early serous ovarian cancer 9///geo_accession: GSM312179///sta

                                        title: Peritoneum normal 12///geo_acces

                                        title: Peritoneum normal 15///geo_acces

                                        title: Peritoneum normal 16///geo_acces

                                        title: Peritoneum normal 18///geo_acces

                                        title: Peritoneum normal 21///geo_acces

                                    title: Peritoneum normal 23///geo_accessi

                                      title: Peritoneum normal 30///geo_acces

                                        title: Peritoneum normal 3///geo_acc

                                        title: Peritoneum normal 4///geo_acc

                                        title: Peritoneum normal 7///geo_acc


    duplicates:
    GSE12470.GSE12470_GSM312135 GSE12470.GSE12470_GSM312136
                              1                           1
    GSE12470.GSE12470_GSM312145 GSE12470.GSE12470_GSM312146
                              1                           1
                        NA's
                          49
```

Value

An expression set

GSE13876   *Survival-related profile, pathways, and transcription factors in ovarian cancer.*

Description

Ovarian cancer has a poor prognosis due to advanced stage at presentation and either intrinsic or acquired resistance to classic cytotoxic drugs such as platinum and taxoids. Recent large clinical trials with different combinations and sequences of classic cytotoxic drugs indicate that further significant improvement in prognosis by this type of drugs is not to be expected. Currently a large number of drugs, targeting dysregulated molecular pathways in cancer cells have been developed and are introduced in the clinic. A major challenge is to identify those patients who will benefit from drugs targeting these specific dysregulated pathways.The aims of our study were (1) to develop a

gene expression profile associated with overall survival in advanced stage serous ovarian cancer, (2) to assess the association of pathways and transcription factors with overall survival, and (3) to validate our identified profile and pathways/transcription factors in an independent set of ovarian cancers.According to a randomized design, profiling of 157 advanced stage serous ovarian cancers was performed in duplicate using approximately 35,000 70-mer oligonucleotide microarrays. A continuous predictor of overall survival was built taking into account well-known issues in microarray analysis, such as multiple testing and overfitting. A functional class scoring analysis was utilized to assess pathways/transcription factors for their association with overall survival. The prognostic value of genes that constitute our overall survival profile was validated on a fully independent, publicly available dataset of 118 well-defined primary serous ovarian cancers. Furthermore, functional class scoring analysis was also performed on this independent dataset to assess the similarities with results from our own dataset. An 86-gene overall survival profile discriminated between patients with unfavorable and favorable prognosis (median survival, 19 versus 41 mo, respectively; permutation p-value of log-rank statistic = 0.015) and maintained its independent prognostic value in multivariate analysis. Genes that composed the overall survival profile were also able to discriminate between the two risk groups in the independent dataset. In our dataset 17/167 pathways and 13/111 transcription factors were associated with overall survival, of which 16 and 12, respectively, were confirmed in the independent dataset.Our study provides new clues to genes, pathways, and transcription factors that contribute to the clinical outcome of serous ovarian cancer and might be exploited in designing new treatment strategies.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Crijns AP, Fehrmann RS, de Jong S, Gerbens F, Meersma GJ, K
  Laboratory: Crijns, van der Zee 2009
  Contact information:
  Title: Survival-related profile, pathways, and transcription factors in ovaria
  URL:
  PMIDs: 19192944

  Abstract: A 371 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      Operon human v3 ~35K 70-mer two-color oligonucleotide microarrays
   platform_shorttitle:
      Operon v3 two-color
   platform_summary:
      OperonHumanV3
   platform_manufacturer:
      other
   platform_distribution:
      non-commercial
   platform_accession:
      GPL7759
   version:
      2015-09-22 19:11:43

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1 2 ... 37629 (20939 total)
```

```
    varLabels: probeset gene EntrezGene.ID best_probe
    varMetadata: labelDescription
```

Details

```
assayData: 20939 features, 157 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

      n   events  median 0.95LCL 0.95UCL
 157.00  113.00    2.05    1.56    2.71


--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
 151 NA's
   1  156

unique_patient_ID:
    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
       1      40      79      79     118     157

sample_type:
tumor
  157

histological_type:
ser
157

primarysite:
 ov
157

summarygrade:
high  low NA's
  85   59   13

summarystage:
late
 157

grade:
    1    2    3    4 NA's
   14   45   82    3   13

age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  21.00   50.00   60.00   57.95   67.00   84.00
```

```
days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
     30     360     630    1100    1470    7020

vital_status:
deceased    living
     113        44

uncurated_author_metadata:




        title: Ovarian tumor sample 105 / Ovarian tumor sample 106///geo_accessio



          title: Ovarian tumor sample 10 / Ovarian tumor sample 11///geo_accessi

        title: Ovarian tumor sample 111 / Ovarian tumor sample 112///geo_accessio

        title: Ovarian tumor sample 115 / Ovarian tumor sample 117///geo_accessio




        title: Ovarian tumor sample 126 / Ovarian tumor sample 127///geo_accessio




          title: Ovarian tumor sample 13 / Ovarian tumor sample 14///geo_accessio
```

title: Ovarian tumor sample 165 / Ovarian tumor sample 166///geo_accessio

title: Ovarian tumor sample 193 / Ovarian tumor sample 194///geo_accessio

```
title: Ovarian tumor sample 230 / Ovarian tumor sample 231///geo_accessi
```

```
title: Ovarian tumor sample 237 / Ovarian tumor sample 238///geo_accessio
```

```
title: Ovarian tumor sample 250 / Ovarian tumor sample 251///geo_accession: GSM4
```

```
title: Ovarian tumor sample 258 / Ovarian tumor sample 259///geo_accessio
```

title: Ovarian tumor sample 273 / Ovarian tumor sample 274///geo_accession

title: Ovarian tumor sample 284 / Ovarian tumor sample 285///geo_accession

title: Ovarian tumor sample 313 / Ovarian tumor sample 314///geo_accession

Value

An expression set

GSE14764   *A prognostic gene expression index in ovarian cancer - validation across different independent data sets.*

Description

Ovarian carcinoma has the highest mortality rate among gynaecological malignancies. In this project, we investigated the hypothesis that molecular markers are able to predict outcome of ovarian cancer independently of classical clinical predictors, and that these molecular markers can be validated using independent data sets. We applied a semi-supervised method for prediction of patient survival. Microarrays from a cohort of 80 ovarian carcinomas (TOC cohort) were used for the development of a predictive model, which was then evaluated in an entirely independent cohort of 118 carcinomas (Duke cohort). A 300-gene ovarian prognostic index (OPI) was generated and validated in a leave-one-out approach in the TOC cohort (Kaplan-Meier analysis, p = 0.0087). In a second validation step, the prognostic power of the OPI was confirmed in an independent data set (Duke cohort, p = 0.0063). In multivariate analysis, the OPI was independent of the post-operative residual tumour, the main clinico-pathological prognostic parameter with an adjusted hazard ratio of 6.4 (TOC cohort, CI 1.8-23.5, p = 0.0049) and 1.9 (Duke cohort, CI 1.2-3.0, p = 0.0068). We constructed a combined score of molecular data (OPI) and clinical parameters (residual tumour), which was able to define patient groups with highly significant differences in survival. The integrated analysis of gene expression data as well as residual tumour can be used for optimized assessment of the prognosis of platinum-taxol-treated ovarian cancer. As traditional treatment options are limited, this analysis may be able to optimize clinical management and to identify those patients who would be candidates for new therapeutic strategies.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Denkert C, Budczies J, Darb-Esfahani S, Gy??rffy B et al. A
  Laboratory: Denkert, Lage 2009
  Contact information:
  Title: A prognostic gene expression index in ovarian cancer - validation acros
  URL:
  PMIDs: 19294737

  Abstract: A 254 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [HG-U133A] Affymetrix Human Genome U133A Array
   platform_shorttitle:
      Affymetrix HG-U133A
```

```
    platform_summary:
       hgu133a
    platform_manufacturer:
       Affymetrix
    platform_distribution:
       commercial
    platform_accession:
       GPL96
    version:
       2015-09-22 19:13:08

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
    (20967 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 20967 features, 80 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

      n  events  median 0.95LCL 0.95UCL
  80.00   21.00    4.52    4.19      NA


--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   1.00   20.75   40.50   40.50   60.25   80.00

sample_type:
tumor
   80

histological_type:
      clearcell                 endo             mix            other
              2                    6               1                2
          ser undifferentiated
           68                  1

primarysite:
ov
80

summarygrade:
high  low
```

```
  54   26

summarystage:
early  late
    9    71

tumorstage:
 1  2  3  4
 8  1 69  2

substage:
   a    b    c NA's
   4    6   32   38

grade:
 1  2  3
 3 23 54

recurrence_status:
norecurrence    recurrence           NA's
          50            26              4

days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
    210     660    1050    1011    1328    2190

vital_status:
deceased   living
      21       59

batch:
2004-09-29 2004-09-30 2004-10-01 2005-01-21 2005-01-25 2005-01-26 2005-01-28
         1          2          6          4          7          8         10
2005-03-02 2006-07-26 2006-07-27 2006-07-28 2006-08-11 2006-08-18 2006-08-19
         6          4          6          4         10          3          4
2006-08-21
         5

uncurated_author_metadata:
            title: ovarian cancer: O10///geo_accession: GSM368670///status: Pu
            title: ovarian cancer: O11///geo_accession: GSM368671///status: Pu
          title: ovarian cancer: O12///geo_accession: GSM368672///status: Publ
            title: ovarian cancer: O13///geo_accession: GSM368673///status: Pu
           title: ovarian cancer: O14///geo_accession: GSM368674///status: P
          title: ovarian cancer: O15///geo_accession: GSM368675///status: Pub
         title: ovarian cancer: O16///geo_accession: GSM368676///status: Publi
```

title: ovarian cancer: O17///geo_accession: GSM368677///status: Pu

title: ovarian cancer: O18///geo_accession: GSM368678///status: Pu

title: ovarian cancer: O19///geo_accession: GSM368679///status: Pu

title: ovarian cancer: O1///geo_accession: GSM368661///status: P

title: ovarian cancer: O20///geo_accession: GSM368680///status: P

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title: ovarian cancer: O25///geo_accession: GSM368685///status: Pu

title: ovarian cancer: O26///geo_accession: GSM368686///status: Public on Feb 09

title: ovarian cancer: O27///geo_accession: GSM368687///status: Publ

title: ovarian cancer: O28///geo_accession: GSM368688///status: Publ

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title: ovarian cancer: O41///geo_accession: GSM368701///status: P

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title: ovarian cancer: O4///geo_accession: GSM368664///status: Pu

title: ovarian cancer: O50///geo_accession: GSM368710///status: P

title: ovarian cancer: O51///geo_accession: GSM368711///status:

title: ovarian cancer: O52///geo_accession: GSM368712///status: Pu

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title: ovarian cancer: O54///geo_accession: GSM368714///status: P

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title: ovarian cancer: O57///geo_accession: GSM368717///status:

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title: ovarian cancer: O61///geo_accession: GSM368721///status: P

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title: ovarian cancer: O63///geo_accession: GSM368723///status: P

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                        title: ovarian cancer: O65///geo_accession: GSM368725///status: P

                         title: ovarian cancer: O66///geo_accession: GSM368726///status:

                         title: ovarian cancer: O67///geo_accession: GSM368727///status:

                        title: ovarian cancer: O68///geo_accession: GSM368728///status: P

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                         title: ovarian cancer: O6///geo_accession: GSM368666///status: P

                         title: ovarian cancer: O70///geo_accession: GSM368730///status:

                         title: ovarian cancer: O71///geo_accession: GSM368731///status:

                        title: ovarian cancer: O72///geo_accession: GSM368732///status: P

            title: ovarian cancer: O73///geo_accession: GSM368733///status: Public on F

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                         title: ovarian cancer: O75///geo_accession: GSM368735///status:

                        title: ovarian cancer: O76///geo_accession: GSM368736///status: P

                        title: ovarian cancer: O77///geo_accession: GSM368737///status: P

                         title: ovarian cancer: O78///geo_accession: GSM368738///status:

                         title: ovarian cancer: O79///geo_accession: GSM368739///status:

                        title: ovarian cancer: O7///geo_accession: GSM368667///status: Pu

                         title: ovarian cancer: O80///geo_accession: GSM368740///status:

                        title: ovarian cancer: O8///geo_accession: GSM368668///status: Pu

                        title: ovarian cancer: O9///geo_accession: GSM368669///status: Pu


    duplicates:
  GSE14764.GSE14764_GSM368667 GSE14764.GSE14764_GSM368668
                            1                             1
                          NA's
                           78
```

Value

An expression set

GSE17260   *Gene expression profile for predicting survival in advanced-stage*
                                   serous ovarian cancer across two independent datasets.

Description

Advanced-stage ovarian cancer patients are generally treated with platinum/taxane-based chemotherapy after primary debulking surgery. However, there is a wide range of outcomes for individual patients. Therefore, the clinicopathological factors alone are insufficient for predicting prognosis. Our aim is to identify a progression-free survival (PFS)-related molecular profile for predicting survival of patients with advanced-stage serous ovarian cancer.Advanced-stage serous ovarian cancer tissues from 110 Japanese patients who underwent primary surgery and platinum/taxane-based chemotherapy were profiled using oligonucleotide microarrays. We selected 88 PFS-related genes by a univariate Cox model (p<0.01) and generated the prognostic index based on 88 PFS-related genes after adjustment of regression coefficients of the respective genes by ridge regression Cox model using 10-fold cross-validation. The prognostic index was independently associated with PFS time compared to other clinical factors in multivariate analysis [hazard ratio (HR), 3.72; 95% confidence interval (CI), 2.66-5.43; p<0.0001]. In an external dataset, multivariate analysis revealed that this prognostic index was significantly correlated with PFS time (HR, 1.54; 95% CI, 1.20-1.98; p = 0.0008). Furthermore, the correlation between the prognostic index and overall survival time was confirmed in the two independent external datasets (log rank test, p = 0.0010 and 0.0008).The prognostic ability of our index based on the 88-gene expression profile in ridge regression Cox hazard model was shown to be independent of other clinical factors in predicting cancer prognosis across two distinct datasets. Further study will be necessary to improve predictive accuracy of the prognostic index toward clinical application for evaluation of the risk of recurrence in patients with advanced-stage serous ovarian cancer.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Yoshihara K, Tajima A, Yahata T, Kodama S, Fujiwara H, Suzu
  Laboratory: Yoshihara, Tanaka 2010
  Contact information:
  Title: Gene expression profile for predicting survival in advanced-stage serou
  URL:
  PMIDs: 20300634

  Abstract: A 257 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      Agilent-012391 Whole Human Genome Oligo Microarray G4112A
   platform_shorttitle:
      Agilent G4112A
   platform_summary:
      hgug4112a
```

```
    platform_manufacturer:
       Agilent
    platform_distribution:
       commercial
    platform_accession:
       GPL6848
    version:
       2015-09-22 19:16:49


featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: A_23_P100001 A_23_P100011 ... A_32_P99902 (30936 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 30936 features, 110 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

      n   events  median 0.95LCL 0.95UCL
 110.00   46.00    4.44    4.03      NA


---------------------------
Available sample meta-data:
---------------------------


alt_sample_name:
 Serous ovarian cancer 10 Serous ovarian cancer 100 Serous ovarian cancer 104
                       1                          1                          1
Serous ovarian cancer 106 Serous ovarian cancer 107 Serous ovarian cancer 108
                       1                          1                          1
Serous ovarian cancer 109  Serous ovarian cancer 11 Serous ovarian cancer 110
                       1                          1                          1
Serous ovarian cancer 111 Serous ovarian cancer 112 Serous ovarian cancer 113
                       1                          1                          1
Serous ovarian cancer 114 Serous ovarian cancer 115 Serous ovarian cancer 116
                       1                          1                          1
Serous ovarian cancer 117 Serous ovarian cancer 118 Serous ovarian cancer 119
                       1                          1                          1
 Serous ovarian cancer 12 Serous ovarian cancer 120 Serous ovarian cancer 122
                       1                          1                          1
Serous ovarian cancer 123 Serous ovarian cancer 127 Serous ovarian cancer 129
                       1                          1                          1
Serous ovarian cancer 130 Serous ovarian cancer 131 Serous ovarian cancer 132
                       1                          1                          1
Serous ovarian cancer 134 Serous ovarian cancer 136 Serous ovarian cancer 137
                       1                          1                          1
Serous ovarian cancer 139 Serous ovarian cancer 140 Serous ovarian cancer 143
                       1                          1                          1
```

```
  Serous ovarian cancer 144 Serous ovarian cancer 145 Serous ovarian cancer 146
                         1                         1                         1
  Serous ovarian cancer 148 Serous ovarian cancer 149  Serous ovarian cancer 15
                         1                         1                         1
  Serous ovarian cancer 150 Serous ovarian cancer 151 Serous ovarian cancer 154
                         1                         1                         1
  Serous ovarian cancer 156 Serous ovarian cancer 157  Serous ovarian cancer 16
                         1                         1                         1
  Serous ovarian cancer 160  Serous ovarian cancer 17 Serous ovarian cancer 171
                         1                         1                         1
  Serous ovarian cancer 172 Serous ovarian cancer 173 Serous ovarian cancer 174
                         1                         1                         1
  Serous ovarian cancer 176 Serous ovarian cancer 178  Serous ovarian cancer 18
                         1                         1                         1
  Serous ovarian cancer 182 Serous ovarian cancer 183 Serous ovarian cancer 184
                         1                         1                         1
  Serous ovarian cancer 185 Serous ovarian cancer 186   Serous ovarian cancer 2
                         1                         1                         1
   Serous ovarian cancer 20  Serous ovarian cancer 22  Serous ovarian cancer 23
                         1                         1                         1
   Serous ovarian cancer 25  Serous ovarian cancer 27  Serous ovarian cancer 31
                         1                         1                         1
   Serous ovarian cancer 36  Serous ovarian cancer 37  Serous ovarian cancer 38
                         1                         1                         1
    Serous ovarian cancer 4  Serous ovarian cancer 41  Serous ovarian cancer 42
                         1                         1                         1
   Serous ovarian cancer 43  Serous ovarian cancer 44  Serous ovarian cancer 45
                         1                         1                         1
   Serous ovarian cancer 49  Serous ovarian cancer 50  Serous ovarian cancer 51
                         1                         1                         1
   Serous ovarian cancer 52  Serous ovarian cancer 53  Serous ovarian cancer 54
                         1                         1                         1
   Serous ovarian cancer 55  Serous ovarian cancer 56  Serous ovarian cancer 57
                         1                         1                         1
   Serous ovarian cancer 58   Serous ovarian cancer 6  Serous ovarian cancer 60
                         1                         1                         1
   Serous ovarian cancer 61  Serous ovarian cancer 62  Serous ovarian cancer 64
                         1                         1                         1
   Serous ovarian cancer 66  Serous ovarian cancer 67  Serous ovarian cancer 68
                         1                         1                         1
   Serous ovarian cancer 69   Serous ovarian cancer 7  Serous ovarian cancer 72
                         1                         1                         1
   Serous ovarian cancer 77  Serous ovarian cancer 79  Serous ovarian cancer 80
                         1                         1                         1
                     (Other)
                          11

sample_type:
tumor
  110

histological_type:
```

```
ser
110

primarysite:
 ov
110

summarygrade:
high  low
  43   67

summarystage:
late
 110

tumorstage:
 3  4
93 17

substage:
   a    b    c NA's
   6   18   69   17

grade:
 1  2  3
26 41 43

pltx:
  y
110

tax:
  y
110

days_to_tumor_recurrence:
  Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  30.0   285.0   510.0   673.9   870.0  2250.0

recurrence_status:
norecurrence    recurrence
          34            76

days_to_death:
  Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
    30     660     915    1086    1530    2430

vital_status:
deceased   living
      46       64

debulking:
```

```
    optimal suboptimal
         57         53
```

uncurated_author_metadata:
                                        title: Serous ovarian cancer 100///geo_accession: GS
                                  title: Serous ovarian cancer 104///geo_accession: GSM432
title: Serous ovarian cancer 106///geo_accession: GSM432223///status: Public on
                                  title: Serous ovarian cancer 107///geo_accession: GSM432
      title: Serous ovarian cancer 108///geo_accession: GSM432225///status: Public
  title: Serous ovarian cancer 109///geo_accession: GSM432226///status: Public on
                                    title: Serous ovarian cancer 10///geo_accession: GS
title: Serous ovarian cancer 110///geo_accession: GSM432228///status: Public on
title: Serous ovarian cancer 111///geo_accession: GSM432229///status: Public on
                                     title: Serous ovarian cancer 112///geo_accession: GS
                                  title: Serous ovarian cancer 113///geo_accession: GSM432
                                   title: Serous ovarian cancer 114///geo_accession: GSM43
                                  title: Serous ovarian cancer 115///geo_accession: GSM432
                                  title: Serous ovarian cancer 116///geo_accession: GSM432
                                    title: Serous ovarian cancer 117///geo_accession: GS
                                  title: Serous ovarian cancer 118///geo_accession: GSM43
                                    title: Serous ovarian cancer 119///geo_accession: GS
                                     title: Serous ovarian cancer 11///geo_accession: GS
                                   title: Serous ovarian cancer 120///geo_accession: GSM
                                  title: Serous ovarian cancer 122///geo_accession: GSM43
                                  title: Serous ovarian cancer 123///geo_accession: GSM432
                                  title: Serous ovarian cancer 127///geo_accession: GSM432
                                     title: Serous ovarian cancer 129///geo_accession: GS
                                      title: Serous ovarian cancer 12///geo_accession: G

title: Serous ovarian cancer 130///geo_accession: GSM432

title: Serous ovarian cancer 131///geo_accession: GS

title: Serous ovarian cancer 132///geo_accession: GS

title: Serous ovarian cancer 134///geo_accession: GS

title: Serous ovarian cancer 136///geo_accession: GS

title: Serous ovarian cancer 137///geo_accession: GS

title: Serous ovarian cancer 139///geo_accession: GS

title: Serous ovarian cancer 140///geo_accession: GSM4

title: Serous ovarian cancer 143///geo_accession: GSM43

title: Serous ovarian cancer 144///geo_accession: GSM4

title: Serous ovarian cancer 145///geo_accession: GSM432

title: Serous ovarian cancer 146///geo_accession: GSM432

title: Serous ovarian cancer 148///geo_accession: GS

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title: Serous ovarian cancer 156///geo_accession: GS

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title: Serous ovarian cancer 171///geo_accession: GSM43

title: Serous ovarian cancer 172///geo_accession: GSM43

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title: Serous ovarian cancer 176///geo_accession: GSM

title: Serous ovarian cancer 178///geo_accession:

title: Serous ovarian cancer 17///geo_accession: GS

title: Serous ovarian cancer 182///geo_accession: GSM4

title: Serous ovarian cancer 183///geo_accession: GSM432

title: Serous ovarian cancer 184///geo_accession: GS

title: Serous ovarian cancer 185///geo_accession: GS

title: Serous ovarian cancer 186///geo_accession: GS

title: Serous ovarian cancer 18///geo_accession: GS

title: Serous ovarian cancer 20///geo_accession: GS

title: Serous ovarian cancer 22///geo_accession: GSM432

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title: Serous ovarian cancer 37///geo_accession: GS

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title: Serous ovarian cancer 49///geo_accession: GSM432

title: Serous ovarian cancer 4///geo_accession: GSM43

```
                                        title: Serous ovarian cancer 50///geo_accession: G
                                 title: Serous ovarian cancer 51///geo_accession: GSM432
                                   title: Serous ovarian cancer 52///geo_accession: GSM
                                   title: Serous ovarian cancer 53///geo_accession: GSM
                                    title: Serous ovarian cancer 54///geo_accession: GS
                                    title: Serous ovarian cancer 55///geo_accession: GS
                                 title: Serous ovarian cancer 56///geo_accession: GSM432
                                    title: Serous ovarian cancer 57///geo_accession: GS
                                    title: Serous ovarian cancer 58///geo_accession: GS
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                                 title: Serous ovarian cancer 61///geo_accession: GSM432
                                 title: Serous ovarian cancer 62///geo_accession: GSM432
                                    title: Serous ovarian cancer 64///geo_accession: GS
                                    title: Serous ovarian cancer 66///geo_accession: GS
                                    title: Serous ovarian cancer 67///geo_accession: GS
                                    title: Serous ovarian cancer 68///geo_accession: GS
                                    title: Serous ovarian cancer 69///geo_accession: GS
                                     title: Serous ovarian cancer 6///geo_accession: GS
                                    title: Serous ovarian cancer 72///geo_accession: GS
                                  title: Serous ovarian cancer 77///geo_accession: GSM4
                                    title: Serous ovarian cancer 79///geo_accession: GS
                                     title: Serous ovarian cancer 7///geo_accession: GS
                                 title: Serous ovarian cancer 80///geo_accession: GSM432
```

Value

An expression set

| GSE18520 | *A gene signature predictive for outcome in advanced ovarian cancer* *identifies a survival factor: microfibril-associated glycoprotein 2.* |

Description

Advanced stage papillary serous tumors of the ovary are responsible for the majority of ovarian cancer deaths, yet the molecular determinants modulating patient survival are poorly characterized. Here, we identify and validate a prognostic gene expression signature correlating with survival in a series of microdissected serous ovarian tumors. Independent evaluation confirmed the association of a prognostic gene microfibril-associated glycoprotein 2 (MAGP2) with poor prognosis, whereas in vitro mechanistic analyses demonstrated its ability to prolong tumor cell survival and stimulate endothelial cell motility and survival via the alpha(V)beta(3) integrin receptor. Increased MAGP2 expression correlated with microvessel density suggesting a proangiogenic role in vivo. Thus, MAGP2 may serve as a survival-associated target.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Mok SC, Bonome T, Vathipadiekal V, Bell A, Johnson ME, Wong
  Laboratory: Mok, Birrer 2009
  Contact information:
  Title: A gene signature predictive for outcome in advanced ovarian cancer iden
  URL:
  PMIDs: 19962670

  Abstract: A 110 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [HG-U133_Plus_2] Affymetrix Human Genome U133 Plus 2.0 Array
   platform_shorttitle:
      Affymetrix HG-U133Plus2
   platform_summary:
      hgu133plus2
   platform_manufacturer:
      Affymetrix|Operon
   platform_distribution:
      commercial|non-commercial
   platform_accession:
      GPL570|GPL9216
   version:
      2015-09-22 19:21:25

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
    (42447 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 42447 features, 63 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

   10 observations deleted due to missingness
      n  events  median 0.95LCL 0.95UCL
  53.00   41.00    2.05    1.48    3.70


--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  312.0   395.0   694.0   893.3  1040.0  2237.0

sample_type:
healthy   tumor
     10      53

histological_type:
 ser NA's
  53   10

primarysite:
ov
63

summarygrade:
high NA's
  53   10

summarystage:
late NA's
  53   10

tumorstage:
   3 NA's
  53   10

grade:
   3 NA's
  53   10

days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
    150     450     630    1212    1440    4500      10
```

```
vital_status:
deceased   living     NA's
      41        12        10

debulking:
optimal
      63

percent_normal_cells:
 0
63

percent_stromal_cells:
 0
63

percent_tumor_cells:
100
 63

batch:
2004-03-12 2004-04-08 2004-04-09 2004-07-20 2004-08-12 2004-08-13 2004-09-30
         20          6          9         11         10          1          6

uncurated_author_metadata:
                                              title: Normal Ovary, 2008///geo_

                                              title: Normal Ovary, 2061///geo_

                                              title: Normal Ovary, 2064///geo_

                                              title: Normal Ovary, 2085///geo_

                                              title: Normal Ovary, 2225///geo_

                                              title: Normal Ovary, 2226///geo_

                                              title: Normal Ovary, 2228///geo_

                                              title: Normal Ovary, 2230///geo_

                                              title: Normal Ovary, 2234///geo_

                                              title: Normal Ovary, 2237///geo_
title: Ovarian Tumor, 1109///geo_accession: GSM461390///status: Public on Oct 17
    title: Ovarian Tumor, 1214///geo_accession: GSM461391///status: Public on Oc
    title: Ovarian Tumor, 1231///geo_accession: GSM461367///status: Public on Oc
title: Ovarian Tumor, 1562///geo_accession: GSM461368///status: Public on Oct 17
```

title: Ovarian Tumor, 1660///geo_accession: GSM461369///status: Public on Oct 17

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title: Ovarian Tumor, 412///geo_accession: GSM461357///status: Public on Oc

title: Ovarian Tumor, 434///geo_accession: GSM461358///status: Public on C

title: Ovarian Tumor, 443///geo_accession: GSM461377///status: Public on Oc

title: Ovarian Tumor, 461///geo_accession: GSM461394///status: Public on C

title: Ovarian Tumor, 467///geo_accession: GSM461359///status: Public on C

title: Ovarian Tumor, 477///geo_accession: GSM461383///status: Public on C

title: Ovarian Tumor, 486///geo_accession: GSM461395///status: Public on C

title: Ovarian Tumor, 629///geo_accession: GSM461360///status: Public on Oct 1

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title: Ovarian Tumor, 662///geo_accession: GSM461370///status: Public on C

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title: Ovarian Tumor, 786///geo_accession: GSM461387///status: Public on Oct 1

title: Ovarian Tumor, 794///geo_accession: GSM461388///status: Public on C

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title: Ovarian Tumor, 800///geo_accession: GSM461371///status: Public on C

title: Ovarian Tumor, 872///geo_accession: GSM461366///status: Public on

title: Ovarian Tumor, 934///geo_accession: GSM461372///status: Public on Oct 1

title: Ovarian Tumor, 970///geo_accession: GSM461389///status: Public on C

duplicates:
                              GSE18520.GSE18520_GSM462649
                                          1
GSE18520.GSE18520_GSM462649///GSE18520.GSE18520_GSM462650

```
                                                                 1
                                        GSE18520.GSE18520_GSM462650
                                                                 1
                                                              NA's
                                                                60
```

Value

An expression set

GSE19829   *Gene expression profile of BRCAness that correlates with responsiveness to chemotherapy and with outcome in patients with epithelial ovarian cancer.*

Description

To define a gene expression profile of BRCAness that correlates with chemotherapy response and outcome in epithelial ovarian cancer (EOC).A publicly available microarray data set including 61 patients with EOC with either sporadic disease or BRCA(1/2) germline mutations was used for development of the BRCAness profile. Correlation with platinum responsiveness was assessed in platinum-sensitive and platinum-resistant tumor biopsy specimens from six patients with BRCA germline mutations. Association with poly-ADP ribose polymerase (PARP) inhibitor responsiveness and with radiation-induced RAD51 foci formation (a surrogate of homologous recombination) was assessed in Capan-1 cell line clones. The BRCAness profile was validated in 70 patients enriched for sporadic disease to assess its association with outcome.The BRCAness profile accurately predicted platinum responsiveness in eight out of 10 patient-derived tumor specimens, and between PARP-inhibitor sensitivity and resistance in four out of four Capan-1 clones. [corrected] When applied to the 70 patients with sporadic disease, patients with the BRCA-like (BL) profile had improved disease-free survival (34 months v 15 months; log-rank P = .013) and overall survival (72 months v 41 months; log-rank P = .006) compared with patients with a non-BRCA-like (NBL) profile, respectively. The BRCAness profile maintained independent prognostic value in multivariate analysis, which controlled for other known clinical prognostic factors.The BRCAness profile correlates with responsiveness to platinum and PARP inhibitors and identifies a subset of sporadic patients with improved outcome. Additional evaluation of this profile as a predictive tool in patients with sporadic EOC is warranted.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Konstantinopoulos PA, Spentzos D, Karlan BY, Taniguchi T et
  Laboratory: Konstantinopoulos, Cannistra 2010 hgu95
  Contact information:
  Title: Gene expression profile of BRCAness that correlates with responsiveness
  URL:
  PMIDs: 20547991

  Abstract: A 241 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
```

```
   notes:
    platform_title:
       [HG_U95Av2] Affymetrix Human Genome U95 Version 2 Array
    platform_shorttitle:
       Affymetrix HG_U95Av2
    platform_summary:
       hgu95av2
    platform_manufacturer:
       Affymetrix
    platform_distribution:
       commercial
    platform_accession:
       GPL570|GPL8300
    version:
       2015-09-22 19:26:29

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-MurIL4_at (54253 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 54253 features, 70 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

      n  events  median 0.95LCL 0.95UCL
  70.00   40.00    3.78    2.96    5.92


--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
 Ovarian cancer_sample 1 Ovarian cancer_sample 10 Ovarian cancer_sample 11
                       1                         1                        1
Ovarian cancer_sample 12 Ovarian cancer_sample 13 Ovarian cancer_sample 14
                       1                         1                        1
Ovarian cancer_sample 15 Ovarian cancer_sample 16 Ovarian cancer_sample 17
                       1                         1                        1
Ovarian cancer_sample 18 Ovarian cancer_sample 19  Ovarian cancer_sample 2
                       1                         1                        1
Ovarian cancer_sample 20 Ovarian cancer_sample 21 Ovarian cancer_sample 22
                       1                         1                        1
Ovarian cancer_sample 23 Ovarian cancer_sample 24 Ovarian cancer_sample 25
                       1                         1                        1
Ovarian cancer_sample 26 Ovarian cancer_sample 27 Ovarian cancer_sample 28
                       1                         1                        1
Ovarian cancer_sample 29  Ovarian cancer_sample 3 Ovarian cancer_sample 30
```

```
                        1                         1                         1
  Ovarian cancer_sample 31 Ovarian cancer_sample 32 Ovarian cancer_sample 33
                        1                         1                         1
  Ovarian cancer_sample 34 Ovarian cancer_sample 35 Ovarian cancer_sample 36
                        1                         1                         1
  Ovarian cancer_sample 37 Ovarian cancer_sample 38 Ovarian cancer_sample 39
                        1                         1                         1
   Ovarian cancer_sample 4 Ovarian cancer_sample 40 Ovarian cancer_sample 41
                        1                         1                         1
  Ovarian cancer_sample 42 Ovarian cancer_sample 43 Ovarian cancer_sample 44
                        1                         1                         1
  Ovarian cancer_sample 45 Ovarian cancer_sample 46 Ovarian cancer_sample 47
                        1                         1                         1
  Ovarian cancer_sample 48 Ovarian cancer_sample 49  Ovarian cancer_sample 5
                        1                         1                         1
  Ovarian cancer_sample 50 Ovarian cancer_sample 51 Ovarian cancer_sample 52
                        1                         1                         1
  Ovarian cancer_sample 53 Ovarian cancer_sample 54 Ovarian cancer_sample 55
                        1                         1                         1
  Ovarian cancer_sample 56 Ovarian cancer_sample 57 Ovarian cancer_sample 58
                        1                         1                         1
  Ovarian cancer_sample 59  Ovarian cancer_sample 6 Ovarian cancer_sample 60
                        1                         1                         1
  Ovarian cancer_sample 61 Ovarian cancer_sample 62 Ovarian cancer_sample 63
                        1                         1                         1
  Ovarian cancer_sample 64 Ovarian cancer_sample 65 Ovarian cancer_sample 66
                        1                         1                         1
  Ovarian cancer_sample 67 Ovarian cancer_sample 68 Ovarian cancer_sample 69
                        1                         1                         1
   Ovarian cancer_sample 7 Ovarian cancer_sample 70  Ovarian cancer_sample 8
                        1                         1                         1
   Ovarian cancer_sample 9
                        1

batch:
2001-09-14 2001-12-14 2002-08-20 2003-09-09 2003-09-18 2009-08-14
         7          4         14         13          4         28

days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   30.0   667.5  1125.0  1170.0  1522.0  3450.0

primarysite:
ov
70

sample_type:
tumor
   70

uncurated_author_metadata:
          title: Ovarian cancer_sample 10///geo_accession: GSM495148///status:
```

```
                  title: Ovarian cancer_sample 11///geo_accession: GSM495149///status:
                    title: Ovarian cancer_sample 12///geo_accession: GSM495150///st
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                  title: Ovarian cancer_sample 15///geo_accession: GSM495153///status:
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                  title: Ovarian cancer_sample 17///geo_accession: GSM495155///status:
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                    title: Ovarian cancer_sample 19///geo_accession: GSM495157///st
                title: Ovarian cancer_sample 1///geo_accession: GSM495139///status:
                  title: Ovarian cancer_sample 20///geo_accession: GSM495158///status:
                  title: Ovarian cancer_sample 21///geo_accession: GSM495159///status:
                    title: Ovarian cancer_sample 22///geo_accession: GSM495160///st
                    title: Ovarian cancer_sample 23///geo_accession: GSM495161///st
                    title: Ovarian cancer_sample 24///geo_accession: GSM495162///st
                    title: Ovarian cancer_sample 25///geo_accession: GSM495163///st
                  title: Ovarian cancer_sample 26///geo_accession: GSM495164///sta
                title: Ovarian cancer_sample 27///geo_accession: GSM495165///status:
                    title: Ovarian cancer_sample 28///geo_accession: GSM495166///s
     title: Ovarian cancer_sample 29///geo_accession: GSM495167///status: Public on
                  title: Ovarian cancer_sample 2///geo_accession: GSM495140///status:
              title: Ovarian cancer_sample 30///geo_accession: GSM495168///status: Publi
              title: Ovarian cancer_sample 31///geo_accession: GSM495169///status: Publi
            title: Ovarian cancer_sample 32///geo_accession: GSM495170///status: Public on
          title: Ovarian cancer_sample 33///geo_accession: GSM495171///status: Public on
              title: Ovarian cancer_sample 34///geo_accession: GSM495172///status: Publi
```

```
title: Ovarian cancer_sample 35///geo_accession: GSM495173///status: Public on
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title: Ovarian cancer_sample 37///geo_accession: GSM495175///status: Public on
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title: Ovarian cancer_sample 39///geo_accession: GSM495177///status: Public on
                title: Ovarian cancer_sample 3///geo_accession: GSM495141///sta
    title: Ovarian cancer_sample 40///geo_accession: GSM495178///status: Publi
title: Ovarian cancer_sample 41///geo_accession: GSM495179///status: Public on
      title: Ovarian cancer_sample 42///geo_accession: GSM495180///status: Publi
title: Ovarian cancer_sample 43///geo_accession: GSM495181///status: Public on J
    title: Ovarian cancer_sample 44///geo_accession: GSM495182///status: Public
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    title: Ovarian cancer_sample 47///geo_accession: GSM495185///status: Public
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    title: Ovarian cancer_sample 49///geo_accession: GSM495187///status: Public
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    title: Ovarian cancer_sample 51///geo_accession: GSM495189///status: Public
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    title: Ovarian cancer_sample 53///geo_accession: GSM495191///status: Public
    title: Ovarian cancer_sample 54///geo_accession: GSM495192///status: Public
title: Ovarian cancer_sample 55///geo_accession: GSM495193///status: Public on J
    title: Ovarian cancer_sample 56///geo_accession: GSM495194///status: Public o
    title: Ovarian cancer_sample 57///geo_accession: GSM495195///status: Public o
    title: Ovarian cancer_sample 58///geo_accession: GSM495196///status: Public on
```

```
         title: Ovarian cancer_sample 59///geo_accession: GSM495197///status: Publ
              title: Ovarian cancer_sample 5///geo_accession: GSM495143///status:
    title: Ovarian cancer_sample 60///geo_accession: GSM495198///status: Public on
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      title: Ovarian cancer_sample 62///geo_accession: GSM495200///status: Public on
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         title: Ovarian cancer_sample 66///geo_accession: GSM495204///status: Publi
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          title: Ovarian cancer_sample 8///geo_accession: GSM495146///status:
           title: Ovarian cancer_sample 9///geo_accession: GSM495147///status
```

```
  vital_status:
  deceased    living
       40        30
```

Value

An expression set

```
GSE20565              A genomic and transcriptomic approach for a differential diagnosis
                      between primary and secondary ovarian carcinomas in patients with
                      a previous history of breast cancer.
```

Description

The distinction between primary and secondary ovarian tumors may be challenging for patholo-
gists. The purpose of the present work was to develop genomic and transcriptomic tools to further
refine the pathological diagnosis of ovarian tumors after a previous history of breast cancer.Sixteen
paired breast-ovary tumors from patients with a former diagnosis of breast cancer were collected.
The genomic profiles of paired tumors were analyzed using the Affymetrix GeneChip Mapping 50
K Xba Array or Genome-Wide Human SNP Array 6.0 (for one pair), and the data were normalized
with ITALICS (ITerative and Alternative normaLIzation and Copy number calling for affymetrix
Snp arrays) algorithm or Partek Genomic Suite, respectively. The transcriptome of paired samples
was analyzed using Affymetrix GeneChip Human Genome U133 Plus 2.0 Arrays, and the data were
normalized with gc-Robust Multi-array Average (gcRMA) algorithm. A hierarchical clustering of
these samples was performed, combined with a dataset of well-identified primary and secondary
ovarian tumors.In 12 of the 16 paired tumors analyzed, the comparison of genomic profiles con-
firmed the pathological diagnosis of primary ovarian tumor (n = 5) or metastasis of breast cancer
(n = 7). Among four cases with uncertain pathological diagnosis, genomic profiles were clearly
distinct between the ovarian and breast tumors in two pairs, thus indicating primary ovarian carci-
nomas, and showed common patterns in the two others, indicating metastases from breast cancer.
In all pairs, the result of the transcriptomic analysis was concordant with that of the genomic anal-
ysis.In patients with ovarian carcinoma and a previous history of breast cancer, SNP array analysis
can be used to distinguish primary and secondary ovarian tumors. Transcriptomic analysis may be
used when primary breast tissue specimen is not available.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Meyniel JP, Cottu PH, Decraene C, Stern MH, Couturier J, Le
  Laboratory: Meyniel, Sastre-Garau 2010
  Contact information:
  Title: A genomic and transcriptomic approach for a differential diagnosis betw
  URL:
  PMIDs: 20492709

  Abstract: A 277 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [HG-U133_Plus_2] Affymetrix Human Genome U133 Plus 2.0 Array
   platform_shorttitle:
      Affymetrix HG-U133Plus2
   platform_summary:
      hgu133plus2
   platform_manufacturer:
      Affymetrix
   platform_distribution:
      commercial
   platform_accession:
      GPL570|GPL2005|GPL6801
   version:
      2015-09-22 19:33:01

featureData(eset):
```

```
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
    (42447 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 42447 features, 140 samples
Platform type:
--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
Breast metastasis in the ovary_OC01_ARN0016 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0017 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0020 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0029 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0035 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0046 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0051 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0053 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0055 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0060 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0069 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0073 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0077 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0079 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0081 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0083 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0092 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0097 [HG-U133_Plus_2]
                                             1
  Breast metastasis in the ovary_OC01_ARN0098 [HG-U133_Plus_2]
```

```
                                                              1
     Breast metastasis in the ovary_OC01_ARN0099 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0102 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0104 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0112 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0120 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0121 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0123 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0126 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0141 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0142 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0143 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0145 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0146 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0153 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0162 [HG-U133_Plus_2]
                                                              1
     Breast metastasis in the ovary_OC01_ARN0201 [HG-U133_Plus_2]
                                                              1
                 Ovarian carcinoma_OC01_ARN0001 [HG-U133_Plus_2]
                                                              1
                 Ovarian carcinoma_OC01_ARN0002 [HG-U133_Plus_2]
                                                              1
                 Ovarian carcinoma_OC01_ARN0004 [HG-U133_Plus_2]
                                                              1
                 Ovarian carcinoma_OC01_ARN0005 [HG-U133_Plus_2]
                                                              1
                 Ovarian carcinoma_OC01_ARN0007 [HG-U133_Plus_2]
                                                              1
                 Ovarian carcinoma_OC01_ARN0008 [HG-U133_Plus_2]
                                                              1
                 Ovarian carcinoma_OC01_ARN0009 [HG-U133_Plus_2]
                                                              1
                 Ovarian carcinoma_OC01_ARN0010 [HG-U133_Plus_2]
                                                              1
                 Ovarian carcinoma_OC01_ARN0011 [HG-U133_Plus_2]
                                                              1
                 Ovarian carcinoma_OC01_ARN0012 [HG-U133_Plus_2]
```

```
                                                                     1
            Ovarian carcinoma_OC01_ARN0013 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0015 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0022 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0023 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0025 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0028 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0030 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0032 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0034 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0036 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0037 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0038 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0039 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0041 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0042 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0045 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0049 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0057 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0058 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0061 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0062 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0063 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0064 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0066 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0067 [HG-U133_Plus_2]
                                                                     1
            Ovarian carcinoma_OC01_ARN0070 [HG-U133_Plus_2]
```

```
                                                   1
Ovarian carcinoma_OC01_ARN0072 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0075 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0076 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0080 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0084 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0085 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0089 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0091 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0093 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0095 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0096 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0100 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0101 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0103 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0105 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0106 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0107 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0108 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0109 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0111 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0113 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0114 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0115 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0116 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0118 [HG-U133_Plus_2]
                                                   1
Ovarian carcinoma_OC01_ARN0119 [HG-U133_Plus_2]
```

```
                                                                         1
                  Ovarian carcinoma_OC01_ARN0124 [HG-U133_Plus_2]
                                                                         1
                  Ovarian carcinoma_OC01_ARN0125 [HG-U133_Plus_2]
                                                                         1
                                                             (Other)
                                                                        41
```

sample_type:
tumor
  140

histological_type:
```
clearcell      endo  mucinous      other       ser      NA's
       6          6         7          6        71        44
```

primarysite:
```
other     ov
   44     96
```

summarygrade:
```
high   low NA's
  63    33   44
```

summarystage:
```
early  late  NA's
   27    67    46
```

tumorstage:
```
   1     2     3     4 NA's
  18     9    52    15   46
```

substage:
```
   a     b     c NA's
  14    10    55   61
```

grade:
```
   1     2     3 NA's
   6    27    63   44
```

batch:
```
2006-06-01 2006-06-27 2006-06-28 2006-06-29 2006-06-30 2006-07-20 2008-03-06
        21         18         37         20         36          7          1
```

uncurated_author_metadata:
title: Breast metastasis in the ovary_OC01_ARN0016 [HG-U133_Plus_2]///geo_access

title: Breast metastasis in the ovary_OC01_ARN0017 [HG-U133_Plus_2]///geo_access

title: Breast metastasis in the ovary_OC01_ARN0020 [HG-U133_Plus_2]///geo_access

title: Breast metastasis in the ovary_OC01_ARN0029 [HG-U133_Plus_2]///geo_access

```
title: Breast metastasis in the ovary_OC01_ARN0035 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0046 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0051 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0053 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0055 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0060 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0069 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0073 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0077 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0079 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0081 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0083 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0092 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0097 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0098 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0099 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0102 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0104 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0112 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0120 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0121 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0123 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0126 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0141 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0142 [HG-U133_Plus_2]///geo_access
title: Breast metastasis in the ovary_OC01_ARN0143 [HG-U133_Plus_2]///geo_access
```

```
title: Breast metastasis in the ovary_OC01_ARN0145 [HG-U133_Plus_2]///geo_access

title: Breast metastasis in the ovary_OC01_ARN0146 [HG-U133_Plus_2]///geo_access

title: Breast metastasis in the ovary_OC01_ARN0153 [HG-U133_Plus_2]///geo_access

title: Breast metastasis in the ovary_OC01_ARN0162 [HG-U133_Plus_2]///geo_access

title: Breast metastasis in the ovary_OC01_ARN0201 [HG-U133_Plus_2]///geo_access

                                                    title: Ovarian carcinoma_OC0

                                          title: Ovarian carcinoma_OC01_ARN00

                                              title: Ovarian carcinoma_OC01_

                                              title: Ovarian carcinoma_OC0

                                              title: Ovarian carcinoma_OC01_

                                              title: Ovarian carcinoma_OC01_

                                              title: Ovarian carcinoma_OC01_

                                             title: Ovarian carcinoma_OC01

                                              title: Ovarian carcinoma_OC0

                                              title: Ovarian carcinoma_OC0

                                          title: Ovarian carcinoma_OC01_AR

                                              title: Ovarian carcinoma_OC0

                                              title: Ovarian carcinoma_OC0

                                              title: Ovarian carcinoma_OC0

                                              title: Ovarian carcinoma_OC0

                                              title: Ovarian carcinoma_OC0

                                    title: Ovarian carcinoma_OC01_ARN003

                                              title: Ovarian carcinoma_OC01_

                                              title: Ovarian carcinoma_OC01_

                                              title: Ovarian carcinoma_OC0

                                              title: Ovarian carcinoma_OC01_
```

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_ARN00

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_ARN004

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_ARN

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC0

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_ARN0076

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_ARN

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_ARN0091

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_AR

title: Ovarian carcinoma_OC01

title: Ovarian carcinoma_OC01_ARN

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_ARN0

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_ARN01

title: Ovarian carcinoma_OC01_ARN0114

title: Ovarian carcinoma_OC01_ARN0

title: Ovarian carcinoma_OC0

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

title: Ovarian carcinoma_OC01_

```
duplicates:
GSE20565.GSE20565_GSM516722 GSE20565.GSE20565_GSM516741
                          1                           1
                        NA's
                         138
```

Value

An expression set

GSE2109   *IGC EXpression Project for Oncology*

Description

EXpression Project for Oncology, International Genomics Consortium, www.intgen.org

Format

```
experimentData(eset):
Experiment data
  Experimenter name: EXpression Project for Oncology, International Genomics Con
  Laboratory: expO, IGC 2005
  Contact information:
  Title: IGC EXpression Project for Oncology
  URL:
  PMIDs: PMID unknown

  Abstract: A 8 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [HG-U133_Plus_2] Affymetrix Human Genome U133 Plus 2.0 Array
   platform_shorttitle:
      Affymetrix HG-U133Plus2
   platform_summary:
      hgu133plus2
   platform_manufacturer:
      Affymetrix
   platform_distribution:
      commercial
   platform_accession:
      GPL570
   version:
      2015-09-22 19:40:35

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
    (42447 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 42447 features, 204 samples
Platform type:
--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
Abdominal wall mass - 8176          Omentum - 1006
                      1                          1
          Omentum - 8174          Omentum - 8186
```

	1		1
Omentum – 8240		Ovary – 101094	
	1		1
Ovary – 101109		Ovary – 101120	
	1		1
Ovary – 101150		Ovary – 1018	
	1		1
Ovary – 1040		Ovary – 1057	
	1		1
Ovary – 112866		Ovary – 112867	
	1		1
Ovary – 118662		Ovary – 118671	
	1		1
Ovary – 1241		Ovary – 1270	
	1		1
Ovary – 129660		Ovary – 129669	
	1		1
Ovary – 1311		Ovary – 1313	
	1		1
Ovary – 1323		Ovary – 133643	
	1		1
Ovary – 133651		Ovary – 1351	
	1		1
Ovary – 151614		Ovary – 151622	
	1		1
Ovary – 161465		Ovary – 161524	
	1		1
Ovary – 161525		Ovary – 161534	
	1		1
Ovary – 1636		Ovary – 1639	
	1		1
Ovary – 1643		Ovary – 170809	
	1		1
Ovary – 174931		Ovary – 174936	
	1		1
Ovary – 180953		Ovary – 184837	
	1		1
Ovary – 187243		Ovary – 187246	
	1		1
Ovary – 187251		Ovary – 187253	
	1		1
Ovary – 191413		Ovary – 191424	
	1		1
Ovary – 195198		Ovary – 199399	
	1		1
Ovary – 199400		Ovary – 202030	
	1		1
Ovary – 202041		Ovary – 20284	
	1		1
Ovary – 20285		Ovary – 20296	
	1		1
Ovary – 20307		Ovary – 20315	

```
                          1                                         1
              Ovary - 20323                         Ovary - 20325
                          1                                         1
              Ovary - 20326                         Ovary - 20329
                          1                                         1
             Ovary - 207532                        Ovary - 209699
                          1                                         1
             Ovary - 209709                        Ovary - 209714
                          1                                         1
             Ovary - 209718                        Ovary - 211371
                          1                                         1
             Ovary - 211372                        Ovary - 211395
                          1                                         1
             Ovary - 211409                         Ovary - 21758
                          1                                         1
             Ovary - 219571                        Ovary - 219581
                          1                                         1
             Ovary - 219590                        Ovary - 219604
                          1                                         1
              Ovary - 21981                         Ovary - 22218
                          1                                         1
             Ovary - 226414                        Ovary - 226423
                          1                                         1
             Ovary - 228537                        Ovary - 228549
                          1                                         1
             Ovary - 231863                        Ovary - 234328
                          1                                         1
             Ovary - 234329                        Ovary - 235691
                          1                                         1
             Ovary - 235692                        Ovary - 235695
                          1                                         1
              Ovary - 23862                         Ovary - 23884
                          1                                         1
              Ovary - 23904                         Ovary - 23930
                          1                                         1
              Ovary - 23934                         Ovary - 23936
                          1                                         1
              Ovary - 23938                        Ovary - 241181
                          1                                         1
             Ovary - 241187                        Ovary - 241196
                          1                                         1
             Ovary - 241198                        Ovary - 241199
                          1                                         1
             Ovary - 242929                               (Other)
                          1                                       105

   sample_type:
   tumor
     204

   histological_type:
         clearcell                 endo         mucinous                 other
```

```
               9                    28                   11                    59
          ser undifferentiated               NA's
               85                     2                   10
```

```
primarysite:
other     ov  NA's
   23    178     3
```

```
summarygrade:
high   low NA's
  91    31    82
```

```
summarystage:
early   late   NA's
   37     87     80
```

```
tumorstage:
    1     2     3     4 NA's
   20    14    58    18    94
```

```
substage:
    a     b     c NA's
   17    22    79    86
```

```
grade:
    1     2     3     4 NA's
   11    20    83     8    82
```

```
age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  25.00   45.00   55.00   58.82   65.00   85.00
```

```
batch:
2004-12-03 2004-12-04 2004-12-07 2005-02-11 2005-03-03 2005-03-10 2005-03-11
         3          3          1          1          1          1          1
2005-03-15 2005-03-16 2005-03-17 2005-03-19 2005-03-22 2005-04-13 2005-04-26
         3          1          2          4          2          1          5
2005-04-29 2005-05-10 2005-06-01 2005-06-03 2005-06-08 2005-06-17 2005-08-05
         2          2          5          3          3          6          3
2005-08-09 2005-08-11 2005-09-07 2005-09-09 2005-09-13 2005-11-02 2005-11-04
         1          6          1          3          3          6          3
2005-11-15 2005-11-18 2005-12-02 2006-01-24 2006-01-26 2006-02-07 2006-02-28
         3          1          4          2          1          1          1
2006-03-06 2006-03-14 2006-04-18 2006-04-20 2006-05-16 2006-06-08 2006-07-26
         2          2          1          2          3          1          2
2006-07-28 2006-09-12 2006-09-14 2006-10-10 2006-10-24 2006-10-31 2006-11-09
         1          2          1          1          9          5         10
2006-11-21 2006-11-30 2006-12-07 2007-01-12 2007-02-09 2007-03-07 2007-03-09
         1          6          3          1          1          8          1
2007-03-15 2007-05-01 2007-05-03 2007-05-15 2007-05-18 2007-05-30 2007-06-12
         4          2          3          4          2          2          1
2007-07-27 2007-09-05 2007-09-07 2007-09-11 2007-09-12 2008-02-15 2008-02-21
```

```
           2           3           1           4           4           1           3
2008-02-27 2008-03-04 2008-05-13 2008-05-16 2008-05-23
           2           1           4           4           5
```

uncurated_author_metadata:

title: Omentu

title: Ovary - 170809///geo_accession: GSM137917///status: Public on Sep 28 2006

```
duplicates:
GSE2109.GSE2109_GSM76554 GSE2109.GSE2109_GSM76567                                    NA's
```

1 1 202

Value

An expression set

GSE26193 *miR-141 and miR-200a act on ovarian tumorigenesis by controlling oxidative stress response.*

Description

Although there is evidence that redox regulation has an essential role in malignancies, its impact on tumor prognosis remains unclear. Here we show crosstalk between oxidative stress and the miR-200 family of microRNAs that affects tumorigenesis and chemosensitivity. miR-141 and miR-200a target p38?? and modulate the oxidative stress response. Enhanced expression of these microRNAs mimics p38?? deficiency and increases tumor growth in mouse models, but it also improves the response to chemotherapeutic agents. High-grade human ovarian adenocarcinomas that accumulate miR-200a have low concentrations of p38?? and an associated oxidative stress signature. The miR200a-dependent stress signature correlates with improved survival of patients in response to treatment. Therefore, the role of miR-200a in stress could be a predictive marker for clinical outcome in ovarian cancer. In addition, although oxidative stress promotes tumor growth, it also sensitizes tumors to treatment, which could account for the limited success of antioxidants in clinical trials.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Mateescu B, Batista L, Mariani O, Meyniel J, Cottu PH, Sast
  Laboratory: Mateescu, Mechta-Grigoriou 2011
  Contact information:
  Title: miR-141 and miR-200a act on ovarian tumorigenesis by controlling oxidat
  URL:
  PMIDs: 22101765

  Abstract: A 149 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [HG-U133_Plus_2] Affymetrix Human Genome U133 Plus 2.0 Array
   platform_shorttitle:
      Affymetrix HG-U133Plus2
   platform_summary:
      hgu133plus2
   platform_manufacturer:
      Affymetrix
   platform_distribution:
      commercial
   platform_accession:
```

```
      GPL570
  platform_technology:
      in situ oligonucleotide
  version:
      2015-09-22 19:44:56


featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
    (42447 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 42447 features, 107 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

      n   events  median 0.95LCL 0.95UCL
 107.00    76.00    3.05    2.50    4.56


--------------------------
Available sample meta-data:
--------------------------


alt_sample_name:
  Ovarian carcinoma 1  Ovarian carcinoma 10 Ovarian carcinoma 100
                    1                     1                     1
Ovarian carcinoma 101 Ovarian carcinoma 102 Ovarian carcinoma 103
                    1                     1                     1
Ovarian carcinoma 104 Ovarian carcinoma 105 Ovarian carcinoma 106
                    1                     1                     1
Ovarian carcinoma 107  Ovarian carcinoma 11  Ovarian carcinoma 12
                    1                     1                     1
 Ovarian carcinoma 13  Ovarian carcinoma 14  Ovarian carcinoma 15
                    1                     1                     1
 Ovarian carcinoma 16  Ovarian carcinoma 17  Ovarian carcinoma 18
                    1                     1                     1
 Ovarian carcinoma 19   Ovarian carcinoma 2  Ovarian carcinoma 20
                    1                     1                     1
 Ovarian carcinoma 21  Ovarian carcinoma 22  Ovarian carcinoma 23
                    1                     1                     1
 Ovarian carcinoma 24  Ovarian carcinoma 25  Ovarian carcinoma 26
                    1                     1                     1
 Ovarian carcinoma 27  Ovarian carcinoma 28  Ovarian carcinoma 29
                    1                     1                     1
  Ovarian carcinoma 3  Ovarian carcinoma 30  Ovarian carcinoma 31
                    1                     1                     1
 Ovarian carcinoma 32  Ovarian carcinoma 33  Ovarian carcinoma 34
                    1                     1                     1
```

```
  Ovarian carcinoma 35  Ovarian carcinoma 36  Ovarian carcinoma 37
                     1                     1                     1
  Ovarian carcinoma 38  Ovarian carcinoma 39   Ovarian carcinoma 4
                     1                     1                     1
  Ovarian carcinoma 40  Ovarian carcinoma 41  Ovarian carcinoma 42
                     1                     1                     1
  Ovarian carcinoma 43  Ovarian carcinoma 44  Ovarian carcinoma 45
                     1                     1                     1
  Ovarian carcinoma 46  Ovarian carcinoma 47  Ovarian carcinoma 48
                     1                     1                     1
  Ovarian carcinoma 49   Ovarian carcinoma 5  Ovarian carcinoma 50
                     1                     1                     1
  Ovarian carcinoma 51  Ovarian carcinoma 52  Ovarian carcinoma 53
                     1                     1                     1
  Ovarian carcinoma 54  Ovarian carcinoma 55  Ovarian carcinoma 56
                     1                     1                     1
  Ovarian carcinoma 57  Ovarian carcinoma 58  Ovarian carcinoma 59
                     1                     1                     1
   Ovarian carcinoma 6  Ovarian carcinoma 60  Ovarian carcinoma 61
                     1                     1                     1
  Ovarian carcinoma 62  Ovarian carcinoma 63  Ovarian carcinoma 64
                     1                     1                     1
  Ovarian carcinoma 65  Ovarian carcinoma 66  Ovarian carcinoma 67
                     1                     1                     1
  Ovarian carcinoma 68  Ovarian carcinoma 69   Ovarian carcinoma 7
                     1                     1                     1
  Ovarian carcinoma 70  Ovarian carcinoma 71  Ovarian carcinoma 72
                     1                     1                     1
  Ovarian carcinoma 73  Ovarian carcinoma 74  Ovarian carcinoma 75
                     1                     1                     1
  Ovarian carcinoma 76  Ovarian carcinoma 77  Ovarian carcinoma 78
                     1                     1                     1
  Ovarian carcinoma 79   Ovarian carcinoma 8  Ovarian carcinoma 80
                     1                     1                     1
  Ovarian carcinoma 81  Ovarian carcinoma 82  Ovarian carcinoma 83
                     1                     1                     1
  Ovarian carcinoma 84  Ovarian carcinoma 85  Ovarian carcinoma 86
                     1                     1                     1
  Ovarian carcinoma 87  Ovarian carcinoma 88  Ovarian carcinoma 89
                     1                     1                     1
   Ovarian carcinoma 9  Ovarian carcinoma 90  Ovarian carcinoma 91
                     1                     1                     1
               (Other)
                     8

sample_type:
tumor
  107

histological_type:
clearcell       endo  mucinous      other        ser
        6          8         8          6         79
```

```
summarygrade:
high  low
  67   40


summarystage:
early  late
   31    76


tumorstage:
 1  2  3  4
20 11 59 17


substage:
   a    b    c NA's
  16   12   62   17


grade:
 1  2  3
 7 33 67


days_to_tumor_recurrence:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
    3.0   340.5   584.0  1108.0  1525.0  7386.0


recurrence_status:
norecurrence    recurrence
          27            80


days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
      3     668    1096    1520    2220    7386


vital_status:
deceased   living
      76       31


batch:
2006-06-01 2006-06-27 2006-06-28 2006-06-29 2006-06-30 2006-07-20 2008-03-06
        15         14         23         16         21          3          1
2009-03-18 2009-03-19
         4         10


uncurated_author_metadata:
      title: Ovarian carcinoma 100///geo_accession: GSM643032///status: Public o

            title: Ovarian carcinoma 101///geo_accession: GSM643033///status: Pu

        title: Ovarian carcinoma 102///geo_accession: GSM643034///status: Public o

            title: Ovarian carcinoma 103///geo_accession: GSM643035///status: Publ
```

```
                      title: Ovarian carcinoma 104///geo_accession: GSM643036///status: Publ
                      title: Ovarian carcinoma 105///geo_accession: GSM643037///status: Publ
                  title: Ovarian carcinoma 106///geo_accession: GSM643038///status: Public
          title: Ovarian carcinoma 107///geo_accession: GSM643039///status: Public on Nov
                    title: Ovarian carcinoma 10///geo_accession: GSM642942///status: Public
                      title: Ovarian carcinoma 11///geo_accession: GSM642943///status: Pub
                      title: Ovarian carcinoma 12///geo_accession: GSM642944///status: Pub
                       title: Ovarian carcinoma 13///geo_accession: GSM642945///status: Pu
                     title: Ovarian carcinoma 14///geo_accession: GSM642946///status: Publ
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                      title: Ovarian carcinoma 16///geo_accession: GSM642948///status: Pub
                    title: Ovarian carcinoma 17///geo_accession: GSM642949///status: Publi
                  title: Ovarian carcinoma 18///geo_accession: GSM642950///status: Public on
                      title: Ovarian carcinoma 19///geo_accession: GSM642951///status: Publ
                        title: Ovarian carcinoma 1///geo_accession: GSM642933///status:
            title: Ovarian carcinoma 20///geo_accession: GSM642952///status: Public on No
                      title: Ovarian carcinoma 21///geo_accession: GSM642953///status: Pub
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                  title: Ovarian carcinoma 2///geo_accession: GSM642934///status: Public
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title: Ovarian carcinoma 31///geo_accession: GSM642963///status: Pub

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title: Ovarian carcinoma 74///geo_accession: GSM643006///status: Pub

title: Ovarian carcinoma 75///geo_accession: GSM643007///status: Publ

title: Ovarian carcinoma 76///geo_accession: GSM643008///status: Publi

title: Ovarian carcinoma 77///geo_accession: GSM643009///status: Publi

```
         title: Ovarian carcinoma 78///geo_accession: GSM643010///status: Public
       title: Ovarian carcinoma 79///geo_accession: GSM643011///status: Public on
            title: Ovarian carcinoma 7///geo_accession: GSM642939///status: Pub
           title: Ovarian carcinoma 80///geo_accession: GSM643012///status: P
      title: Ovarian carcinoma 81///geo_accession: GSM643013///status: Public on
          title: Ovarian carcinoma 82///geo_accession: GSM643014///status: Pub
       title: Ovarian carcinoma 83///geo_accession: GSM643015///status: Publi
       title: Ovarian carcinoma 84///geo_accession: GSM643016///status: Publi
       title: Ovarian carcinoma 85///geo_accession: GSM643017///status: Publi
     title: Ovarian carcinoma 86///geo_accession: GSM643018///status: Public
         title: Ovarian carcinoma 87///geo_accession: GSM643019///status: Pub
       title: Ovarian carcinoma 88///geo_accession: GSM643020///status: Publi
     title: Ovarian carcinoma 89///geo_accession: GSM643021///status: Public
            title: Ovarian carcinoma 8///geo_accession: GSM642940///status:
          title: Ovarian carcinoma 90///geo_accession: GSM643022///status:
   title: Ovarian carcinoma 91///geo_accession: GSM643023///status: Public on
         title: Ovarian carcinoma 92///geo_accession: GSM643024///status: Publi
```

Value

An expression set

GSE26712   *A gene signature predicting for survival in suboptimally debulked pa-*
                        tients with ovarian cancer.

Description

Despite the existence of morphologically indistinguishable disease, patients with advanced ovarian
tumors display a broad range of survival end points. We hypothesize that gene expression profil-
ing can identify a prognostic signature accounting for these distinct clinical outcomes. To resolve

survival-associated loci, gene expression profiling was completed for an extensive set of 185 (90 optimal/95 suboptimal) primary ovarian tumors using the Affymetrix human U133A microarray. Cox regression analysis identified probe sets associated with survival in optimally and suboptimally debulked tumor sets at a P value of <0.01. Leave-one-out cross-validation was applied to each tumor cohort and confirmed by a permutation test. External validation was conducted by applying the gene signature to a publicly available array database of expression profiles of advanced stage suboptimally debulked tumors. The prognostic signature successfully classified the tumors according to survival for suboptimally (P = 0.0179) but not optimally debulked (P = 0.144) patients. The suboptimal gene signature was validated using the independent set of tumors (odds ratio, 8.75; P = 0.0146). To elucidate signaling events amenable to therapeutic intervention in suboptimally debulked patients, pathway analysis was completed for the top 57 survival-associated probe sets. For suboptimally debulked patients, confirmation of the predictive gene signature supports the existence of a clinically relevant predictor, as well as the possibility of novel therapeutic opportunities. Ultimately, the prognostic classifier defined for suboptimally debulked tumors may aid in the classification and enhancement of patient outcome for this high-risk population.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Bonome T, Levine DA, Shih J, Randonovich M, Pise-Masison CA
  Laboratory: Bonome, Birrer 2008
  Contact information:
  Title: A gene signature predicting for survival in suboptimally debulked patie
  URL:
  PMIDs: 18593951

  Abstract: A 238 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [HG-U133A] Affymetrix Human Genome U133A Array
   platform_shorttitle:
      Affymetrix HG-U133A
   platform_summary:
      hgu133a
   platform_manufacturer:
      Affymetrix
   platform_distribution:
      commercial
   platform_accession:
      GPL96
   version:
      2015-09-22 19:46:24

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
    (20967 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 20967 features, 195 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

   10 observations deleted due to missingness
      n  events  median 0.95LCL 0.95UCL
 185.00  129.00    3.83    3.24    4.83


--------------------------
Available sample meta-data:
--------------------------


alt_sample_name:
    Normal HOSE2008     Normal HOSE2061     Normal HOSE2064
                  1                   1                   1
    Normal HOSE2085     Normal HOSE2225     Normal HOSE2226
                  1                   1                   1
    Normal HOSE2228     Normal HOSE2230     Normal HOSE2234
                  1                   1                   1
    Normal HOSE2237  Ovarian Cancer SO10 Ovarian Cancer SO100
                  1                   1                   1
Ovarian Cancer SO103 Ovarian Cancer SO106 Ovarian Cancer SO108
                  1                   1                   1
 Ovarian Cancer SO11 Ovarian Cancer SO113 Ovarian Cancer SO115
                  1                   1                   1
Ovarian Cancer SO116 Ovarian Cancer SO117 Ovarian Cancer SO118
                  1                   1                   1
 Ovarian Cancer SO12 Ovarian Cancer SO121 Ovarian Cancer SO122
                  1                   1                   1
Ovarian Cancer SO124 Ovarian Cancer SO129  Ovarian Cancer SO13
                  1                   1                   1
Ovarian Cancer SO131 Ovarian Cancer SO134 Ovarian Cancer SO135
                  1                   1                   1
Ovarian Cancer SO137 Ovarian Cancer SO141 Ovarian Cancer SO143
                  1                   1                   1
Ovarian Cancer SO148 Ovarian Cancer SO154  Ovarian Cancer SO16
                  1                   1                   1
Ovarian Cancer SO166  Ovarian Cancer SO17 Ovarian Cancer SO173
                  1                   1                   1
Ovarian Cancer SO174  Ovarian Cancer SO18 Ovarian Cancer SO181
                  1                   1                   1
Ovarian Cancer SO184 Ovarian Cancer SO185 Ovarian Cancer SO187
                  1                   1                   1
Ovarian Cancer SO189 Ovarian Cancer SO190 Ovarian Cancer SO193
                  1                   1                   1
Ovarian Cancer SO194 Ovarian Cancer SO196 Ovarian Cancer SO197
                  1                   1                   1
  Ovarian Cancer SO2 Ovarian Cancer SO200 Ovarian Cancer SO201
                  1                   1                   1
Ovarian Cancer SO203 Ovarian Cancer SO205  Ovarian Cancer SO21
```

```
                      1                   1                   1
  Ovarian Cancer SO211 Ovarian Cancer SO214 Ovarian Cancer SO216
                      1                   1                   1
  Ovarian Cancer SO217 Ovarian Cancer SO218 Ovarian Cancer SO224
                      1                   1                   1
  Ovarian Cancer SO225 Ovarian Cancer SO227 Ovarian Cancer SO228
                      1                   1                   1
  Ovarian Cancer SO229  Ovarian Cancer SO23 Ovarian Cancer SO230
                      1                   1                   1
  Ovarian Cancer SO231 Ovarian Cancer SO235 Ovarian Cancer SO236
                      1                   1                   1
  Ovarian Cancer SO237 Ovarian Cancer SO241 Ovarian Cancer SO242
                      1                   1                   1
  Ovarian Cancer SO243 Ovarian Cancer SO244 Ovarian Cancer SO246
                      1                   1                   1
  Ovarian Cancer SO247 Ovarian Cancer SO249  Ovarian Cancer SO25
                      1                   1                   1
  Ovarian Cancer SO250 Ovarian Cancer SO256 Ovarian Cancer SO257
                      1                   1                   1
  Ovarian Cancer SO258 Ovarian Cancer SO261 Ovarian Cancer SO262
                      1                   1                   1
  Ovarian Cancer SO263 Ovarian Cancer SO265 Ovarian Cancer SO267
                      1                   1                   1
  Ovarian Cancer SO268 Ovarian Cancer SO272 Ovarian Cancer SO273
                      1                   1                   1
  Ovarian Cancer SO278 Ovarian Cancer SO279 Ovarian Cancer SO282
                      1                   1                   1
  Ovarian Cancer SO283 Ovarian Cancer SO285 Ovarian Cancer SO290
                      1                   1                   1
              (Other)
                   96

  sample_type:
  healthy    tumor
       10      185

  histological_type:
   ser NA's
   185    10

  primarysite:
   ov
  195

  summarygrade:
  high NA's
   185    10

  summarystage:
  late NA's
   185    10
```

```
tumorstage:
   3    4 NA's
 146   36   13

substage:
   b    c NA's
   9  137   49

age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
  26.00   52.00   63.00   61.54   70.00   84.00      13

recurrence_status:
norecurrence    recurrence
         42           153

days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
   21.9   660.6  1164.0  1429.0  1880.0  4982.0      10

vital_status:
deceased   living     NA's
    129       56       10

debulking:
   optimal suboptimal      NA's
        90         95        10

percent_normal_cells:
20-
195

percent_stromal_cells:
20-
195

percent_tumor_cells:
80+
195

batch:
2003-11-04 2003-11-05 2003-11-06 2003-11-07 2003-11-20 2003-11-21 2003-12-16
        14         16          9          6         10         15         17
2003-12-23 2003-12-24 2004-04-20 2004-04-21 2004-04-27 2004-09-28 2005-07-27
        12         11         20         17          9         14         15
2006-11-09
        10

uncurated_author_metadata:
                                                                          title: No

                                                                          title: No
```

title: No

title: No

title: No

title: No

title: No

title: No

title: No

title: No

title: Ovarian Cancer SO100///geo_accession: GSM657530///status: Public on Jan

title: Ovarian Cancer SO103///geo_accession: GSM657531///status: Public on Jan

title: Ovarian Cancer SO106///geo_accession: GSM657532///status: Public

title: Ovarian Cancer SO108///geo_accession: GSM657533///status: Public on

title: Ovarian Cancer SO10///geo_accession: GSM657529///status: Public on

title: Ovarian Cancer SO113///geo_accession: GSM657535///status: Public on Jan

title: Ovarian Cancer SO115///geo_accession: GSM657536///status: Public

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title: Ovarian Cancer SO117///geo_accession: GSM657538///status: Public on

title: Ovarian Cancer SO118///geo_accession: GSM657539///status: Public on Jan

title: Ovarian Cancer SO11///geo_accession: GSM657534///status: Public

title: Ovarian Cancer SO121///geo_accession: GSM657541///status: Public on Jan

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title: Ovarian Cancer SO143///geo_accession: GSM657551///status: Public on

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title: Ovarian Cancer SO250///geo_accession: GSM657600///status: Public on

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     title: Ovarian Cancer SO290///geo_accession: GSM657617///status: Public

title: Ovarian Cancer SO295///geo_accession: GSM657618///status: Public on
```

```
duplicates:
                          GSE26712.GSE26712_GSM657526
                                    1
GSE26712.GSE26712_GSM657526///GSE26712.GSE26712_GSM657527
                                    1
                          GSE26712.GSE26712_GSM657527
                                    1
                                  NA's
                                  192
```

Value

An expression set

GSE30009   *Multidrug resistance-linked gene signature predicts overall survival of patients with primary ovarian serous carcinoma.*

Description

This study assesses the ability of multidrug resistance (MDR)-associated gene expression patterns to predict survival in patients with newly diagnosed carcinoma of the ovary. The scope of this research differs substantially from that of previous reports, as a very large set of genes was evaluated whose expression has been shown to affect response to chemotherapy.We applied a customized TaqMan low density array, a highly sensitive and specific assay, to study the expression profiles of 380 MDR-linked genes in 80 tumor specimens collected at initial surgery to debulk primary serous carcinoma. The RNA expression profiles of these drug resistance genes were correlated with clinical outcomes.Leave-one-out cross-validation was used to estimate the ability of MDR gene expression to predict survival. Although gene expression alone does not predict overall survival (OS; P = 0.06), four covariates (age, stage, CA125 level, and surgical debulking) do (P = 0.03). When gene expression was added to the covariates, we found an 11-gene signature that provides a major improvement in OS prediction (log-rank statistic P < 0.003). The predictive power of this 11-gene signature was confirmed by dividing high- and low-risk patient groups, as defined by their clinical covariates, into four specific risk groups on the basis of expression levels.This study reveals an 11-gene signature that allows a more precise prognosis for patients with serous cancer of the ovary treated with carboplatin- and paclitaxel-based therapy. These 11 new targets offer opportunities for new therapies to improve clinical outcome in ovarian cancer.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Gillet JP, Calcagno AM, Varma S, Davidson B et al. Multidru
  Laboratory: Gillet, Gottesman 2012
  Contact information:
  Title: Multidrug resistance-linked gene signature predicts overall survival of
  URL:
  PMIDs: 22492981

  Abstract: A 244 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      TaqMan qRT-PCR Homo sapiens Low-Density Array 380
   platform_shorttitle:
      TaqMan qRT-PCR
   platform_summary:
      NA
   platform_manufacturer:
      TaqMan
   platform_distribution:
```

```
        custom
    platform_accession:
        GPL13728
    version:
        2015-09-22 19:46:26

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 5 6 ... 380 (363 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 363 features, 103 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

      n   events  median 0.95LCL 0.95UCL
 103.00   57.00    3.42    2.92    5.34


--------------------------
Available sample meta-data:
--------------------------


alt_sample_name:
 Norwegian patient 1 Norwegian patient 10 Norwegian patient 11
                   1                    1                    1
Norwegian patient 12 Norwegian patient 13 Norwegian patient 14
                   1                    1                    1
Norwegian patient 15 Norwegian patient 16 Norwegian patient 17
                   1                    1                    1
Norwegian patient 18 Norwegian patient 19  Norwegian patient 2
                   1                    1                    1
Norwegian patient 20 Norwegian patient 21 Norwegian patient 22
                   1                    1                    1
Norwegian patient 23  Norwegian patient 3  Norwegian patient 4
                   1                    1                    1
 Norwegian patient 5  Norwegian patient 6  Norwegian patient 7
                   1                    1                    1
 Norwegian patient 8  Norwegian patient 9         US Patient 1
                   1                    1                    1
      US Patient 10        US Patient 11        US Patient 12
                   1                    1                    1
      US Patient 13        US Patient 14        US Patient 15
                   1                    1                    1
      US Patient 16        US Patient 17        US Patient 18
                   1                    1                    1
      US Patient 19         US Patient 2        US Patient 20
                   1                    1                    1
      US Patient 21        US Patient 22        US Patient 23
```

```
                       1                            1                            1
       US Patient 24            US Patient 25               US Patient 26
                       1                            1                            1
       US Patient 27            US Patient 28               US Patient 29
                       1                            1                            1
        US Patient 3            US Patient 30               US Patient 31
                       1                            1                            1
       US Patient 32            US Patient 33               US Patient 34
                       1                            1                            1
       US Patient 35            US Patient 36               US Patient 37
                       1                            1                            1
       US Patient 38            US Patient 39                US Patient 4
                       1                            1                            1
       US Patient 40            US Patient 41               US Patient 42
                       1                            1                            1
       US Patient 43            US Patient 44               US Patient 45
                       1                            1                            1
       US Patient 46            US Patient 47               US Patient 48
                       1                            1                            1
       US Patient 49             US Patient 5               US Patient 50
                       1                            1                            1
       US Patient 51            US Patient 52               US Patient 53
                       1                            1                            1
       US Patient 54            US Patient 55               US Patient 56
                       1                            1                            1
       US Patient 57            US Patient 58               US Patient 59
                       1                            1                            1
        US Patient 6            US Patient 60               US Patient 61
                       1                            1                            1
       US Patient 62            US Patient 63               US Patient 64
                       1                            1                            1
       US Patient 65            US Patient 66               US Patient 67
                       1                            1                            1
       US Patient 68            US Patient 69                US Patient 7
                       1                            1                            1
       US Patient 70            US Patient 71               US Patient 72
                       1                            1                            1
       US Patient 73            US Patient 74               US Patient 75
                       1                            1                            1
       US Patient 76            US Patient 77               US Patient 78
                       1                            1                            1
             (Other)
                       4

  sample_type:
  tumor
    103

  histological_type:
  clearcell        ser
         1        102
```

```
summarygrade:
high  low NA's
  92    9    2


summarystage:
late
 103


tumorstage:
 3   4
82  21


substage:
   b    c NA's
   2   60   41


grade:
   1    2    3 NA's
   4    5   92    2


age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  30.00   56.00   61.00   62.45   71.50   87.00


days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
     24     598    1053    1156    1568    4748


vital_status:
deceased    living
      57        46


debulking:
   optimal suboptimal
        81         22


uncurated_author_metadata:
```

`title: US P`

title:

title: US Patien

title: US Patient 51///geo_accession: GSM742615///status: Public on Apr 19 2012/

title: US Patient 54///geo_accession: GSM7

title: US Patient 57///geo_accession: GSM742621///status: Publi

title: US Patient 59///geo_accession: GSM742623///status: Publi

title: US Patient 63///geo_acces

title: US Patie

title: US Patient 66///geo_accession: GSM742630///sta

title: US Patient 70///geo_accession: GSM742634///status: Public on Apr 19

title: US Pat

title: US Patient 75///geo_accession: GSM7

titl

title: US Patient 77///geo

title: US Patient 78

title: US Patient 79/

Value

An expression set

GSE30161	*Multi-gene expression predictors of single drug responses to adjuvant chemotherapy in ovarian carcinoma: predicting platinum resistance.*

Description

Despite advances in radical surgery and chemotherapy delivery, ovarian cancer is the most lethal gynecologic malignancy. Standard therapy includes treatment with platinum-based combination chemotherapies yet there is no biomarker model to predict their responses to these agents. We here have developed and independently tested our multi-gene molecular predictors for forecasting patients' responses to individual drugs on a cohort of 55 ovarian cancer patients. To independently validate these molecular predictors, we performed microarray profiling on FFPE tumor samples of 55 ovarian cancer patients (UVA-55) treated with platinum-based adjuvant chemotherapy. Genome-wide chemosensitivity biomarkers were initially discovered from the in vitro drug activities and genomic expression data for carboplatin and paclitaxel, respectively. Multivariate predictors were trained with the cell line data and then evaluated with a historical patient cohort. For the UVA-55

cohort, the carboplatin, taxol, and combination predictors significantly stratified responder patients and non-responder patients (p = 0.019, 0.04, 0.014) with sensitivity = 91%, 96%, 93 and NPV = 57%, 67%, 67% in pathologic clinical response. The combination predictor also demonstrated a significant survival difference between predicted responders and non-responders with a median survival of 55.4 months vs. 32.1 months. Thus, COXEN single- and combination-drug predictors successfully stratified platinum resistance and taxane response in an independent cohort of ovarian cancer patients based on their FFPE tumor samples.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Ferriss JS, Kim Y, Duska L, Birrer M, Levine DA, Moskaluk C
  Laboratory: Ferriss, Lee 2012
  Contact information:
  Title: Multi-gene expression predictors of single drug responses to adjuvant c
  URL:
  PMIDs: 22348014

  Abstract: A 215 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [HG-U133_Plus_2] Affymetrix Human Genome U133 Plus 2.0 Array
   platform_shorttitle:
      Affymetrix HG-U133Plus2
   platform_summary:
      hgu133plus2
   platform_manufacturer:
      Affymetrix
   platform_distribution:
      commercial
   platform_accession:
      GPL570
   version:
      2015-09-22 19:50:24

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
    (42447 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 42447 features, 58 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

      n  events  median 0.95LCL 0.95UCL
```

```
  58.00    36.00     4.19     2.70     6.17

--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
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         1          1          1          1          1          1          1
OV_FFPE_16 OV_FFPE_17 OV_FFPE_18 OV_FFPE_19  OV_FFPE_2 OV_FFPE_20 OV_FFPE_21
         1          1          1          1          1          1          1
OV_FFPE_22 OV_FFPE_23 OV_FFPE_24 OV_FFPE_25 OV_FFPE_26 OV_FFPE_27 OV_FFPE_28
         1          1          1          1          1          1          1
OV_FFPE_29  OV_FFPE_3 OV_FFPE_30 OV_FFPE_31 OV_FFPE_32 OV_FFPE_33 OV_FFPE_34
         1          1          1          1          1          1          1
OV_FFPE_35 OV_FFPE_36 OV_FFPE_37 OV_FFPE_38 OV_FFPE_39  OV_FFPE_4 OV_FFPE_40
         1          1          1          1          1          1          1
OV_FFPE_41 OV_FFPE_42 OV_FFPE_43 OV_FFPE_44 OV_FFPE_45 OV_FFPE_46 OV_FFPE_47
         1          1          1          1          1          1          1
OV_FFPE_48 OV_FFPE_49  OV_FFPE_5 OV_FFPE_50 OV_FFPE_51 OV_FFPE_52 OV_FFPE_53
         1          1          1          1          1          1          1
OV_FFPE_54 OV_FFPE_55 OV_FFPE_56 OV_FFPE_57 OV_FFPE_58  OV_FFPE_6  OV_FFPE_7
         1          1          1          1          1          1          1
 OV_FFPE_8  OV_FFPE_9
         1          1

sample_type:
tumor
   58

histological_type:
     clearcell              endo        mucinous              other
            5                 1               1                  1
          ser undifferentiated             NA's
           47                 1                2

summarygrade:
high  low NA's
  33   21    4

summarystage:
late
  58

tumorstage:
 3   4
53   5

substage:
 a  b  c
 9 11 38
```

```
grade:
   1    2    3 NA's
   2   19   33    4

age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  38.00   53.50   62.00   62.57   72.00   85.00

pltx:
 y
58

tax:
 n  y
 4 54

neo:
 n
58

days_to_tumor_recurrence:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   12.0   255.2   386.0   742.1   768.2  4208.0

recurrence_status:
norecurrence    recurrence         NA's
           6            48            4

days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   49.0   585.2  1010.0  1375.0  2131.0  4208.0

vital_status:
deceased   living
      36       22

debulking:
   optimal suboptimal       NA's
        26         30          2

batch:
2009-10-07 2009-10-08 2009-10-09 2009-10-20
        28         18          8          4

uncurated_author_metadata:
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      title: OV_FFPE_13///geo_accession: GSM746873///status: Public on Aug 21 2012
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title: OV_FFPE_19///g

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title: OV_FFPE_33///geo_accession: GSM746893///status: Public on Aug 21 2012///s

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    title: OV_FFPE_40///geo_accession: GSM746900///status: Public on Aug 21 201
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                              title: OV_FFPE_43///geo_accession: GSM746903///st
 title: OV_FFPE_44///geo_accession: GSM746904///status: Public on Aug 21 2012///
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    title: OV_FFPE_46///geo_accession: GSM746906///status: Public on Aug 21 201
    title: OV_FFPE_47///geo_accession: GSM746907///status: Public on Aug 21 201
                         title: OV_FFPE_48///geo_accession: GSM746908///status:
   title: OV_FFPE_49///geo_accession: GSM746909///status: Public on Aug 21 20
        title: OV_FFPE_4///geo_accession: GSM746864///status: Public on Aug 2
    title: OV_FFPE_50///geo_accession: GSM746910///status: Public on Aug 21 20
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      title: OV_FFPE_52///geo_accession: GSM746912///status: Public on Aug 21
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    title: OV_FFPE_54///geo_accession: GSM746914///status: Public on Aug 21 201
     title: OV_FFPE_55///geo_accession: GSM746915///status: Public on Aug 21 20
 title: OV_FFPE_56///geo_accession: GSM746916///status: Public on Aug 21 2012//
                                    title: OV_FFPE_57///geo_accession: GS
   title: OV_FFPE_58///geo_accession: GSM746918///status: Public on Aug 21 201
      title: OV_FFPE_5///geo_accession: GSM746865///status: Public on Aug 21 2
      title: OV_FFPE_6///geo_accession: GSM746866///status: Public on Aug 21 2
     title: OV_FFPE_7///geo_accession: GSM746867///status: Public on Aug 21 20
```

title: OV_FFPE_8///geo_accession: GSM746868///status: Public on Aug 21 2

title: OV_FFPE_9///geo_accession: GSM746869///status: Public on Aug 21 201

Value

An expression set

GSE32062   *High-risk ovarian cancer based on 126-gene expression signature
is uniquely characterized by downregulation of antigen presentation
pathway.*

Description

High-grade serous ovarian cancers are heterogeneous not only in terms of clinical outcome but
also at the molecular level. Our aim was to establish a novel risk classification system based on
a gene expression signature for predicting overall survival, leading to suggesting novel therapeutic
strategies for high-risk patients.In this large-scale cross-platform study of six microarray data sets
consisting of 1,054 ovarian cancer patients, we developed a gene expression signature for predicting
overall survival by applying elastic net and 10-fold cross-validation to a Japanese data set A (n =
260) and evaluated the signature in five other data sets. Subsequently, we investigated differences
in the biological characteristics between high- and low-risk ovarian cancer groups.An elastic net
analysis identified a 126-gene expression signature for predicting overall survival in patients with
ovarian cancer using the Japanese data set A (multivariate analysis, $P = 4 ?? 10(-20)$). We validated
its predictive ability with five other data sets using multivariate analysis (Tothill's data set, $P =
1 ?? 10(-5)$; Bonome's data set, $P = 0.0033$; Dressman's data set, $P = 0.0016$; TCGA data set,
$P = 0.0027$; Japanese data set B, $P = 0.021$). Through gene ontology and pathway analyses, we
identified a significant reduction in expression of immune-response-related genes, especially on
the antigen presentation pathway, in high-risk ovarian cancer patients.This risk classification based
on the 126-gene expression signature is an accurate predictor of clinical outcome in patients with
advanced stage high-grade serous ovarian cancer and has the potential to develop new therapeutic
strategies for high-grade serous ovarian cancer patients.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Yoshihara K, Tsunoda T, Shigemizu D, Fujiwara H et al. High
  Laboratory: Yoshihara, Tanaka 2012
  Contact information:
  Title: High-risk ovarian cancer based on 126-gene expression signature is uniq
  URL:
  PMIDs: 22241791

  Abstract: A 255 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
```

```
    platform_title:
      Agilent-014850 Whole Human Genome Microarray 4x44K G4112F (Probe Name vers
ion)
    platform_shorttitle:
      Agilent G4112F
    platform_summary:
      hgug4112a
    platform_manufacturer:
      Agilent
    platform_distribution:
      commercial
    platform_accession:
      GPL6480
    version:
      2015-09-22 19:55:29

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: A_23_P100001 A_23_P100011 ... A_32_P99902 (30936 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 30936 features, 260 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

      n   events   median  0.95LCL  0.95UCL
 260.00   121.00     4.93     4.11     6.58


--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
    10d    115d    116d    117d    119d     11d    120d    122d    123d   125Rd
     1       1       1       1       1       1       1       1       1       1
   129d     12d    130d    132d    134d    139d    140d    143d    144d    145d
     1       1       1       1       1       1       1       1       1       1
   146d    148d    150d    155d    156d     15d    160d     16d    171d    173d
     1       1       1       1       1       1       1       1       1       1
   174d    178d     17d    183d    184d    185d    186d     18d     20d     22d
     1       1       1       1       1       1       1       1       1       1
    23d    249d    257d     25d    260d    262d    264d    266d    267d    268d
     1       1       1       1       1       1       1       1       1       1
   269d     27d    299d      2d    300d    301d    302d    303d    304d   305d2
     1       1       1       1       1       1       1       1       1       1
   306d    307d    310d    318d    319d   320d2    323d    327d    330d    331d
     1       1       1       1       1       1       1       1       1       1
  333d2    335d    337d    340d    342d    346d    347d   348d2    350d    352d
```

```
        1       1       1       1       1       1       1       1       1       1
     353d    355d    356d    357d    358d    360d    362d    363d    365d    366d
        1       1       1       1       1       1       1       1       1       1
     367d   368d2     36d     38d   41d2R     42d     43d     44d    456d (Other)
        1       1       1       1       1       1       1       1       1     161
```

sample_type:
```
tumor
  260
```

histological_type:
```
ser
260
```

summarygrade:
```
high  low
 129  131
```

summarystage:
```
late
 260
```

tumorstage:
```
  3    4
204   56
```

substage:
```
   a    b    c NA's
   4   20  180   56
```

grade:
```
  2    3
131  129
```

pltx:
```
  y
260
```

tax:
```
  y
260
```

days_to_death:
```
  Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
    30     810    1245    1344    1710    3840
```

vital_status:
```
deceased   living
     121      139
```

debulking:
```
   optimal suboptimal
```

```
      103        157
```

uncurated_author_metadata:
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title: serous ovarian cancer 115d///geo_accession: GSM794867///status: Public on

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title: serous ovarian cancer 44d///geo_accession: GSM794963///status: Public

title: serous ovarian cancer 456d///geo_accession: GSM794965///status: Public

duplicates:
GSE32062.GSE32062.GPL6480_GSM794933 GSE32062.GSE32062.GPL6480_GSM794935
                                1   1
                                   NA's

258

Value

An expression set

GSE32063   *High-risk ovarian cancer based on 126-gene expression signature*
                            is uniquely characterized by downregulation of antigen presentation
                            pathway.

Description

High-grade serous ovarian cancers are heterogeneous not only in terms of clinical outcome but also at the molecular level. Our aim was to establish a novel risk classification system based on a gene expression signature for predicting overall survival, leading to suggesting novel therapeutic strategies for high-risk patients.In this large-scale cross-platform study of six microarray data sets consisting of 1,054 ovarian cancer patients, we developed a gene expression signature for predicting overall survival by applying elastic net and 10-fold cross-validation to a Japanese data set A (n = 260) and evaluated the signature in five other data sets. Subsequently, we investigated differences in the biological characteristics between high- and low-risk ovarian cancer groups.An elastic net analysis identified a 126-gene expression signature for predicting overall survival in patients with ovarian cancer using the Japanese data set A (multivariate analysis, P = 4 ?? 10(-20)). We validated its predictive ability with five other data sets using multivariate analysis (Tothill's data set, P = 1 ?? 10(-5); Bonome's data set, P = 0.0033; Dressman's data set, P = 0.0016; TCGA data set, P = 0.0027; Japanese data set B, P = 0.021). Through gene ontology and pathway analyses, we identified a significant reduction in expression of immune-response-related genes, especially on the antigen presentation pathway, in high-risk ovarian cancer patients.This risk classification based on the 126-gene expression signature is an accurate predictor of clinical outcome in patients with advanced stage high-grade serous ovarian cancer and has the potential to develop new therapeutic strategies for high-grade serous ovarian cancer patients.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Yoshihara K, Tsunoda T, Shigemizu D, Fujiwara H et al. High
  Laboratory: Yoshihara, Tanaka 2012
  Contact information:
  Title: High-risk ovarian cancer based on 126-gene expression signature is uniq
  URL:
  PMIDs: 22241791

  Abstract: A 255 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      Agilent-014850 Whole Human Genome Microarray 4x44K G4112F (Probe Name vers
ion)
    platform_shorttitle:
```

```
        Agilent G4112F
    platform_summary:
        hgug4112a
    platform_manufacturer:
        Agilent
    platform_distribution:
        commercial
    platform_accession:
        GPL6480
    version:
        2015-09-22 19:58:23


featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: A_23_P100001 A_23_P100011 ... A_32_P99902 (30936 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 30936 features, 40 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

      n   events   median 0.95LCL 0.95UCL
  40.00    22.00     4.44    3.29      NA


--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
 106  108 109R  110 111R  192 195R  196  197  198  200  203  205  206  207  213
   1    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1
 222  224  226  229  230  231  274  277  278  280  281  282  283  284  285  286
   1    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1
 287  288  289  291  292  294 297R 298R
   1    1    1    1    1    1    1    1

sample_type:
tumor
   40

histological_type:
ser
 40

summarygrade:
high   low
  17    23
```

```
summarystage:
late
  40

tumorstage:
 3  4
31  9

substage:
   b    c NA's
   3   28    9

grade:
 2  3
23 17

pltx:
 y
40

tax:
 y
40

days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
    210     705    1155    1346    1792    3330

vital_status:
deceased   living
      22       18

debulking:
   optimal suboptimal
        19         21

uncurated_author_metadata:
  title: serous ovarian cancer 106///geo_accession: GSM795125///status: Public o

     title: serous ovarian cancer 108///geo_accession: GSM795126///status: Publi

 title: serous ovarian cancer 109R///geo_accession: GSM795127///status: Public o

   title: serous ovarian cancer 110///geo_accession: GSM795128///status: Public o

title: serous ovarian cancer 111R///geo_accession: GSM795129///status: Public on

                     title: serous ovarian cancer 192///geo_accession: G

                   title: serous ovarian cancer 195R///geo_accession: GS

                    title: serous ovarian cancer 196///geo_accession:
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title: serous ovarian cancer 197///geo_accession: G

title: serous ovarian cancer 198///geo_accession: GSM

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title: serous ovarian cancer 203///geo_accession: GSM7

title: serous ovarian cancer 205///geo_accession: GS

title: serous ovarian cancer 206///geo_accession: G

title: serous ovarian cancer 207///geo_accession: GSM7

title: serous ovarian cancer 213///geo_accession: GS

title: serous ovarian cancer 222///geo_accession: GSM7

title: serous ovarian cancer 224///geo_accession: GSM7

title: serous ovarian cancer 226///geo_accession: G

title: serous ovarian cancer 229///geo_accession:

title: serous ovarian cancer 230///geo_accessio

title: serous ovarian cancer 231///geo_accession:

title: serous ovarian cancer 274///geo_accession: GSM79

title: serous ovarian cancer 277///geo_accession: GS

title: serous ovarian cancer 278///geo_accession: GS

title: serous ovarian cancer 280///geo_accession: G

title: serous ovarian cancer 281///geo_accession: GSM

title: serous ovarian cancer 282///geo_accession: G

title: serous ovarian cancer 283///geo_accession: G

title: serous ovarian cancer 284///geo_accession: GSM795

title: serous ovarian cancer 285///geo_accession: G

title: serous ovarian cancer 286///geo_accession:

title: serous ovarian cancer 287///geo_accession: G

title: serous ovarian cancer 288///geo_accession: G

```
                                        title: serous ovarian cancer 289///geo_accession: G

                               title: serous ovarian cancer 291///geo_accession: GSM7

                                   title: serous ovarian cancer 292///geo_accession: G

                                   title: serous ovarian cancer 294///geo_accession: G

                             title: serous ovarian cancer 297R///geo_accession: GS

                               title: serous ovarian cancer 298R///geo_accession: GSM
```

Value

An expression set

GSE44104   *COL11A1 promotes tumor progression and predicts poor clinical out-come in ovarian cancer.*

Description

Biomarkers that predict disease progression might assist the development of better therapeutic strategies for aggressive cancers, such as ovarian cancer. Here, we investigated the role of collagen type XI alpha 1 (COL11A1) in cell invasiveness and tumor formation and the prognostic impact of COL11A1 expression in ovarian cancer. Microarray analysis suggested that COL11A1 is a disease progression-associated gene that is linked to ovarian cancer recurrence and poor survival. Small interference RNA-mediated specific reduction in COL11A1 protein levels suppressed the invasive ability and oncogenic potential of ovarian cancer cells and decreased tumor formation and lung colonization in mouse xenografts. A combination of experimental approaches, including real-time RT-PCR, casein zymography and chromatin immunoprecipitation (ChIP) assays, showed that COL11A1 knockdown attenuated MMP3 expression and suppressed binding of Ets-1 to its putative MMP3 promoter-binding site, suggesting that the Ets-1-MMP3 axis is upregulated by COL11A1. Transforming growth factor (TGF)-beta (TGF-??1) treatment triggers the activation of smad2 signaling cascades, leading to activation of COL11A1 and MMP3. Pharmacological inhibition of MMP3 abrogated the TGF-??1-triggered, COL11A1-dependent cell invasiveness. Furthermore, the NF-YA-binding site on the COL11A1 promoter was identified as the major determinant of TGF-??1-dependent COL11A1 activation. Analysis of 88 ovarian cancer patients indicated that high COL11A1 mRNA levels are associated with advanced disease stage. The 5-year recurrence-free and overall survival rates were significantly lower (P=0.006 and P=0.018, respectively) among patients with high expression levels of tissue COL11A1 mRNA compared with those with low expression. We conclude that COL11A1 may promote tumor aggressiveness via the TGF-??1-MMP3 axis and that COL11A1 expression can predict clinical outcome in ovarian cancer patients.

Format

```
experimentData(eset):
Experiment data
```

```
   Experimenter name: Wu Y, Chang T, Huang Y, Huang H, Chou C
   Laboratory: Wu, Chou 2013
   Contact information:
   Title: COL11A1 promotes tumor progression and predicts poor clinical outcome i
   URL:
   PMIDs: 23934190

   Abstract: A 260 word abstract is available. Use 'abstract' method.
   Information is available on: preprocessing
   notes:
    platform_title:
       [HG-U133_Plus_2] Affymetrix Human Genome U133 Plus 2.0 Array
    platform_shorttitle:
       Affymetrix HG-U133Plus2
    platform_summary:
       hgu133plus2
    platform_manufacturer:
       Affymetrix
    platform_distribution:
       commercial
    platform_accession:
       GPL570
    platform_technology:
       in situ oligonucleotide
    version:
       2015-09-22 20:02:05

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
    (42447 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 42447 features, 60 samples
Platform type:
--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
Tc_113  Tc_48  Tc_49  Tc_51  Tc_56  Tc_59  Tc_61  Tc_63  Tc_64  Tc_65  Tc_74
     1      1      1      1      1      1      1      1      1      1      1
 Tc_94  Te_69  Te_77  Te_78  Te_79  Te_84  Te_87  Te_89  Te_90  Te_91  Te_92
     1      1      1      1      1      1      1      1      1      1      1
 Te_93 Tm_101 Tm_102 Tm_106 Tm_107 Tm_110  Tm_95  Tm_96  Tm_97  Tm_98  Ts_11
     1      1      1      1      1      1      1      1      1      1      1
 Ts_14  Ts_15  Ts_17  Ts_19   Ts_2  Ts_20  Ts_21  Ts_23  Ts_24  Ts_26  Ts_28
     1      1      1      1      1      1      1      1      1      1      1
  Ts_3  Ts_31  Ts_32  Ts_34  Ts_35  Ts_36  Ts_37  Ts_39   Ts_4  Ts_41  Ts_43
```

```
    1      1      1      1      1      1      1      1      1      1      1
 Ts_45  Ts_46  Ts_47   Ts_5   Ts_8
    1      1      1      1      1

sample_type:
tumor
   60

histological_type:
clearcell      endo   mucinous       ser
      12         11          9         28

summarystage:
early  late
   25    35

tumorstage:
 1  2  3  4
17  8 30  5

recurrence_status:
norecurrence     recurrence
          40             20

os_binary:
 long short
   44    16

relapse_binary:
 long short
   40    20

batch:
2010-09-07 2010-09-08 2010-10-14 2010-12-10 2010-12-14
        20          2         18         16          4

uncurated_author_metadata:
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          title: Tc_48///geo_accession: GSM1078973///status: Public on Jan 01 20

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duplicates:
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```

Value

An expression set

GSE49997   *Validating the impact of a molecular subtype in ovarian cancer on outcomes: a study of the OVCAD Consortium.*

Description

Most patients with epithelial ovarian cancer (EOC) are diagnosed at advanced stage and have a poor prognosis. However, a small proportion of these patients will survive, whereas others will die very quickly. Clinicopathological factors do not allow precise identification of these subgroups. Thus, we have validated a molecular subclassification as new prognostic factor in EOC. One hundred and ninety-four patients with Stage II-IV EOC were characterized by whole-genome expression profiling of tumor tissues and were classified using a published 112 gene set, derived from an International Federation of Gynecology and Obstetrics (FIGO) stage-directed supervised classification approach. The 194 tumor samples were classified into two subclasses comprising 95 (Subclass 1) and 99 (Subclass 2) tumors. All nine FIGO II tumors were grouped in Subclass 1 (P = 0.001). Subclass 2 (54% of advanced-stage tumors) was significantly correlated with peritoneal carcinomatosis and non-optimal debulking. Patients with Subclass 2 tumors had a worse overall survival for both serous and non-serous histological subtypes, as revealed by univariate analysis (hazard ratios [HR] of 3.17 and 17.11, respectively; P ??? 0.001) and in models corrected for relevant clinicopathologic parameters (HR 2.87 and 12.42, respectively; P ??? 0.023). Significance analysis of microarrays revealed 2082 genes that were differentially expressed in advanced-grade serous tumors of both subclasses and the focal adhesion pathway as the most deregulated pathway. In the present validation study, we have shown that, in advanced-stage serous ovarian cancer, two approximately equally large molecular subtypes exist, independent of classical clinocopathological parameters and presenting with highly different whole-genome expression profiles and a markedly different overall survival. Similar results were obtained in a small cohort of patients with non-serous tumors.?? 2012 Japanese Cancer Association.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Pils D1, Hager G, Tong D, Aust S, Heinze G, Kohl M, Schuste
  Laboratory: Pils, Zeilinger 2012
  Contact information:
  Title: Validating the impact of a molecular subtype in ovarian cancer on outco
  URL:
  PMIDs: 22497737

  Abstract: A 276 word abstract is available. Use 'abstract' method.
```

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   Information is available on: preprocessing
  notes:
   platform_title:
      ABI Human Genome Survey Microarray Version 2
   platform_shorttitle:
      ABI Human Genome
   platform_summary:

   platform_manufacturer:
      Applied Biosystems
   platform_distribution:
      commercial
   platform_accession:
      GPL2986
   platform_technology:
      in situ oligonucleotide
   version:
      2015-09-22 20:04:13

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 100027 100036 ... 10715781 (18439 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 18439 features, 204 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

   10 observations deleted due to missingness
      n  events  median 0.95LCL 0.95UCL
 194.00   57.00      NA    3.67      NA


--------------------------
Available sample meta-data:
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EOC P017 EOC P018 EOC P019 EOC P020 EOC P021 EOC P022 EOC P023 EOC P024
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  EOC P097 EOC P098 EOC P099  (Other)
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    204

  histological_type:
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  high   low NA's
   143    50    11

  summarystage:
  early   late  NA's
      9    185    10

  tumorstage:
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     9   154    31    10

  grade:
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    50   143    11

  age_at_initial_pathologic_diagnosis:
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  days_to_tumor_recurrence:
     Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
     30.0   335.0   487.0   580.1   722.5  1461.0      10

  recurrence_status:
  norecurrence   recurrence           NA's
            70          124             10
```

```
days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.     NA's
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vital_status:
deceased   living    NA's
      57      137      10

debulking:
   optimal suboptimal      NA's
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Value

An expression set

GSE51088	*POSTN/TGFBI-associated stromal signature predicts poor prognosis in serous epithelial ovarian cancer.*

Description

To identify molecular prognosticators and therapeutic targets for high-grade serous epithelial ovarian cancers (EOCs) using genetic analyses driven by biologic features of EOC pathogenesis.Ovarian tissue samples (n = 172; 122 serous EOCs, 30 other EOCs, 20 normal/benign) collected prospectively from sequential patients undergoing gynecologic surgery were analyzed using RNA expression microarrays. Samples were classified based on expression of genes with potential relevance in ovarian cancer. Gene sets were defined using Rosetta Similarity Search Tool (ROAST) and analysis of variance (ANOVA). Gene copy number variations were identified by array comparative genomic hybridization.No distinct subgroups of EOC could be identified by unsupervised clustering, however, analyses based on genes correlated with periostin (POSTN) and estrogen receptor-alpha (ESR1) yielded distinct subgroups. When 95 high-grade serous EOCs were grouped by genes based on ANOVA comparing ESR1/WT1 and POSTN/TGFBI samples, overall survival (OS) was significantly shorter for 43 patients with tumors expressing genes associated with POSTN/TGFBI compared to 52 patients with tumors expressing genes associated with ESR1/WT1 (median 30 versus 49 months, respectively; P = 0.022). Several targets with therapeutic potential were identified within each subgroup. BRCA germline mutations were more frequent in the ESR1/WT1 subgroup. Proliferation-associated genes and TP53 status (mutated or wild-type) did not correlate with survival. Findings were validated using independent ovarian cancer datasets.Two distinct molecular subgroups of high-grade serous EOCs based on POSTN/TGFBI and ESR1/WT1 expressions were identified with significantly different OS. Specific differentially expressed genes between these subgroups provide potential prognostic and therapeutic targets.Copyright ?? 2013 Elsevier Inc. All rights reserved.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Karlan BY, Dering J, Walsh C, Orsulic S, Lester J, Anderson
  Laboratory: Karlan, Slamon 2014
  Contact information:
  Title: POSTN/TGFBI-associated stromal signature predicts poor prognosis in ser
  URL:
  PMIDs: 24368280

  Abstract: A 250 word abstract is available. Use 'abstract' method.
```

```
   Information is available on: preprocessing
   notes:
    platform_title:
       Agilent-012097 Human 1A Microarray (V2) G4110B (Probe Name version)
    platform_shorttitle:
       Agilent G4110B
    platform_summary:
       hgug4110b
    platform_manufacturer:
       Agilent
    platform_distribution:
       commercial
    platform_accession:
       GPL7264
    platform_technology:
       in situ oligonucleotide
    version:
       2015-09-22 20:05:48

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: A_23_P100001 A_23_P100011 ... A_23_P99996 (18703 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 18703 features, 172 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

   20 observations deleted due to missingness
       n  events  median 0.95LCL 0.95UCL
 152.00  112.00    4.13    3.50    4.92


--------------------------
Available sample meta-data:
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           3          7         9         11        122        20


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    119   30   23


   summarystage:
   early  late  NA's
```

```
   31   120    21
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```
tumorstage:
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  22    9  103   17   21
```

```
substage:
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```

```
grade:
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```

```
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neo:
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172
```

```
recurrence_status:
norecurrence   recurrence          NA's
         36          111            25
```

```
days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
     30     791    1491    1835    2344    7001      20
```

```
vital_status:
deceased   living    NA's
     112       40      20
```

```
percent_normal_cells:
 30- NA's
 140   32
```

```
percent_stromal_cells:
 30- NA's
 140   32
```

```
percent_tumor_cells:
 70+ NA's
 140   32
```

```
uncurated_author_metadata:
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title: Ov_Tum

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Value

An expression set

GSE6008   *Lysophosphatidic acid-induced transcriptional profile represents serous epithelial ovarian carcinoma and worsened prognosis.*

Description

Lysophosphatidic acid (LPA) governs a number of physiologic and pathophysiological processes. Malignant ascites fluid is rich in LPA, and LPA receptors are aberrantly expressed by ovarian cancer cells, implicating LPA in the initiation and progression of ovarian cancer. However, there is an absence of systematic data critically analyzing the transcriptional changes induced by LPA in ovarian cancer.In this study, gene expression profiling was used to examine LPA-mediated transcription by exogenously adding LPA to human epithelial ovarian cancer cells for 24 h to mimic long-term stimulation in the tumor microenvironment. The resultant transcriptional profile comprised a 39-gene signature that closely correlated to serous epithelial ovarian carcinoma. Hierarchical clustering of ovarian cancer patient specimens demonstrated that the signature is associated with worsened prognosis. Patients with LPA-signature-positive ovarian tumors have reduced disease-specific and progression-free survival times. They have a higher frequency of stage IIIc serous carcinoma and a greater proportion is deceased. Among the 39-gene signature, a group of seven genes associated with cell adhesion recapitulated the results. Out of those seven, claudin-1, an adhesion molecule and phenotypic epithelial marker, is the only independent biomarker of serous epithelial ovarian carcinoma. Knockdown of claudin-1 expression in ovarian cancer cells reduces LPA-mediated cellular adhesion, enhances suspended cells and reduces LPA-mediated migration.The data suggest that transcriptional events mediated by LPA in the tumor microenvironment influence tumor progression through modulation of cell adhesion molecules like claudin-1 and, for the first time, report an LPA-mediated expression signature in ovarian cancer that predicts a worse prognosis.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Murph MM, Liu W, Yu S, Lu Y, Hall H, Hennessy BT, Lahad J,
  Laboratory: Murph, Mills 2009
  Contact information:
  Title: Lysophosphatidic acid-induced transcriptional profile represents serous
  URL:
  PMIDs: 19440550

  Abstract: A 247 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [HG-U133A] Affymetrix Human Genome U133A Array
   platform_shorttitle:
      Affymetrix HG-U133A
   platform_summary:
      hgu133a
   platform_manufacturer:
      Affymetrix
   platform_distribution:
      commercial
   platform_accession:
      GPL96
   version:
      2015-09-22 20:07:11

featureData(eset):
An object of class 'AnnotatedDataFrame'
```

```
featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
  (20967 total)
varLabels: probeset gene EntrezGene.ID best_probe
varMetadata: labelDescription
```

Details

```
assayData: 20967 features, 103 samples
Platform type:
--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
   Ovarian_Tumor_ClearCell_CHTN-OC-004      Ovarian_Tumor_ClearCell_CHTN-OC-012
                                     1                                        1
   Ovarian_Tumor_ClearCell_CHTN-OC-028       Ovarian_Tumor_ClearCell_KU-OC-003
                                     1                                        1
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                                     1                                        1
     Ovarian_Tumor_ClearCell_KU-OC-006        Ovarian_Tumor_ClearCell_KU-OC-007
                                     1                                        1
Ovarian_Tumor_Endometrioid_CHTN-OE-005 Ovarian_Tumor_Endometrioid_CHTN-OE-011
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Ovarian_Tumor_Endometrioid_CHTN-OE-014 Ovarian_Tumor_Endometrioid_CHTN-OE-017
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Ovarian_Tumor_Endometrioid_CHTN-OE-056 Ovarian_Tumor_Endometrioid_CHTN-OE-059
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Ovarian_Tumor_Endometrioid_CHTN-OE-060 Ovarian_Tumor_Endometrioid_CHTN-OE-061
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Ovarian_Tumor_Endometrioid_CHTN-OE-076 Ovarian_Tumor_Endometrioid_CHTN-OE-077
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Ovarian_Tumor_Endometrioid_CHTN-OE-080 Ovarian_Tumor_Endometrioid_CHTN-OE-082
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```

```
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   Ovarian_Tumor_Endometrioid_KU-OE-004     Ovarian_Tumor_Endometrioid_KU-OE-007
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     Ovarian_Tumor_Endometrioid_UM-OE-1T      Ovarian_Tumor_Mucinous_CHTN-OM-007
                                      1                                        1
       Ovarian_Tumor_Mucinous_CHTN-OM-017      Ovarian_Tumor_Mucinous_CHTN-OM-023
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                                     1                                           1
         Ovarian_Tumor_Serous_UM-OS-11                                     (Other)
                                     1                                           4

sample_type:
healthy   tumor
      4      99

histological_type:
clearcell       endo   mucinous        ser       NA's
        8         37         13         41          4

primarysite:
 ov
103

summarygrade:
high  low NA's
  38   36   29

summarystage:
early   late  NA's
   42     53      8

tumorstage:
    1     2     3     4 NA's
   35    11    44     9     4

substage:
    a     b     c     d NA's
   19     2    54     1    27

grade:
    1     2     3 NA's
   19    17    38    29

batch:
2002-04-03 2002-04-04 2002-04-09 2002-04-10 2002-04-12 2002-08-13 2002-08-15
         3          8          9          2          3          4          4
2002-08-22 2002-08-23 2002-08-27 2002-08-28 2002-08-29 2002-08-30 2002-09-11
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2006-01-27
         4

uncurated_author_metadata:
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title: Ovarian_Tumor_Mucinous_KU-OM-006///geo_accession: GSM139431///
title: Ovarian_Tumor_Mucinous_KU-OM-007///geo_accession: GSM139432///
title: Ovarian_Tumor_Mucinous_UM-OM-01///geo_accession: GSM13943
title: Ovarian_Tumor_Mucinous_UM-OM-03///geo_accession: GSM13943
title: Ovarian_Tumor_Serous_CHTN-OS-002///geo_accession: GSM1394
 title: Ovarian_Tumor_Serous_CHTN-OS-003///geo_accession: GSM139
title: Ovarian_Tumor_Serous_CHTN-OS-009///geo_accession: GSM1394
title: Ovarian_Tumor_Serous_CHTN-OS-010///geo_accession: GSM1394
title: Ovarian_Tumor_Serous_CHTN-OS-011///geo_accession: GSM1394
title: Ovarian_Tumor_Serous_CHTN-OS-018///geo_accession: GSM1394
title: Ovarian_Tumor_Serous_CHTN-OS-020///geo_accession: GSM1394
title: Ovarian_Tumor_Serous_CHTN-OS-029///geo_accession: GSM139442
title: Ovarian_Tumor_Serous_CHTN-OS-038///geo_accession: GSM139443
title: Ovarian_Tumor_Serous_CHTN-OS-041///geo_accession: GSM1394
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title: Ovarian_Tumor_Serous_CHTN-OS-046///geo_accession: GSM1394
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title: Ovarian_Tumor_Serous_CHTN-OS-053///geo_accession: GSM1394
title: Ovarian_Tumor_Serous_CHTN-OS-055///geo_accession: GSM1394
title: Ovarian_Tumor_Serous_CHTN-OS-068///geo_accession: GSM139450
title: Ovarian_Tumor_Serous_CHTN-OS-072///geo_accession: GSM1394
title: Ovarian_Tumor_Serous_CHTN-OS-081///geo_accession: GSM1394
title: Ovarian_Tumor_Serous_CHTN-OS-089///geo_accession: GSM1394
title: Ovarian_Tumor_Serous_CHTN-OS-093///geo_accession: GSM1394
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title: Ovarian_Tumor_Serous_CHTN-OS-098///geo_accession: GSM1394

title: Ovarian_Tumor_Serous_CU-OS-04///geo_accession: GSM

title: Ovarian_Tumor_Serous_CU-OS-05///geo_accession: GSM

title: Ovarian_Tumor_Serous_KU-OS-001///geo_accession: GSM139

title: Ovarian_Tumor_Serous_KU-OS-002///geo_accession: GSM139

title: Ovarian_Tumor_Serous_KU-OS-003///geo_accession: GSM1394

title: Ovarian_Tumor_Serous_KU-OS-005///geo_accession: GSM1394

title: Ovarian_Tumor_Serous_KU-OS-007///geo_accession: GSM1394

title: Ovarian_Tumor_Serous_KU-OS-009///geo_accession: GSM1394

title: Ovarian_Tumor_Serous_KU-OS-011///geo_accession: GSM1394

title: Ovarian_Tumor_Serous_KU-OS-012///geo_accession: GSM1394

title: Ovarian_Tumor_Serous_KU-OS-013///geo_accession: GSM1394

title: Ovarian_Tumor_Serous_KU-OS-015///geo_accession: GSM1394

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title: Ovarian_Tumor_Serous_KU-OS-021///geo_accession: GSM1394

title: Ovarian_Tumor_Serous_KU-OS-022///geo_accession: GSM1394

title: Ovarian_Tumor_Serous_UM-OS-02///geo_accession: GSM139

title: Ovarian_Tumor_Serous_UM-OS-07///geo_accession: GSM1

title: Ovarian_Tumor_Serous_UM-OS-09///geo_accession: GSM1

title: Ovarian_Tumor_Serous_UM-OS-10///geo_accession: GSM

title: Ovarian_Tumor_Serous_UM-OS-11///geo_accession: GSM1

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duplicates:
GSE6008.GSE6008_GSM139476///GSE6008.GSE6008_GSM139477
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GSE6008.GSE6008_GSM139476///GSE6008.GSE6008_GSM139478
                                 1
GSE6008.GSE6008_GSM139477///GSE6008.GSE6008_GSM139478
                                 1
```

```
                                                NA's
                                                 100
```

Value

An expression set

GSE6822   *Classification of ovarian tumor samples*

Description

Ouellet V, Provencher DM, Maugard CM, Le Page C, Ren F, Lussier C, Novak J, Ge B, Hudson TJ, Tonin PN, Mes-Masson A-M: Discrimination between serous low malignant potential and invasive epithelial ovarian tumors using molecular profiling. Oncogene 2005, 24:4672-4687.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Ouellet V, Provencher DM, Maugard CM, Le Page C, Ren F, Lus
  Laboratory: Ouellet, Mes-Masson 2005
  Contact information:
  Title: Classification of ovarian tumor samples
  URL:
  PMIDs: PMID unknown

  Abstract: A 40 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [Hu6800] Affymetrix Human Full Length HuGeneFL Array
   platform_shorttitle:
      Affymetrix Hu6800
   platform_summary:
      hu6800
   platform_manufacturer:
      Affymetrix
   platform_distribution:
      commercial
   platform_accession:
      GPL80
   version:
      2015-09-22 20:07:22

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: A28102_at AB000114_at ... Z97074_at (6407 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 6407 features, 66 samples
Platform type:
--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
Ovarian tumor AM053 Ovarian tumor AM122 Ovarian tumor AM124 Ovarian tumor AM125
                  1                   1                   1                   1
Ovarian tumor AM127 Ovarian tumor AM137 Ovarian tumor AM138 Ovarian tumor AM144
                  1                   1                   1                   1
Ovarian tumor AM178 Ovarian tumor AM179 Ovarian tumor AM182 Ovarian tumor AM195
                  1                   1                   1                   1
Ovarian tumor AM196 Ovarian tumor AM198 Ovarian tumor AM200 Ovarian tumor AM201
                  1                   1                   1                   1
Ovarian tumor AM202 Ovarian tumor AM203 Ovarian tumor AM204 Ovarian tumor AM207
                  1                   1                   1                   1
Ovarian tumor AM208 Ovarian tumor AM209 Ovarian tumor AM225 Ovarian tumor AM226
                  1                   1                   1                   1
Ovarian tumor AM228 Ovarian tumor AM233 Ovarian tumor AM250 Ovarian tumor AM252
                  1                   1                   1                   1
Ovarian tumor AM253 Ovarian tumor AM255 Ovarian tumor AM256 Ovarian tumor AM259
                  1                   1                   1                   1
Ovarian tumor AM261 Ovarian tumor AM263 Ovarian tumor AM268 Ovarian tumor AM269
                  1                   1                   1                   1
Ovarian tumor AM287 Ovarian tumor AM288 Ovarian tumor AM289 Ovarian tumor AM290
                  1                   1                   1                   1
Ovarian tumor AM292 Ovarian tumor AM293 Ovarian tumor AM294 Ovarian tumor AM311
                  1                   1                   1                   1
Ovarian tumor AM313 Ovarian tumor AM315 Ovarian tumor AM317 Ovarian tumor AM333
                  1                   1                   1                   1
Ovarian tumor AM335 Ovarian tumor AM339 Ovarian tumor AM341 Ovarian tumor AM344
                  1                   1                   1                   1
Ovarian tumor AM345 Ovarian tumor AM347 Ovarian tumor AM348 Ovarian tumor AM349
                  1                   1                   1                   1
Ovarian tumor AM354 Ovarian tumor AM364 Ovarian tumor AM367 Ovarian tumor AM368
                  1                   1                   1                   1
Ovarian tumor AM381 Ovarian tumor AM382 Ovarian tumor AM398 Ovarian tumor AM429
                  1                   1                   1                   1
Ovarian tumor AM431 Ovarian tumor AM438
                  1                   1

sample_type:
tumor
   66

histological_type:
      clearcell                endo                 mix           mucinous
             11                   7                   3                   1
            ser undifferentiated
             41                   3
```

```
primarysite:
ov
66

summarygrade:
high  low NA's
  40   15   11

grade:
   1    2    3 NA's
   1   14   40   11

batch:
2000-12-21 2001-05-03 2001-05-29 2001-06-12 2001-09-25 2001-09-26 2001-09-27
         1          1          3          3          1          5          8
2002-02-14 2002-04-17 2002-04-18 2002-07-18 2002-07-24 2002-10-20 2002-10-30
         4          1          9          7          4         10          5
2002-11-01 2002-11-13
         2          2

uncurated_author_metadata:
                                        title: Ovarian tumor AM053///geo_accessio

title: Ovarian tumor AM122///geo_accession: GSM157231///status: Public on Dec 31

                                        title: Ovarian tumor AM124///geo_accessio

                                        title: Ovarian tumor AM125///geo_accessio

              title: Ovarian tumor AM127///geo_accession: GSM157234///status: Pub

                              title: Ovarian tumor AM137///geo_accession: GSM157

                              title: Ovarian tumor AM138///geo_accession: GSM157

                                title: Ovarian tumor AM144///geo_accession: GSM

                                title: Ovarian tumor AM178///geo_accessio

                              title: Ovarian tumor AM179///geo_accession: GSM157

                                title: Ovarian tumor AM182///geo_accession: GSM

                                title: Ovarian tumor AM195///geo_accessio

                              title: Ovarian tumor AM196///geo_accession: GSM157

                                  title: Ovarian tumor AM198///geo_accession: G

                                title: Ovarian tumor AM200///geo_accession: GSM
```

```
                                        title: Ovarian tumor AM201///geo_accession: G

                                        title: Ovarian tumor AM202///geo_accession: G

                                    title: Ovarian tumor AM203///geo_accession: GSM

                                        title: Ovarian tumor AM204///geo_accession: G

                                        title: Ovarian tumor AM207///geo_accession: G

                                        title: Ovarian tumor AM208///geo_accession: G

                                        title: Ovarian tumor AM209///geo_accession: G

                                    title: Ovarian tumor AM225///geo_accession: GS

                                    title: Ovarian tumor AM226///geo_accession: GS

                                    title: Ovarian tumor AM228///geo_accession: GS

                                    title: Ovarian tumor AM233///geo_accession: GS

                                        title: Ovarian tumor AM250///geo_accessi

                                    title: Ovarian tumor AM252///geo_accession: GSM

                                title: Ovarian tumor AM253///geo_accession: GSM157

                                        title: Ovarian tumor AM255///geo_accessio

                                        title: Ovarian tumor AM256///geo_accessio

                                title: Ovarian tumor AM259///geo_accession: GSM15

                                        title: Ovarian tumor AM261///geo_accessio

                                        title: Ovarian tumor AM263///geo_accessio

                                        title: Ovarian tumor AM268///geo_accessio

                                        title: Ovarian tumor AM269///geo_accessio

            title: Ovarian tumor AM287///geo_accession: GSM157269///status: Publ

            title: Ovarian tumor AM288///geo_accession: GSM157270///status: Publ

                                        title: Ovarian tumor AM289///geo_accessio

                                        title: Ovarian tumor AM290///geo_accessio

            title: Ovarian tumor AM292///geo_accession: GSM157273///status: Publ
```

title: Ovarian tumor AM293///geo_accessio

title: Ovarian tumor AM294///geo_accessio

title: Ovarian tumor AM311///geo_accession: GSM

title: Ovarian tumor AM313///geo_accession:

title: Ovarian tumor AM315///geo_accession:

title: Ovarian tumor AM317///geo_accession: G

title: Ovarian tumor AM333///geo_accession: G

title: Ovarian tumor AM335///geo_accessio

title: Ovarian tumor AM339///geo_accessio

title: Ovarian tumor AM341///geo_accession

title: Ovarian tumor AM344///geo_accession: GS

title: Ovarian tumor AM345///geo_accessio

title: Ovarian tumor AM347///geo_accession: GSM157286///status: Pub

title: Ovarian tumor AM348///geo_accessio

title: Ovarian tumor AM349///geo_accessio

title: Ovarian tumor AM354///geo_accession: G

title: Ovarian tumor AM364///geo_accession: GSM15729

title: Ovarian tumor AM367///geo_accessio

title: Ovarian tumor AM368///geo_accessio

title: Ovarian tumor AM381///geo_accessio

title: Ovarian tumor AM382///geo_accessio

title: Ovarian tumor AM398///geo_accession: GSM157295///status: Public on Dec

title: Ovarian tumor AM429///geo_accession: GSM157296///status: Public on De

title: Ovarian tumor AM431///geo_accessio

title: Ovarian tumor AM438///geo_accessi

duplicates:

```
        Length    Class      Mode
          66 character character
```

Value

An expression set

GSE8842   *Analysis of gene expression in early-stage ovarian cancer.*

Description

Gene expression profile was analyzed in 68 stage I and 15 borderline ovarian cancers to determine
if different clinical features of stage I ovarian cancer such as histotype, grade, and survival are
related to differential gene expression.Tumors were obtained directly at surgery and immediately
frozen in liquid nitrogen until analysis. Glass arrays containing 16,000 genes were used in a dual-
color assay labeling protocol.Unsupervised analysis identified eight major patient partitions, one
of which was statistically associated to overall survival, grading, and histotype and another with
grading and histotype. Supervised analysis allowed detection of gene profiles clearly associated to
histotype or to degree of differentiation. No difference was found between borderline and grade
1 tumors. As to recurrence, a subset of genes able to differentiate relapsers from nonrelapsers
was identified. Among these, cyclin E and minichromosome maintenance protein 5 were found
particularly relevant, as their expression was inversely correlated to progression-free survival (P
= 0.00033 and 0.017, respectively).Specific molecular signatures define different histotypes and
prognosis of stage I ovarian cancer. Mucinous and clear cells histotypes can be distinguished from
the others regardless of tumor grade. Cyclin E and minichromosome maintenance protein 5, whose
expression was found previously to be related to a bad prognosis of advanced ovarian cancer, appear
to be potential prognostic markers in stage I ovarian cancer too, independent of other pathologic and
clinical variables.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Marchini S, Mariani P, Chiorino G, Marrazzo E, Bonomi R, Fr
  Laboratory: Marchini, D'Incalci 2008
  Contact information:
  Title: Analysis of gene expression in early-stage ovarian cancer.
  URL:
  PMIDs: 19047114

  Abstract: A 225 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      Agilent Human 1 cDNA Microarray (G4100A)
   platform_shorttitle:
      Agilent  G4100A cDNA
   platform_summary:
      hgug4100a
```

```
    platform_manufacturer:
        Agilent
    platform_distribution:
        custom-commerical
    platform_accession:
        GPL5689
    platform_technology:
        spotted DNA/cDNA
    version:
        2015-09-22 20:07:40

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1 2 ... 8864 (7809 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 7809 features, 83 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

      n   events   median  0.95LCL  0.95UCL
     83       15       NA       12       NA


--------------------------
Available sample meta-data:
--------------------------


alt_sample_name:
p0102bis sample_Ovarian tumor  p0103bis sample_Ovarian tumor
                            1                              1
p0112bis sample_Ovarian tumor  p0114bis sample_Ovarian tumor
                            1                              1
p0125bis sample_Ovarian tumor  p0128bis sample_Ovarian tumor
                            1                              1
p0143bis sample_Ovarian tumor  p0146bis sample_Ovarian tumor
                            1                              1
p0188bis sample_Ovarian tumor  p0208bis sample_Ovarian tumor
                            1                              1
p0210bis sample_Ovarian tumor  p0217bis sample_Ovarian tumor
                            1                              1
 p057bis sample_Ovarian tumor   p070bis sample_Ovarian tumor
                            1                              1
 p080bis sample_Ovarian tumor   p091bis sample_Ovarian tumor
                            1                              1
 p139bis sample_Ovarian tumor    p13bis sample_Ovarian tumor
                            1                              1
 p141bis sample_Ovarian tumor   p166bis sample_Ovarian tumor
                            1                              1
```

p171bis	sample_Ovarian tumor 1	p17bis	sample_Ovarian tumor 1
p183bis	sample_Ovarian tumor 1	p209bis	sample_Ovarian tumor 1
p212bis	sample_Ovarian tumor 1	p213bis	sample_Ovarian tumor 1
p243bis	sample_Ovarian tumor 1	p246bis	sample_Ovarian tumor 1
p261bis	sample_Ovarian tumor 1	p284bis	sample_Ovarian tumor 1
p293bis	sample_Ovarian tumor 1	p310bis	sample_Ovarian tumor 1
p31bis	sample_Ovarian tumor 1	p320bis	sample_Ovarian tumor 1
p331bis	sample_Ovarian tumor 1	p336bis	sample_Ovarian tumor 1
p350bis	sample_Ovarian tumor 1	p375bis	sample_Ovarian tumor 1
p382bis	sample_Ovarian tumor 1	p383bis	sample_Ovarian tumor 1
p386bis	sample_Ovarian tumor 1	p388bis	sample_Ovarian tumor 1
p398bis	sample_Ovarian tumor 1	p39bis	sample_Ovarian tumor 1
p401bis	sample_Ovarian tumor 1	p414bis	sample_Ovarian tumor 1
p421bis	sample_Ovarian tumor 1	p429bis	sample_Ovarian tumor 1
p433bis	sample_Ovarian tumor 1	p448bis	sample_Ovarian tumor 1
p455bis	sample_Ovarian tumor 1	p459bis	sample_Ovarian tumor 1
p462bis	sample_Ovarian tumor 1	p482bis	sample_Ovarian tumor 1
p487bis	sample_Ovarian tumor 1	p497bis	sample_Ovarian tumor 1
p502bis	sample_Ovarian tumor 1	p540bis	sample_Ovarian tumor 1
p541bis	sample_Ovarian tumor 1	p549bis	sample_Ovarian tumor 1
p550bis	sample_Ovarian tumor 1	p567bis	sample_Ovarian tumor 1
p56bis	sample_Ovarian tumor 1	p573bis	sample_Ovarian tumor 1
p586bis	sample_Ovarian tumor 1	p597bis	sample_Ovarian tumor 1
p616bis	sample_Ovarian tumor 1	p63bis	sample_Ovarian tumor 1
p646bis	sample_Ovarian tumor 1	p66bis	sample_Ovarian tumor 1
p68bis	sample_Ovarian tumor 1	p690bis	sample_Ovarian tumor 1

```
   p692bis sample_Ovarian tumor   p725bis sample_Ovarian tumor
                              1                                1
    p73bis sample_Ovarian tumor   p760bis sample_Ovarian tumor
                              1                                1
   p770bis sample_Ovarian tumor   p772bis sample_Ovarian tumor
                              1                                1
   p775bis sample_Ovarian tumor   p793bis sample_Ovarian tumor
                              1                                1
    p79bis sample_Ovarian tumor    p84bis sample_Ovarian tumor
                              1                                1
    p90bis sample_Ovarian tumor
                              1
```

```
sample_type:
borderline      tumor
        15         68
```

```
histological_type:
      clearcell               endo         mucinous            other
            16                 17               17                1
            ser undifferentiated
            31                  1
```

```
primarysite:
ov
83
```

```
summarygrade:
high   low NA's
  35    33   15
```

```
summarystage:
early
   83
```

```
tumorstage:
 1
83
```

```
substage:
 a  b  c
25  5 53
```

```
grade:
   1    2    3 NA's
  13   20   35   15
```

```
age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  21.00   43.00   50.00   51.25   61.00   87.00
```

```
recurrence_status:
```

```
    norecurrence    recurrence
            62            21

    days_to_death:
      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
         0    1192    2248    2273    3048    5824

    vital_status:
    deceased   living
         15       68

    uncurated_author_metadata:
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       title: p0103bis sample_Ovarian tumor///geo_accession: GSM214078///status: Publ

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                   title: p0114bis sample_Ovarian tumor///geo_accession: GSM

           title: p0125bis sample_Ovarian tumor///geo_accession: GSM214009///stat

              title: p0128bis sample_Ovarian tumor///geo_accession: GSM214030/

           title: p0143bis sample_Ovarian tumor///geo_accession: GSM214012///stat

           title: p0146bis sample_Ovarian tumor///geo_accession: GSM214033///stat

                 title: p0188bis sample_Ovarian tumor///geo_accession: GSM214041

            title: p0208bis sample_Ovarian tumor///geo_accession: GSM214011///sta

             title: p0210bis sample_Ovarian tumor///geo_accession: GSM214031///statu

                title: p0217bis sample_Ovarian tumor///geo_accession: GSM214008///

         title: p057bis sample_Ovarian tumor///geo_accession: GSM214064///status: P

               title: p070bis sample_Ovarian tumor///geo_accession: GSM214032///sta

             title: p080bis sample_Ovarian tumor///geo_accession: GSM214017///status

              title: p091bis sample_Ovarian tumor///geo_accession: GSM214024///statu

               title: p139bis sample_Ovarian tumor///geo_accession: GSM214047///sta

               title: p13bis sample_Ovarian tumor///geo_accession: GSM214043///stat

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title: p243bis sample_Ovarian tumor///geo_accession: GSM214042///status

title: p246bis sample_Ovarian tumor///geo_accession: GSM214055///status: Pu

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title: p310bis sample_Ovarian tumor///geo_accession: GSM214083///status: Public

title: p31bis sample_Ovarian tumor///geo_accession: GSM214019///status

title: p320bis sample_Ovarian tumor///geo_accession: GSM214020///statu

title: p331bis sample_Ovarian tumor///geo_accession: GSM214021///status: P

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title: p388bis sample_Ovarian tumor///geo_accession: GSM214059///stat

title: p398bis sample_Ovarian tumor///geo_accession: GSM214066///statu

title: p39bis sample_Ovarian tumor///geo_accession: GSM214076///status: Public

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title: p573bis sample_Ovarian tumor///geo_accession: GSM214060///status: P

title: p586bis sample_Ovarian tumor///geo_accession: GSM214061///status: P

title: p597bis sample_Ovarian tumor///geo_accession: GSM214088///status: Publ

title: p616bis sample_Ovarian tumor///geo_accession: GSM214071///status: P

title: p63bis sample_Ovarian tumor///geo_accession: GSM214027///status: Pu

title: p646bis sample_Ovarian tumor///geo_accession: GSM214087///status: Publi

title: p66bis sample_Ovarian tumor///geo_accession: GSM214045///status: Pu

title: p68bis sample_Ovarian tumor///geo_accession: GSM214046///status: P

title: p690bis sample_Ovarian tumor///geo_accession: GSM214072///stat

```
        title: p692bis sample_Ovarian tumor///geo_accession: GSM214073///status:

        title: p725bis sample_Ovarian tumor///geo_accession: GSM214057///status:

      title: p73bis sample_Ovarian tumor///geo_accession: GSM214028///status: Pu

            title: p760bis sample_Ovarian tumor///geo_accession: GSM214062///st

       title: p770bis sample_Ovarian tumor///geo_accession: GSM214089///status

       title: p772bis sample_Ovarian tumor///geo_accession: GSM214058///status:

      title: p775bis sample_Ovarian tumor///geo_accession: GSM214074///status:

      title: p793bis sample_Ovarian tumor///geo_accession: GSM214075///status:

    title: p79bis sample_Ovarian tumor///geo_accession: GSM214063///status: Pu

      title: p84bis sample_Ovarian tumor///geo_accession: GSM214039///status: P

  title: p90bis sample_Ovarian tumor///geo_accession: GSM214077///status: Public
```

Value

An expression set

GSE9891   *Novel molecular subtypes of serous and endometrioid ovarian cancer*
                                 linked to clinical outcome.

Description

The study aim to identify novel molecular subtypes of ovarian cancer by gene expression profiling with linkage to clinical and pathologic features.Microarray gene expression profiling was done on 285 serous and endometrioid tumors of the ovary, peritoneum, and fallopian tube. K-means clustering was applied to identify robust molecular subtypes. Statistical analysis identified differentially expressed genes, pathways, and gene ontologies. Laser capture microdissection, pathology review, and immunohistochemistry validated the array-based findings. Patient survival within k-means groups was evaluated using Cox proportional hazards models. Class prediction validated k-means groups in an independent dataset. A semisupervised survival analysis of the array data was used to compare against unsupervised clustering results.Optimal clustering of array data identified six molecular subtypes. Two subtypes represented predominantly serous low malignant potential and low-grade endometrioid subtypes, respectively. The remaining four subtypes represented higher grade and advanced stage cancers of serous and endometrioid morphology. A novel subtype of high-grade serous cancers reflected a mesenchymal cell type, characterized by overexpression of N-cadherin and P-cadherin and low expression of differentiation markers, including CA125 and MUC1. A poor prognosis subtype was defined by a reactive stroma gene expression signature, correlating with extensive desmoplasia in such samples. A similar poor prognosis signature could be

found using a semisupervised analysis. Each subtype displayed distinct levels and patterns of immune cell infiltration. Class prediction identified similar subtypes in an independent ovarian dataset with similar prognostic trends.Gene expression profiling identified molecular subtypes of ovarian cancer of biological and clinical importance.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Tothill RW, Tinker AV, George J, Brown R, Fox SB, Lade S, J
  Laboratory: Tothill, Bowtell 2008
  Contact information:
  Title: Novel molecular subtypes of serous and endometrioid ovarian cancer link
  URL:
  PMIDs: 18698038

  Abstract: A 243 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [HG-U133_Plus_2] Affymetrix Human Genome U133 Plus 2.0 Array
   platform_shorttitle:
      Affymetrix HG-U133Plus2
   platform_summary:
      hgu133plus2
   platform_manufacturer:
      Affymetrix
   platform_distribution:
      commercial
   platform_accession:
      GPL570
   version:
      2015-09-22 20:16:32

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
    (42447 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 42447 features, 285 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

   7 observations deleted due to missingness
       n  events  median 0.95LCL 0.95UCL
 278.00  113.00    3.95    3.53    5.01
```

```
--------------------------
Available sample meta-data:
--------------------------


alt_sample_name:
   X129    X146    X152  X20019  X20025  X20027  X20031  X20032  X20041  X20046
      1       1       1       1       1       1       1       1       1       1
 X20074  X22002  X22012  X22013  X22020  X22023  X22027  X22029  X22031  X22037
      1       1       1       1       1       1       1       1       1       1
 X22046  X22047  X22048  X22057  X22058   X2219   X2227  X23026  X23030  X23036
      1       1       1       1       1       1       1       1       1       1
 X23043  X23052  X23053  X23055  X23066  X23070  X23074  X23077  X23084  X23098
      1       1       1       1       1       1       1       1       1       1
 X23102  X23106  X23116  X23128  X23139  X23143  X23162  X23165  X23167  X23170
      1       1       1       1       1       1       1       1       1       1
 X23172  X23177  X23178  X23182  X23187  X23197  X23202  X23204  X23210  X23212
      1       1       1       1       1       1       1       1       1       1
 X23213  X23221  X26047    X261  X27006  X27098  X32013  X32022  X32032  X32034
      1       1       1       1       1       1       1       1       1       1
 X32048  X32049  X32054  X32055  X32089  X32098  X32103  X32117  X34019  X34049
      1       1       1       1       1       1       1       1       1       1
 X34066  X34078  X34080  X34085  X34086  X34090  X34102  X34103  X34111  X34113
      1       1       1       1       1       1       1       1       1       1
 X34117  X34125  X34165  X34168  X34172  X34186  X34202  X34207  X34801 (Other)
      1       1       1       1       1       1       1       1       1     186

sample_type:
tumor
  285

histological_type:
 endo other   ser
   20     1   264

primarysite:
   ft other    ov
    8    34   243

arrayedsite:
   ft other    ov
    2    83   200

summarygrade:
high  low NA's
 163  116    6

summarystage:
early  late  NA's
   42   240     3

tumorstage:
   1    2    3    4 NA's
```

```
   24   18  218   22    3

substage:
   a    b    c NA's
  26   19  212   28

grade:
   1    2    3 NA's
  19   97  163    6

age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
  22.00   53.00   59.00   59.62   68.00   80.00       3

pltx:
   n    y NA's
  39  243    3

tax:
   n    y NA's
  87  195    3

neo:
   n    y NA's
 264   18    3

days_to_tumor_recurrence:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
    0.0   300.0   450.0   618.9   810.0  4980.0      10

recurrence_status:
norecurrence    recurrence          NA's
         94           188             3

days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
    0.0   547.5   855.0   955.1  1252.0  6420.0       7

vital_status:
deceased    living     NA's
     113       169        3

debulking:
   optimal suboptimal       NA's
       160         88         37

batch:
2004-12-03 2004-12-23 2005-01-12 2005-01-17 2005-01-24 2005-01-31 2005-02-21
         3          4          7          7          8         10         10
2005-03-17 2005-05-05 2005-05-09 2005-05-25 2005-05-27 2005-05-30 2005-06-02
         2          1          1          2          3          3          6
2005-06-06 2005-06-08 2005-06-16 2005-06-17 2005-06-24 2005-07-06 2005-07-15
```

```
         4          5          3          5          6          2          9
2005-07-20 2005-07-29 2005-08-03 2005-08-05 2005-08-18 2005-08-24 2005-08-26
         7          5          6          3          4          8          4
2005-09-09 2005-09-14 2005-09-16 2005-09-21 2005-10-05 2005-10-26 2005-10-28
         4          6          6          4          5          2          4
2005-11-04 2005-11-09 2005-11-11 2005-11-23 2005-12-15 2005-12-21 2006-01-20
         6          3          7          4          7          8          3
2006-01-31 2006-02-08 2006-02-28 2006-04-05 2006-04-06 2006-04-12 2006-04-13
         7          3          3          7          3          7          4
2006-04-28 2006-05-03 2006-06-06 2006-06-07 2006-06-22 2006-07-07 2006-07-19
         6          9          6          3          9          4          7
```

uncurated_author_metadata:
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      title: X146///geo_accession: GSM250000///status: Public on Mar 01 200

   title: X152///geo_accession: GSM249999///status: Public on Mar 01 2008///su

      title: X20019///geo_accession: GSM249998///status: Public on Mar 01 2

  title: X20025///geo_accession: GSM249997///status: Public on Mar 01 2008///s

      title: X20027///geo_accession: GSM249996///status: Public on Mar 01 2

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  title: X22013///geo_accession: GSM249989///status: Public on Mar 01 2008///s

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     title: X22029///geo_accession: GSM249986///status: Public on Mar 01

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title: X34168///geo_accession: GSM249914///status: Public on Mar 01 2008//

title: X34172///geo_accession: GSM249913///status: Public on Mar 01 20

title: X34186///geo_accession: GSM249912///status: Public on Mar 01 200

title: X34202///geo_accession: GSM249911///status: Public on Mar 01 2008///

title: X34207///geo_accession: GSM249910///status: Public on Mar 01 2008

```
           title: X34801///geo_accession: GSM249909///status: Public on Mar 01 200
```

Value

An expression set

```
loadOvarianDatasets
```
Function to load ovarian cancer SummarizedExperiment objects from the Experiment Hub

---

Description

This function returns ovarian cancer datasets from the hub and a vector of patients from the datasets that are duplicates based on a spearman correlation > 0.98

Usage

```
loadOvarianDatasets(
  rescale = FALSE,
  minNumberGenes = 0,
  minNumberEvents = 0,
  minSampleSize = 0,
  keepCommonOnly = FALSE,
  imputeMissing = FALSE,
  removeDuplicates = FALSE
)
```

Arguments

rescale   apply centering and scaling to the expression sets (default FALSE)

minNumberGenes

an integer specifying to remove expression sets with less genes than this number (default 0)

minNumberEvents

an integer specifying how man survival events must be in the dataset to keep the dataset (default 0)

minSampleSize

an integer specifying the minimum number of patients required in a summarizedExperiment (default 0)

keepCommonOnly

remove entrezIDs not common to all datasets (default FALSE)

imputeMissing

remove patients from datasets with missing expression values

removeDuplicates

remove patients with a Spearman correlation greater than or equal to 0.98 with other patient expression profiles (default TRUE)

Value

a list with 2 elements. The First element named summarizedExperiments contains the datasets. The second element named duplicates contains a vector with patient IDs for the duplicate patients (those with Spearman correlation greater than or equal to 0.98 with other patient expression profiles).

Examples

```
experimentsAndDups = loadOvarianDatasets()
```

---

loadOvarianEsets	*Function to load ovarian cancer expression sets from the Experiment Hub*

Description

This function returns ovarian cancer datasets from the hub and a vector of patients from the datasets that are most likely duplicates

Usage

```
loadOvarianEsets(
  removeDuplicates = TRUE,
  quantileCutoff = 0,
  rescale = FALSE,
  minNumberGenes = 0,
  minNumberEvents = 0,
  minSampleSize = 0,
  removeRetracted = TRUE,
  removeSubsets = TRUE,
  keepCommonOnly = FALSE,
  imputeMissing = FALSE
)
```

Arguments

removeDuplicates

remove patients with a Spearman correlation greater than or equal to 0.98 with other patient expression profiles (default TRUE)

quantileCutoff

A nueric between 0 and 1 specifying to remove genes with standard deviation below the required quantile (default 0)

rescale apply centering and scaling to the expression sets (default FALSE)

minNumberGenes

an integer specifying to remove expression sets with less genes than this number (default 0)

minNumberEvents

an integer specifying how man survival events must be in the dataset to keep the dataset (default 0)

`minSampleSize`

> an integer specifying the minimum number of patients required in an eset (default 0)

`removeRetracted`

> remove datasets from retracted papers (default TRUE, currently just PMID17290060 dataset)

`removeSubsets`

> remove datasets that are a subset of other datasets (defeault TRUE, currently just PMID19318476)

`keepCommonOnly`

> remove probes not common to all datasets (default FALSE)

`imputeMissing`

> remove patients from datasets with missing expression values

Value

a list with 2 elements. The First element named esets contains the datasets. The second element named duplicates contains a vector with patient IDs for the duplicate patients (those with Spearman correlation greater than or equal to 0.98 with other patient expression profiles).

Examples

```
esetsAndDups = loadOvarianEsets()
```

PMID15897565   *Patterns of gene expression that characterize long-term survival in advanced stage serous ovarian cancers.*

Description

A better understanding of the underlying biology of invasive serous ovarian cancer is critical for the development of early detection strategies and new therapeutics. The objective of this study was to define gene expression patterns associated with favorable survival.RNA from 65 serous ovarian cancers was analyzed using Affymetrix U133A microarrays. This included 54 stage III/IV cases (30 short-term survivors who lived <3 years and 24 long-term survivors who lived >7 years) and 11 stage I/II cases. Genes were screened on the basis of their level of and variability in expression, leaving 7,821 for use in developing a predictive model for survival. A composite predictive model was developed that combines Bayesian classification tree and multivariate discriminant models. Leave-one-out cross-validation was used to select and evaluate models.Patterns of genes were identified that distinguish short-term and long-term ovarian cancer survivors. The expression model developed for advanced stage disease classified all 11 early-stage ovarian cancers as long-term survivors. The MAL gene, which has been shown to confer resistance to cancer therapy, was most highly overexpressed in short-term survivors (3-fold compared with long-term survivors, and 29-fold compared with early-stage cases). These results suggest that gene expression patterns underlie differences in outcome, and an examination of the genes that provide this discrimination reveals that many are implicated in processes that define the malignant phenotype.Differences in survival of advanced ovarian cancers are reflected by distinct patterns of gene expression. This biological distinction is further emphasized by the finding that early-stage cancers share expression patterns with the advanced stage long-term survivors, suggesting a shared favorable biology.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Berchuck A, Iversen ES, Lancaster JM, Pittman J, Luo J, Lee
  Laboratory: Berchuck, Marks 2005
  Contact information:
  Title: Patterns of gene expression that characterize long-term survival in adv
  URL:
  PMIDs: 15897565

  Abstract: A 258 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [HG-U133A] Affymetrix Human Genome U133A Array
   platform_shorttitle:
      Affymetrix HG-U133A
   platform_summary:
      hgu133a
   platform_manufacturer:
      Affymetrix
   platform_distribution:
      commercial
   platform_accession:
      GPL96
   warnings:
      These samples are a subset of PMID17290060.
   version:
      2015-09-22 20:17:53

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
    (20967 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 20967 features, 63 samples
Platform type:
---------------------------
Available sample meta-data:
---------------------------

alt_sample_name:
   Min. 1st Qu.  Median   Mean 3rd Qu.    Max.
   1761    1828    1907    2001    2032    2536

sample_type:
tumor
```

```
    63

histological_type:
ser
 63

primarysite:
ov
63

summarygrade:
high   low NA's
  25    37    1

summarystage:
early  late
   11    52

tumorstage:
 1  2  3  4
 7  4 48  4

grade:
   1    2    3    4 NA's
   2   35   24    1    1

age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  33.00   52.50   59.00   59.21   67.00   79.00

os_binary:
 long short  NA's
   24    28    11

debulking:
   optimal suboptimal        NA's
        24          28          11

batch:
2002-09-20 2002-10-23 2002-11-12 2002-12-16 2002-12-21 2003-01-03 2003-05-30
        15          9          10           1           3          11          13
2003-07-02
         1

uncurated_author_metadata:
 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1761///Cancer.Type: Early

 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1762///Cancer.Type: Early

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1763///Cancer.Type: Early

 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1764///Cancer.Type: Early
```

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1765///Cancer.Type: Early

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1772///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1773///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1774///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1775///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1776///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1777///Cancer.Type:

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Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1779///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1780///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1781///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1828///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1829///Cancer.Type: S

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1830///Cancer.Type: S

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1831///Cancer.Type: S

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1832///Cancer.Type: S

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1833///Cancer.Type: S

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1834///Cancer.Type: S

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1835///Cancer.Type: S

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1836///Cancer.Type: S

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1900///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1901///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1902///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1903///Cancer.Type: Early

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1904///Cancer.Type:

Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1905///Cancer.Type: S

```
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1906///Cancer.Type: S
 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1907///Cancer.Type:
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1908///Cancer.Type: S
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1909///Cancer.Type: S
 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 1989///Cancer.Type:
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2003///Cancer.Type: S
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2004///Cancer.Type: S
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2005///Cancer.Type: S
 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2019///Cancer.Type:
 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2020///Cancer.Type:
 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2021///Cancer.Type:
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2026///Cancer.Type: S
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2027///Cancer.Type: S
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2028///Cancer.Type: S
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2029///Cancer.Type: S
  Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2030///Cancer.Type:
 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2031///Cancer.Type:
 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2032///Cancer.Type:
 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2033///Cancer.Type:
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2390///Cancer.Type: Early
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2391///Cancer.Type: Early
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2392///Cancer.Type: Early
Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2393///Cancer.Type: Early
  Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2394///Cancer.Type:
 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2395///Cancer.Type:
 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2396///Cancer.Type: S
```

```
      Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2397///Cancer.Type: S

        Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2398///Cancer.Type:

      Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2399///Cancer.Type: S

      Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2400///Cancer.Type: S

      Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2401///Cancer.Type: S

        Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2402///Cancer.Type:

 Genome.ID..File.name....0074_GenomeID_h133a_2802.cel: 2536///Cancer.Type: Early
```

Value

An expression set

PMID17290060	*An integrated genomic-based approach to individualized treatment of patients with advanced-stage ovarian cancer.*

Description

The purpose of this study was to develop an integrated genomic-based approach to personalized treatment of patients with advanced-stage ovarian cancer. We have used gene expression profiles to identify patients likely to be resistant to primary platinum-based chemotherapy and also to identify alternate targeted therapeutic options for patients with de novo platinum-resistant disease.A gene expression model that predicts response to platinum-based therapy was developed using a training set of 83 advanced-stage serous ovarian cancers and tested on a 36-sample external validation set. In parallel, expression signatures that define the status of oncogenic signaling pathways were evaluated in 119 primary ovarian cancers and 12 ovarian cancer cell lines. In an effort to increase chemotherapy sensitivity, pathways shown to be activated in platinum-resistant cancers were subject to targeted therapy in ovarian cancer cell lines.Gene expression profiles identified patients with ovarian cancer likely to be resistant to primary platinum-based chemotherapy with greater than 80% accuracy. In patients with platinum-resistant disease, we identified expression signatures consistent with activation of Src and Rb/E2F pathways, components of which were successfully targeted to increase response in ovarian cancer cell lines.We have defined a strategy for treatment of patients with advanced-stage ovarian cancer that uses therapeutic stratification based on predictions of response to chemotherapy, coupled with prediction of oncogenic pathway deregulation, as a method to direct the use of targeted agents.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Dressman HK, Berchuck A, Chan G, Zhai J, Bild A, Sayer R, C
  Laboratory: Dressman, Lancaster 2007
```

```
Contact information:
Title: An integrated genomic-based approach to individualized treatment of pat
URL:
PMIDs: 17290060

Abstract: A 223 word abstract is available. Use 'abstract' method.
Information is available on: preprocessing
notes:
 platform_title:
    [HG-U133A] Affymetrix Human Genome U133A Array
 platform_shorttitle:
    Affymetrix HG-U133A
 platform_summary:
    hgu133a
 platform_manufacturer:
    Affymetrix
 platform_distribution:
    commercial
 platform_accession:
    GPL96
 warnings:
    This paper has been retracted.
 version:
    2015-09-22 20:19:16
```

```
featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
    (20967 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 20967 features, 117 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

      n   events  median 0.95LCL 0.95UCL
 117.00   67.00    5.26    2.79    7.48


---------------------------
Available sample meta-data:
---------------------------


alt_sample_name:
    1024   1447   1451   1504   1526   1552   1578   1590   1615   1623
       1      1      1      1      1      1      1      1      1      1
    1665   1674   1675   1774   1784   1834   1846   1877   1913   1929
       1      1      1      1      1      1      1      1      1      1
    2046   2063   2064   2075   2198   2204   2324   2419   2422   2424
```

```
       1       1       1       1       1       1       1       1       1       1
    2465    2476    2479    2505    2542    2573    2673    2739    2802    2849
       1       1       1       1       1       1       1       1       1       1
    2895    2967    2981    2999    3018    3090    3102    3107    3142     860
       1       1       1       1       1       1       1       1       1       1
     872     922   D1805   D1837   D1859   D2098   D2208   D2332   D2342   D2358
       1       1       1       1       1       1       1       1       1       1
   D2421   D2432   D2433   D2480   D2557   D2559   D2560   D2572   D2575   D2576
       1       1       1       1       1       1       1       1       1       1
   D2581   D2603   D2611   D2629   D2640   D2648   D2668   D2689   D2691   D2700
       1       1       1       1       1       1       1       1       1       1
   D2726   D2727   D2733   D2738   D2749   D2776   D2792   M1054   M1055    M120
       1       1       1       1       1       1       1       1       1       1
   M1241   M1390   M1503   M1572     M17   M1891   M2070   M2097   M2184 (Other)
       1       1       1       1       1       1       1       1       1      18

sample_type:
tumor
  117

histological_type:
ser
117

primarysite:
 ov
117

summarygrade:
high  low NA's
  57   57    3

summarystage:
early  late  NA's
    1   115     1

tumorstage:
   2    3    4 NA's
   1   98   17    1

grade:
   1    2    3    4 NA's
   4   53   56    1    3

days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
     30     510    1020    1496    2220    5550

vital_status:
deceased   living
      67       50
```

```
primary_therapy_outcome_success:
  completeresponse progressivedisease
                85                  32

debulking:
   optimal suboptimal
        63        54

batch:
2002-09-20 2002-10-23 2002-11-12 2002-12-16 2002-12-21 2003-01-03 2003-05-30
        10          8          9          1          3         11         10
2004-03-09 2004-03-16 2004-04-20 2004-05-18 2004-05-21 2004-05-27 2004-06-22
        16          6          5         15          7          7          1
2004-06-23
         8

uncurated_author_metadata:
                             OVC.TumorID: 1024///Survival: 13///X0...alive...1...dead
                             OVC.TumorID: 1447///Survival: 75///X0...alive...1...dead:
                             OVC.TumorID: 1451///Survival: 132///X0...alive...1...dead
                              OVC.TumorID: 1504///Survival: 108///X0...alive...1...dea
                             OVC.TumorID: 1526///Survival: 74///X0...alive...1...dead:
                             OVC.TumorID: 1552///Survival: 33///X0...alive...1...dead:
                             OVC.TumorID: 1578///Survival: 33///X0...alive...1...dead:
                              OVC.TumorID: 1590///Survival: 148///X0...alive...1...dea
                             OVC.TumorID: 1615///Survival: 13///X0...alive...1...dead:
                              OVC.TumorID: 1623///Survival: 147///X0...alive...1...dea
                             OVC.TumorID: 1665///Survival: 15///X0...alive...1...dead:
                              OVC.TumorID: 1674///Survival: 18///X0...alive...1...dead
                            OVC.TumorID: 1675///Survival: 34///X0...alive...1...dead:
                            OVC.TumorID: 1774///Survival: 22///X0...alive...1...dead:
                              OVC.TumorID: 1784///Survival: 78///X0...alive...1...dead
                             OVC.TumorID: 1834///Survival: 118///X0...alive...1...dead
                              OVC.TumorID: 1846///Survival: 142///X0...alive...1...dea
                              OVC.TumorID: 1877///Survival: 119///X0...alive...1...dea
```

```
OVC.TumorID: 1913///Survival: 32///X0...alive...1...dead:
OVC.TumorID: 1929///Survival: 134///X0...alive...1...dea
OVC.TumorID: 2046///Survival: 127///X0...alive...1...dea
OVC.TumorID: 2063///Survival: 16///X0...alive...1...dead:
OVC.TumorID: 2064///Survival: 27///X0...alive...1...dead: 1///
OVC.TumorID: 2075///Survival: 87///X0...alive...1...dea
OVC.TumorID: 2198///Survival: 91///X0...alive...1...dea
OVC.TumorID: 2204///Survival: 118///X0...alive...1...dea
OVC.TumorID: 2324///Survival: 98///X0...alive...1...dea
OVC.TumorID: 2419///Survival: 107///X0...alive...1...dead
OVC.TumorID: 2422///Survival: 20///X0...alive...1...dea
OVC.TumorID: 2424///Survival: 16///X0...alive...1...dead:
OVC.TumorID: 2465///Survival: 17///X0...alive...1...dead:
OVC.TumorID: 2476///Survival: 86///X0...alive...1...dead:
OVC.TumorID: 2479///Survival: 95///X0...alive...1...dead:
OVC.TumorID: 2505///Survival: 95///X0...alive...1...dead
OVC.TumorID: 2542///Survival: 36///X0...alive...1...dea
OVC.TumorID: 2573///Survival: 7///X0...alive...1...dead: 1
OVC.TumorID: 2673///Survival: 74///X0...alive...1...dead:
OVC.TumorID: 2739///Survival: 67///X0...alive...1...dead
OVC.TumorID: 2802///Survival: 24///X0...alive...1...dead:
OVC.TumorID: 2849///Survival: 23///X0...alive...1...dead:
OVC.TumorID: 2895///Survival: 9///X0...alive...1...dead:
OVC.TumorID: 2967///Survival: 22///X0...alive...1...dead
OVC.TumorID: 2981///Survival: 6///X0...alive...1...dead:
OVC.TumorID: 2999///Survival: 16///X0...alive...1...dead:
```

```
OVC.TumorID: 3018///Survival: 16///X0...alive...1...dead:
OVC.TumorID: 3090///Survival: 16///X0...alive...1...dead:
OVC.TumorID: 3102///Survival: 10///X0...alive...1...dead: 1
OVC.TumorID: 3107///Survival: 31///X0...alive...1...dead:
OVC.TumorID: 3142///Survival: 18///X0...alive...1...dead
OVC.TumorID: 860///Survival: 17///X0...alive...1...dead:
OVC.TumorID: 872///Survival: 185///X0...alive...1...dead:
OVC.TumorID: 922///Survival: 183///X0...alive...1...dea
OVC.TumorID: D1805///Survival: 9///X0...alive...1...dead:
OVC.TumorID: D1837///Survival: 83///X0...alive...1...dead:
OVC.TumorID: D1859///Survival: 110///X0...alive...1...dead
OVC.TumorID: D2098///Survival: 42///X0...alive...1...dead
OVC.TumorID: D2208///Survival: 2///X0...alive...1...dead: 0
OVC.TumorID: D2332///Survival: 27///X0...alive...1...dead
OVC.TumorID: D2342///Survival: 20///X0...alive...1...dead:
OVC.TumorID: D2358///Survival: 9///X0...alive...1...dead
OVC.TumorID: D2421///Survival: 12///X0...alive...1...dead
OVC.TumorID: D2432///Survival: 34///X0...alive...1...dea
OVC.TumorID: D2433///Survival: 49///X0...alive...1...dead:
OVC.TumorID: D2480///Survival: 34///X0...alive...1...dead:
OVC.TumorID: D2557///Survival: 62///X0...alive...1...dead:
OVC.TumorID: D2559///Survival: 5///X0...alive...1...dead:
OVC.TumorID: D2560///Survival: 91///X0...alive...1...dead:
OVC.TumorID: D2572///Survival: 37///X0...alive...1...dead
OVC.TumorID: D2575///Survival: 33///X0...alive...1...dead:
OVC.TumorID: D2576///Survival: 17///X0...alive...1...dead:
```

OVC.TumorID: D2581///Survival: 63///X0...alive...1...dead

OVC.TumorID: D2603///Survival: 42///X0...alive...1...dead:

OVC.TumorID: D2611///Survival: 2///X0...alive...1...dead:

OVC.TumorID: D2629///Survival: 36///X0...alive...1...dead

OVC.TumorID: D2640///Survival: 1///X0...alive...1...dead: 1

OVC.TumorID: D2648///Survival: 35///X0...alive...1...dead:

OVC.TumorID: D2668///Survival: 40///X0...alive...1...d

OVC.TumorID: D2689///Survival: 45///X0...alive...1...dead:

OVC.TumorID: D2691///Survival: 63///X0...alive...1...dead:

OVC.TumorID: D2700///Survival: 74///X0...alive...1...dead:

OVC.TumorID: D2726///Survival: 71///X0...alive...1...dead:

OVC.TumorID: D2727///Survival: 53///X0...alive...1...dead

OVC.TumorID: D2733///Survival: 55///X0...alive...1...dead:

OVC.TumorID: D2738///Survival: 68///X0...alive...1...dead:

OVC.TumorID: D2749///Survival: 24///X0...alive...1...dead:

OVC.TumorID: D2776///Survival: 10///X0...alive...1...dead:

OVC.TumorID: D2792///Survival: 16///X0...alive...1...dead:

OVC.TumorID: M1054///Survival: 101///X0...alive...1...dead: 0///As

OVC.TumorID: M1055///Survival: 13///X0...alive...1...dead: 0///Assig

OVC.TumorID: M120///Survival: 35///X0...alive...1...dead: 1///Ass

OVC.TumorID: M1241///Survival: 95///X0...alive...1...dead: 0///Assigne

OVC.TumorID: M1390///Survival: 46///X0...alive...1...dead:

OVC.TumorID: M1503///Survival: 53///X0...alive...1...dead: 1///Ass

OVC.TumorID: M1572///Survival: 22///X0...alive...1...dead: 1///Assi

OVC.TumorID: M17///Survival: 17///X0...alive...1...dead: 0///Assigned.

OVC.TumorID: M1891///Survival: 12///X0...alive...1...dead: 0///Assigned.Stage: 4

OVC.TumorID: M2070///Survival: 65///X0...alive...1...dead: 0///Assigne

OVC.TumorID: M2097///Survival: 58///X0...alive...1...dead: 0///A

OVC.TumorID: M2184///Survival: 34///X0...alive...1...dead: 0///Assi

Value

An expression set

| PMID19318476 | *Microarray analysis of early stage serous ovarian cancers shows profiles predictive of favorable outcome.* |

Description

Although few women with advanced serous ovarian cancer are cured, detection of the disease at an early stage is associated with a much higher likelihood of survival. We previously used gene expression array analysis to distinguish subsets of advanced cancers based on disease outcome. In the present study, we report on gene expression of early-stage cancers and validate our prognostic model for advanced-stage cancers.Frozen specimens from 39 stage I/II, 42 stage III/IV, and 20 low malignant potential cancers were obtained from four different sites. A linear discriminant model was used to predict survival based upon array data.We validated the late-stage survival model and show that three of the most differentially expressed genes continue to be predictive of outcome. Most early-stage cancers (38 of 39 invasive, 15 of 20 low malignant potential) were classified as long-term survivors (median probabilities 0.97 and 0.86). MAL, the most differentially expressed gene, was further validated at the protein level and found to be an independent predictor of poor survival in an unselected group of advanced serous cancers (P = 0.0004).These data suggest that serous ovarian cancers detected at an early stage generally have a favorable underlying biology similar to advanced-stage cases that are long-term survivors. Conversely, most late-stage ovarian cancers seem to have a more virulent biology. This insight suggests that if screening approaches are to succeed it will be necessary to develop approaches that are able to detect these virulent cancers at an early stage.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Berchuck A, Iversen ES, Luo J, Clarke JP, Horne H, Levine D
  Laboratory: Berchuck, Lancaster 2009
  Contact information:
  Title: Microarray analysis of early stage serous ovarian cancers shows profile
  URL:
  PMIDs: 19318476

  Abstract: A 241 word abstract is available. Use 'abstract' method.
```

```
   Information is available on: preprocessing
   notes:
    platform_title:
       [HG-U133A] Affymetrix Human Genome U133A Array
    platform_shorttitle:
       Affymetrix HG-U133A
    platform_summary:
       hgu133a
    platform_manufacturer:
       Affymetrix
    platform_distribution:
       commercial
    platform_accession:
       GPL96
    warnings:
       These samples are a subset of PMID17290060.
    version:
       2015-09-22 20:20:30

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-HUMISGF3A/M97935_MB_at
    (20967 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 20967 features, 42 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

     n   events  median 0.95LCL 0.95UCL
 42.00   22.00    2.79    2.30      NA


--------------------------
Available sample meta-data:
--------------------------

alt_sample_name:
D1462 D1805 D2171 D2208 D2247 D2332 D2432 D2480 D2559 D2560 D2575 D2576 D2611
    1     1     1     1     1     1     1     1     1     1     1     1     1
D2629 D2640 D2648 D2736 D2749 D2776 D2792 M1025 M1054 M1055  M120 M1241 M1572
    1     1     1     1     1     1     1     1     1     1     1     1     1
  M17 M1777 M1891 M2184 M2515 M2807 M3035  M337 M3484  M359 M4161  M444  M503
    1     1     1     1     1     1     1     1     1     1     1     1     1
M5668 M5775  M806
    1     1     1


sample_type:
tumor
```

```
   42

histological_type:
ser
 42

summarygrade:
high  low NA's
  24   17    1

summarystage:
early  late  NA's
    2    39     1

tumorstage:
   1    2    3    4 NA's
   1    1   29   10    1

substage:
   a    b    c NA's
   1    1   29   11

grade:
   1    2    3 NA's
   2   15   24    1

age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
  33.00   55.00   62.00   61.46   70.00   81.00       1

recurrence_status:
norecurrence    recurrence
          6            36

days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   30.0   367.5   825.0  1105.0  1050.0  3420.0

vital_status:
deceased   living
      22       20

debulking:
   optimal suboptimal       NA's
        20          21          1

batch:
2004-03-09 2004-03-16 2004-04-20 2004-05-18 2004-05-21 2004-05-27 2004-06-22
        14          3          4          8          6          5          1
2004-06-23
         1
```

```
uncurated_author_metadata:
```

```
Tumor: D2560///NEW.Response: CR///SHORT.LONG: NA///AgeDx: 60///DateDx: 5/14/1996
```

Value

An expression set

TCGA.RNASeqV2	*Integrated genomic analyses of ovarian carcinoma.*

Description

A catalogue of molecular aberrations that cause ovarian cancer is critical for developing and deploying therapies that will improve patients' lives. The Cancer Genome Atlas project has analysed messenger RNA expression, microRNA expression, promoter methylation and DNA copy number in 489 high-grade serous ovarian adenocarcinomas and the DNA sequences of exons from coding genes in 316 of these tumours. Here we report that high-grade serous ovarian cancer is characterized by TP53 mutations in almost all tumours (96%); low prevalence but statistically recurrent somatic

mutations in nine further genes including NF1, BRCA1, BRCA2, RB1 and CDK12; 113 signifi-
cant focal DNA copy number aberrations; and promoter methylation events involving 168 genes.
Analyses delineated four ovarian cancer transcriptional subtypes, three microRNA subtypes, four
promoter methylation subtypes and a transcriptional signature associated with survival duration,
and shed new light on the impact that tumours with BRCA1/2 (BRCA1 or BRCA2) and CCNE1
aberrations have on survival. Pathway analyses suggested that homologous recombination is defec-
tive in about half of the tumours analysed, and that NOTCH and FOXM1 signalling are involved in
serous ovarian cancer pathophysiology.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Integrated genomic analyses of ovarian carcinoma. Nature 20
  Laboratory: Cancer Genome Atlas Research Network 2011
  Contact information:
  Title: Integrated genomic analyses of ovarian carcinoma.
  URL:
  PMIDs: 21720365

  Abstract: A 179 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [RNASeqV2] Illumina HiSeq RNA sequencing
   platform_shorttitle:
      Illumina HiSeq RNA sequencing
   platform_summary:
      NA
   platform_manufacturer:
      Illumina
   platform_distribution:
      sequencing
   platform_accession:
      NA
   platform_technology:
      RNA sequencing
   version:
      2015-09-22 20:27:26

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: ?|100133144 ?|100134869 ... ZZZ3|26009 (20471 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
```

Details

```
assayData: 20471 features, 261 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)
```

```
   5 observations deleted due to missingness
       n   events  median 0.95LCL 0.95UCL
 256.00  143.00    3.62    3.19    4.03


--------------------------
Available sample meta-data:
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TCGA-24-1562-01A-01R-1566-13                      (Other)
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TCGA-24-1558 TCGA-24-1560 TCGA-24-1562      (Other)
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sample_type:
tumor
  261

histological_type:
ser
261

primarysite:
```

```
other    ov
    1   260


summarygrade:
high  low NA's
 226   29    6


summarystage:
early  late  NA's
   18   242     1


tumorstage:
    2    3    4 NA's
   18  209   33    1


substage:
    b    c NA's
   16  211   34


grade:
    1    2    3    4 NA's
    1   28  225    1    6


age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  34.00   51.00   58.00   58.84   66.00   87.00


pltx:
    n    y NA's
   17  215   29


tax:
    n    y NA's
   17  215   29


neo:
    n NA's
  232   29


days_to_tumor_recurrence:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
    9.0   225.0   426.5   585.3   755.0  5480.0      19


recurrence_status:
norecurrence    recurrence
         123           138


days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
    9.0   341.8   878.0  1018.0  1446.0  5480.0       5


vital_status:
```

```
deceased    living     NA's
    143       114        4


site_of_tumor_first_recurrence:
locoregional   metastasis         NA's
         82          56          123


primary_therapy_outcome_success:
  completeresponse     partialresponse progressivedisease       stabledisease
              147                  30                 15                  15
             NA's
              54


debulking:
  optimal suboptimal       NA's
     171         60         30


percent_normal_cells:
  Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
 0.000   0.000   0.000   2.066   0.000  55.000       5


percent_stromal_cells:
  Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
 0.00    5.00   10.00   11.43   15.00   70.00       4


percent_tumor_cells:
  Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
 0.00   77.00   85.00   82.07   90.00  100.00       4


uncurated_author_metadata:



age_at_initial_pathologic_diagnosis: 38///anatomic_organ_subdivision: Bilateral/
                                                                age_at_initi
                                                                     age_at
                                                      age_at_initial_pathologic_di
                                             age_at_initial_pathologic_diagnosis
                                           age_at_initial_pathologic_diagn
                                                                age_at
                              age_at_initial_pathologic_diagnosis: 42///anatomic_organ_subd
```

age_at_initial_pathologic_diagnosis

age_at_i

age_at_initial_p

age_at_initial_pat

age_at_initial_patho

age_at_initia

age_at_initial_pathologic_diagnosis: 45///anatomic

age

age_at_initial_pathologic_diagnosis: 45///an

age_at_initial_patho

age_at_initial_path

age_at_initial_pathologic_diagno

age_at_initial_pathologic_diagnosis: 45///anatomic_organ_subdivisio

age_at_initial_pathologic_

age_at_initial_pathologic_diagnosis: 46///anatomic_organ_subdivisi

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age_at_initial_pathologic_diagno

age_at_initial_pathologic_diagnosis: 47///anato

age_at_initi

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age_at_initial_pathologic_diagnosis: 48///

age

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age_at_initial_pathologic_

age_at_in

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age_at_initial_pathologic_diagnosis: 50///anatomic_org

age_at_initial_pathologic_dia

age_at_initial_pat

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age_at_initial_pathologic_diagnosis: 50///ana

age_at_initial_pathol

age_at_initial_pathologic_diagnosis: 51///anatomic_organ_subdivision: Bilatera

age_at_init

age_at_initial_pathologic_dia

age_at

age

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age_at_initial_pathologic

age_at_initia

age_at_initial_pathologi

age_at_initial_pathologic_di

age_

age_at_initial_pathologic_diagnos

age_at_initial_pat

age_at_initial_pathologic_di

age_at_initial_pathologic_diagnosis: 53///anatomic_organ_

age_at_initial_pathologic_diagnosi

age_at_initial_pathologic_diagnosis: 53///anato

age_at_initial_pat

age_at_initial_pathologic_diagnosis: 54///anatomic_organ_subdivis

age_a

age_at_ini

age_at_i

age_at_initial_pathologic_diagnosis: 54///anatomic_organ_subdiv

Value

An expression set

| TCGAOVARIAN | *Integrated genomic analyses of ovarian carcinoma.* |

Description

A catalogue of molecular aberrations that cause ovarian cancer is critical for developing and deploying therapies that will improve patients' lives. The Cancer Genome Atlas project has analysed messenger RNA expression, microRNA expression, promoter methylation and DNA copy number in 489 high-grade serous ovarian adenocarcinomas and the DNA sequences of exons from coding genes in 316 of these tumours. Here we report that high-grade serous ovarian cancer is characterized by TP53 mutations in almost all tumours (96%); low prevalence but statistically recurrent somatic mutations in nine further genes including NF1, BRCA1, BRCA2, RB1 and CDK12; 113 significant focal DNA copy number aberrations; and promoter methylation events involving 168 genes. Analyses delineated four ovarian cancer transcriptional subtypes, three microRNA subtypes, four promoter methylation subtypes and a transcriptional signature associated with survival duration, and shed new light on the impact that tumours with BRCA1/2 (BRCA1 or BRCA2) and CCNE1 aberrations have on survival. Pathway analyses suggested that homologous recombination is defective in about half of the tumours analysed, and that NOTCH and FOXM1 signalling are involved in serous ovarian cancer pathophysiology.

Format

```
experimentData(eset):
Experiment data
  Experimenter name: Integrated genomic analyses of ovarian carcinoma. Nature 20
  Laboratory: Cancer Genome Atlas Research Network 2011
  Contact information:
  Title: Integrated genomic analyses of ovarian carcinoma.
  URL:
  PMIDs: 21720365

  Abstract: A 179 word abstract is available. Use 'abstract' method.
  Information is available on: preprocessing
  notes:
   platform_title:
      [HT_HG-U133A] Affymetrix HT Human Genome U133A Array
   platform_shorttitle:
      Affymetrix HT_HG-U133A
   platform_summary:
      hthgu133a
   platform_manufacturer:
      Affymetrix
   platform_distribution:
      commercial
   platform_accession:
      GPL3921
   warnings:
      The following samples are likely from specimens also used in GSE26712: TCG
A.13.0725, TCGA.13.0885, TCGA.13.0887, TCGA.13.0890, TCGA.13.0886, TCGA.13
.0714, TCGA.13.0727, TCGA.13.1817, TCGA.13.1499, TCGA.13.0883
   version:
      2015-09-22 20:25:15

featureData(eset):
An object of class 'AnnotatedDataFrame'
  featureNames: 1007_s_at 1053_at ... AFFX-M27830_M_at (21260 total)
  varLabels: probeset gene EntrezGene.ID best_probe
  varMetadata: labelDescription
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Details

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assayData: 21260 features, 578 samples
Platform type:
Overall survival time-to-event summary (in years):
Call: survfit(formula = Surv(time, cens) ~ -1)

   21 observations deleted due to missingness
      n  events  median 0.95LCL 0.95UCL
 557.00  290.00    3.73    3.45    4.06


--------------------------
Available sample meta-data:
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TCGA-10-0936-01A-01R-0404-01 TCGA-10-0937-01A-02R-0404-01
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TCGA-10-0938-01A-02R-0404-01 TCGA-13-0714-01A-01R-0362-01
                     1                                   1
TCGA-13-0717-01A-01R-0362-01 TCGA-13-0720-01A-01R-0362-01
                     1                                   1
TCGA-13-0723-01A-02R-0362-01 TCGA-13-0724-01A-01R-0362-01
                     1                                   1
                  (Other)                             NA's
                     479                                 1
```

```
unique_patient_ID:
TCGA-01-0628 TCGA-01-0630 TCGA-01-0631 TCGA-01-0633 TCGA-01-0636 TCGA-01-0637
           1            1            1            1            1            1
TCGA-01-0639 TCGA-01-0642 TCGA-04-1331 TCGA-04-1332 TCGA-04-1335 TCGA-04-1336
           1            1            1            1            1            1
TCGA-04-1337 TCGA-04-1338 TCGA-04-1341 TCGA-04-1342 TCGA-04-1343 TCGA-04-1346
           1            1            1            1            1            1
TCGA-04-1347 TCGA-04-1348 TCGA-04-1349 TCGA-04-1350 TCGA-04-1351 TCGA-04-1353
           1            1            1            1            1            1
TCGA-04-1356 TCGA-04-1357 TCGA-04-1360 TCGA-04-1361 TCGA-04-1362 TCGA-04-1364
           1            1            1            1            1            1
TCGA-04-1365 TCGA-04-1367 TCGA-04-1369 TCGA-04-1371 TCGA-04-1514 TCGA-04-1516
           1            1            1            1            1            1
TCGA-04-1517 TCGA-04-1519 TCGA-04-1525 TCGA-04-1530 TCGA-04-1536 TCGA-04-1542
           1            1            1            1            1            1
TCGA-04-1638 TCGA-04-1644 TCGA-04-1646 TCGA-04-1648 TCGA-04-1649 TCGA-04-1651
           1            1            1            1            1            1
TCGA-04-1652 TCGA-04-1654 TCGA-04-1655 TCGA-09-0364 TCGA-09-0365 TCGA-09-0366
           1            1            1            1            1            1
TCGA-09-0367 TCGA-09-0369 TCGA-09-1659 TCGA-09-1661 TCGA-09-1662 TCGA-09-1664
           1            1            1            1            1            1
TCGA-09-1665 TCGA-09-1666 TCGA-09-1667 TCGA-09-1668 TCGA-09-1669 TCGA-09-1670
           1            1            1            1            1            1
TCGA-09-1672 TCGA-09-1673 TCGA-09-1674 TCGA-09-1675 TCGA-09-2043 TCGA-09-2044
           1            1            1            1            1            1
TCGA-09-2045 TCGA-09-2048 TCGA-09-2049 TCGA-09-2050 TCGA-09-2051 TCGA-09-2053
           1            1            1            1            1            1
TCGA-09-2054 TCGA-09-2055 TCGA-09-2056 TCGA-10-0925 TCGA-10-0926 TCGA-10-0927
           1            1            1            1            1            1
TCGA-10-0928 TCGA-10-0930 TCGA-10-0931 TCGA-10-0933 TCGA-10-0934 TCGA-10-0935
           1            1            1            1            1            1
TCGA-10-0936 TCGA-10-0937 TCGA-10-0938 TCGA-13-0714 TCGA-13-0717 TCGA-13-0720
           1            1            1            1            1            1
TCGA-13-0723 TCGA-13-0724 TCGA-13-0725      (Other)
           1            1            1          479

sample_type:
adjacentnormal           tumor
             8             570

histological_type:
 ser NA's
 568   10

primarysite:
other    ov  NA's
    4   564    10

summarygrade:
high  low NA's
 480   75   23
```

```
summarystage:
early  late  NA's
   43   520    15

tumorstage:
   1    2    3    4 NA's
  16   27  436   84   15

substage:
   b    c NA's
  31  448   99

grade:
   1    2    3    4 NA's
   6   69  479    1   23

age_at_initial_pathologic_diagnosis:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
  26.00   51.00   59.00   59.70   68.25   89.00      10

pltx:
   n    y NA's
  19  492   67

tax:
   n    y NA's
  43  468   67

neo:
   n NA's
 511   67

days_to_tumor_recurrence:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
    8.0   238.2   443.5   623.7   812.0  5480.0      56

recurrence_status:
norecurrence   recurrence
        279          299

days_to_death:
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
      8     349     881    1010    1446    5480      21

vital_status:
deceased   living     NA's
     290      270       18

site_of_tumor_first_recurrence:
                locoregional locoregional_plus_metastatic
                         153                            3
                  metastasis                         NA's
```

```
                               143                                  279
   primary_therapy_outcome_success:
     completeresponse    partialresponse progressivedisease       stabledisease
                   318                  65                 41                   30
                 NA's
                 124

   debulking:
      optimal suboptimal        NA's
         367          140          71

   percent_normal_cells:
      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
     0.000   0.000   0.000   2.385   0.000  55.000      19

   percent_stromal_cells:
      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
     0.00    5.00   10.00   12.85   20.00   70.00      25

   percent_tumor_cells:
      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
     0.00   75.00   85.00   80.64   90.00  100.00      22

   batch:
      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
     9.00   13.00   17.00   18.55   22.00   40.00       1

   uncurated_author_metadata:
                                              age_at_initial_pathologic_diagnosi
```

```
                                                                          age
```

```
                                         age_at_initial_patholog
```

```
                           age_at_initial_pathologic_diagnosis: 37//
```

```
   age_at_initial_pathologic_diagnosis: 38///anatomic_organ_subdivision: Bilateral/
```

```
            age_at_initial_pathologic_diagnosis: 38///anatomic_organ_subdivision:
```

```
                                       age_at_initi
```

age_at

age_at_initial_pathologic_diagnosis: 39///

age_at_initial_pathologic_

age_at_initial_pathologic_di

age_at_initial_pathologic_diagnosis

age_at_initial_pathologic_diagnosis: 40///anatomic_organ

age_at_initial_pathologic_diagn

age_at

age_at_initial_pa

age_at_initial_pathologic_d

age_at_initial_pathologic_diagnosis

age_at_initial_pathologic_diagnosis: 42///anatomic_organ_subd

age_at_initial_

age_at_initial_pathologic_diagnosis: 42///anatomic_

age_at_initial_pat

age_at_initial_pathologic_diagnosis

age_at_

age_at_initial_pathologic_diagnosis

age_at_init

age_at_i

age_at_in

age_at_initial_pathologic_dia

age_at_initial_pathologic_diagnosis: 44///anatomi

age_at_initial_pathologic_di

age_at_initial_p

age_at_initial_pa

age_at_initial_pat

age_at_initial_patho

age_at_initia

age_at_initial_pathologic_diagnosis: 45///anatomic

age

age_at_initial_pathologic_diagnosis: 45///an

age_at_initial_patho

age_at_initial_path

age_at_initial_pathologic_diagno

age_at_initial_pathologic_diagnosis: 45///anatomic_organ_subdivisio

age_at_initial_pathologic_

age_at_initial_pathologic_diagnosis: 46///anatomic_organ_subdivis

age_at_initial_pathologic_diagnosis: 46///an

age_at_initial_pathologic_diagnosis:

age_at_initial_patholo

age_at_initial_pathologic_diagno

age_at_initial_pathologic_diagno

age_at_initial_pathologic_diagnosis: 47///anato

age_at_initi

age_at_initial_pathologic_diagnosis: 47///anatomic_

age_at_initial_pathologic_diagnosis: 48///

age_at_initial_pathologic_diagno

age_at_initial_pathologic

```
age_at_initial_pathologic_diagnosis: 48///
```

```
duplicates:
    Length     Class      Mode
       578 character character
```

Value

An expression set