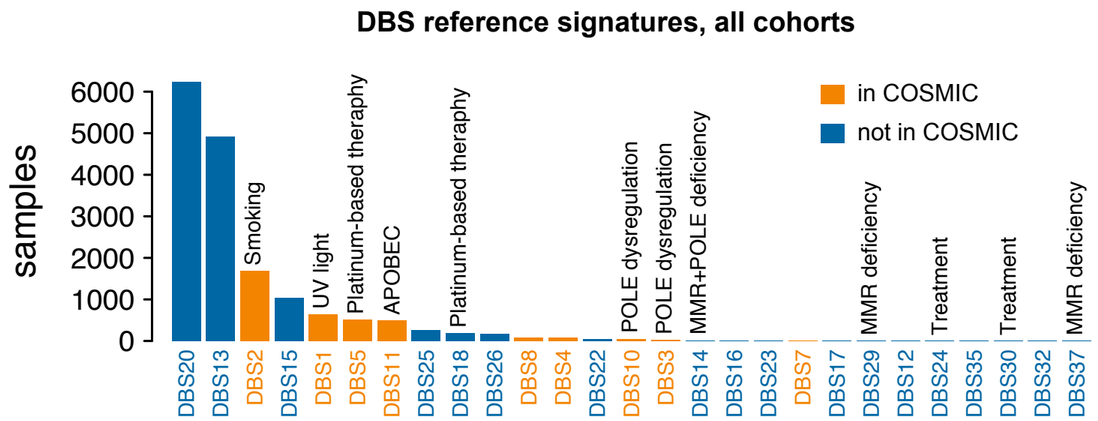
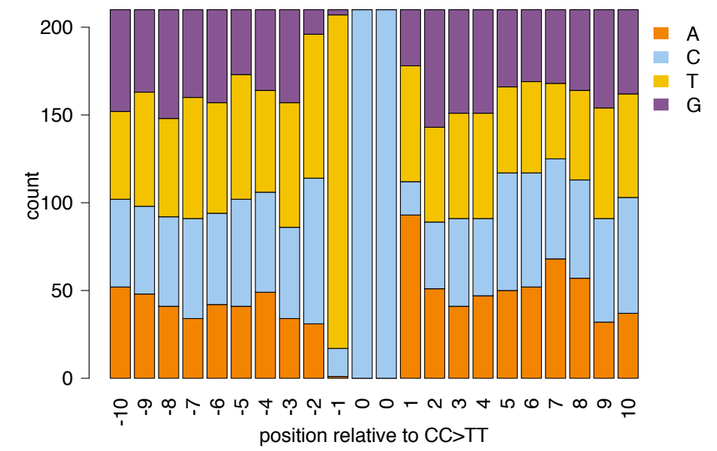
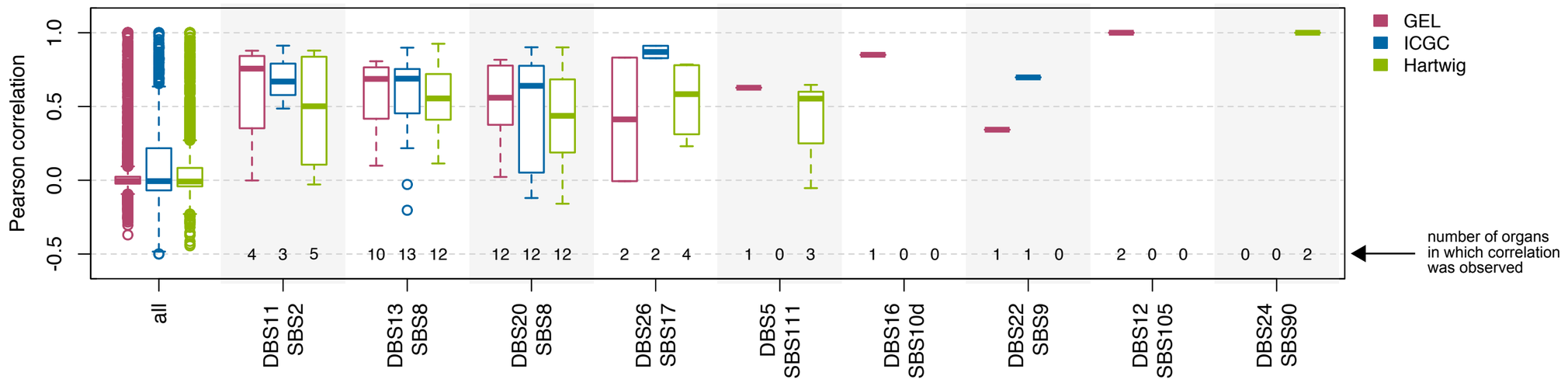
A


DBS reference signatures, all cohorts
samples
6000
5000
4000
3000
2000
1000
0
in COSMIC
not in COSMIC
DBS20
DBS13
DBS2
DBS15
DBS1
DBS5
DBS11
DBS25
DBS18
DBS26
DBS8
DBS4
DBS22
DBS10
DBS3
DBS14
DBS16
DBS23
DBS7
DBS17
DBS29
DBS12
DBS24
DBS35
DBS30
DBS32
DBS37
Smoking
UV light
Platinum-based theraphy
APOBEC
Platinum-based theraphy
POLE dysregulation
POLE dysregulation
MMR+POLE deficiency
MMR deficiency
Treatment
Treatment
MMR deficiency

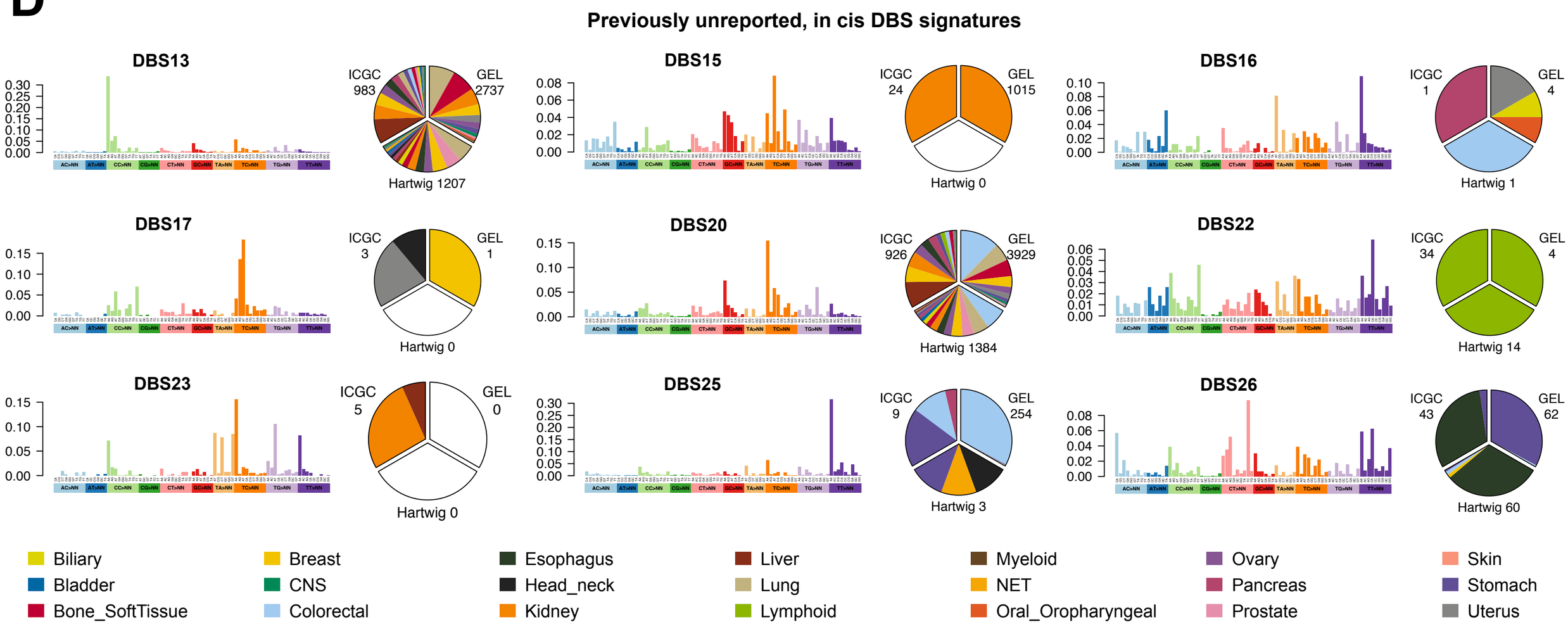
B


Sequence context of the CC>TT mutations in GEL-2373213-11,
sample with high DBS11 exposure, associated with APOBEC-related SBS2
count
200
150
100
50
0
A
C
T
G
-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 0 1 2 3 4 5 6 7 8 9 10
position relative to CC>TT

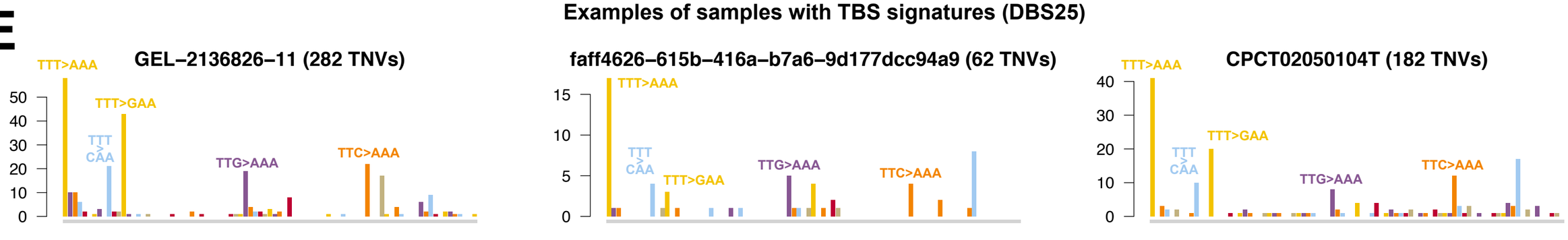
C


Correlation of DBS with SBS exposures across organs and cohorts
Pearson correlation
1.0
0.5
0.0
-0.5
GEL
ICGC
Hartwig
4 3 5
10 13 12
12 12 12
2 2 4
1 0 3
1 0 0
1 1 0
2 0 0
0 0 2
number of organs
in which correlation
was observed
all
DBS11 SBS2
DBS13 SBS8
DBS20 SBS8
DBS26 SBS17
DBS5 SBS111
DBS16 SBS10d
DBS22 SBS9
DBS12 SBS105
DBS24 SBS90

D


Previously unreported, in cis DBS signatures
DBS13
ICGC 983
GEL 2737
Hartwig 1207
DBS15
ICGC 24
GEL 1015
Hartwig 0
DBS16
ICGC 1
GEL 4
Hartwig 1
DBS17
ICGC 3
GEL 1
Hartwig 0
DBS20
ICGC 926
GEL 3929
Hartwig 1384
DBS22
ICGC 34
GEL 4
Hartwig 14
DBS23
ICGC 5
GEL 0
Hartwig 0
DBS25
ICGC 9
GEL 254
Hartwig 3
DBS26
ICGC 43
GEL 62
Hartwig 60
Biliary
Bladder
Bone_SoftTissue
Breast
CNS
Colorectal
Esophagus
Head_neck
Kidney
Liver
Lung
Lymphoid
Myeloid
NET
Oral_Oropharyngeal
Ovary
Pancreas
Prostate
Skin
Stomach
Uterus

E


Examples of samples with TBS signatures (DBS25)
GEL–2136826–11 (282 TNVs)
faff4626–615b–416a–b7a6–9d177dcc94a9 (62 TNVs)
CPCT02050104T (182 TNVs)
TTT>AAA
TTT>GAA
TTT>CAA
TTG>AAA
TTC>AAA