AEBP2 (non-ER binding) AKT1 (ER binding) [<=60] p = 0.30847No detectable trend: [<=60] p = 0.65079No detectable trend: 16 16 [>60] p = 0.19876 [>60] p = 0.046761 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [All] p = 0.32129[All] p = 0.13814 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ω 9 9 30 40 50 60 70 80 90 30 40 50 60 70 80 90 Age at diagnosis Age at diagnosis **AKT2 (non-ER binding)** AKT3 (non-ER binding) [<=60] p = 0.9851No detectable trend: [<=60] p = 0.68355No detectable trend: 16 16 [>60] p = 0.44882 [>60] p = 0.045112 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [AII] p = 0.00014581[All] p = 0.126214 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ∞ 9 9

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Age at diagnosis

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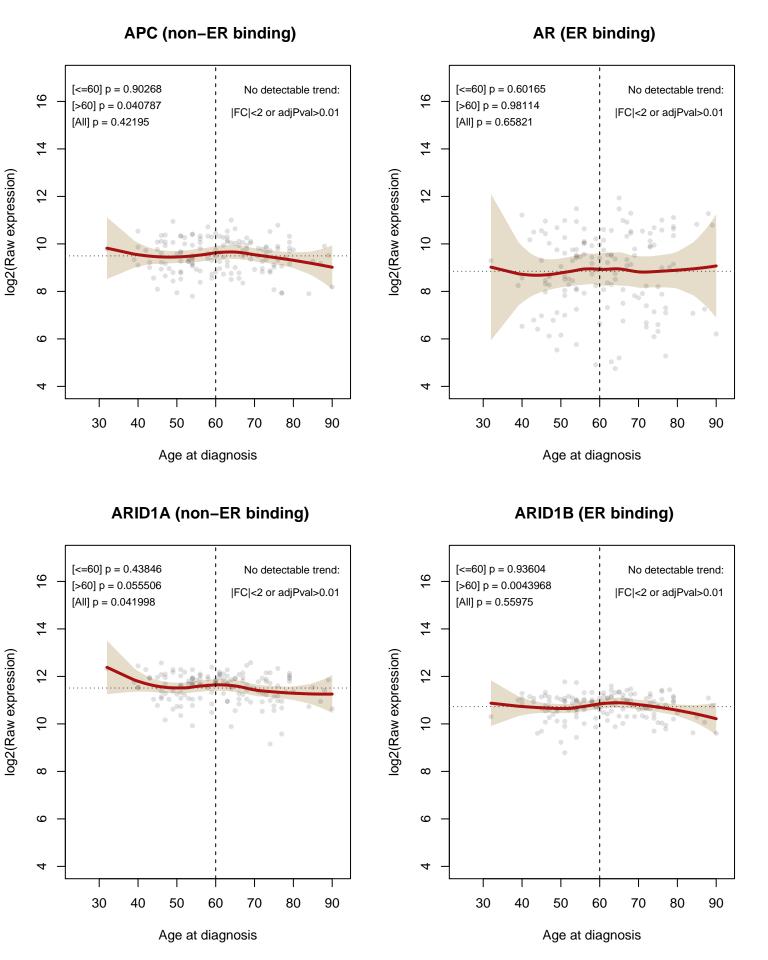
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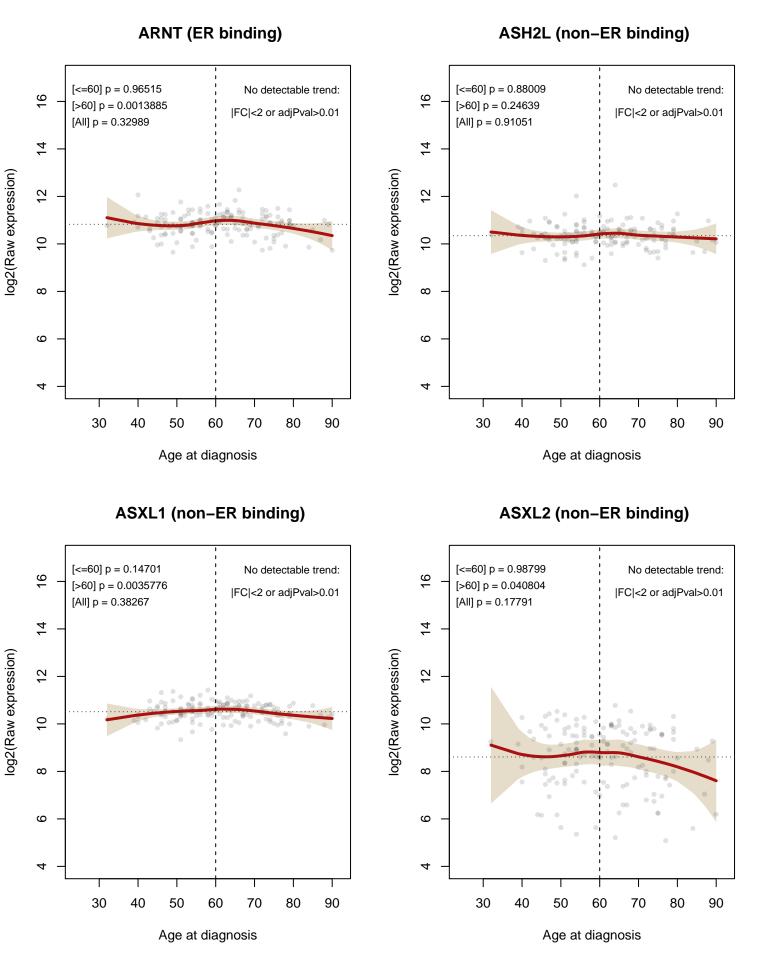
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Age at diagnosis

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ASXL3 (non-ER binding) ATM (non-ER binding) [<=60] p = 0.6431 No detectable trend: [<=60] p = 0.48641No detectable trend: 16 16 [>60] p = 0.16994 [>60] p = 0.0030197 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [AII] p = 0.030013[All] p = 0.578014 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ω 9 9 30 40 50 60 70 80 90 30 40 50 60 70 80 90 Age at diagnosis Age at diagnosis ATR (non-ER binding) **AXIN1 (ER binding)** [<=60] p = 0.13554No detectable trend: [<=60] p = 0.8665No detectable trend: 16 16 [>60] p = 0.010819 [>60] p = 0.42729 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [AII] p = 0.10085[All] p = 0.598124 4 log2(Raw expression) log2(Raw expression) 12 12 19 10 ω ∞ 9 9

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Age at diagnosis

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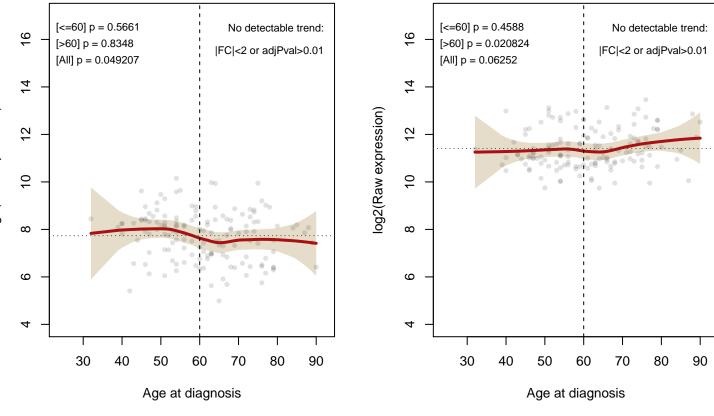
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Age at diagnosis

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BCL3 (non-ER binding) BCL2 (non-ER binding) [<=60] p = 0.15077No detectable trend: [<=60] p = 0.8762No detectable trend: 16 16 [>60] p = 0.52408 [>60] p = 0.26494 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [AII] p = 0.60236[All] p = 0.745734 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ∞ ω 9 9 30 40 50 60 70 80 90 30 40 50 60 70 80 90 Age at diagnosis Age at diagnosis BIRC5 (non-ER binding) **BMI1 (non-ER binding)** [<=60] p = 0.5661No detectable trend: [<=60] p = 0.4588No detectable trend: 16 16 [>60] p = 0.020824 [>60] p = 0.8348 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [AII] p = 0.049207[All] p = 0.062524 4 log2(Raw expression) 12 12



BMX (non-ER binding) **BRCA1** (non-ER binding) [<=60] p = 0.58034No detectable trend: [<=60] p = 0.93144No detectable trend: 16 16 [>60] p = 0.12793 [>60] p = 0.43545 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [All] p = 0.22031[All] p = 0.0162424 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ∞ ∞ 9 9 30 40 50 70 80 90 30 40 50 60 70 80 90 60 Age at diagnosis Age at diagnosis CA9 (non-ER binding) **CBX1** (non-ER binding) [<=60] p = 0.81018No detectable trend: [<=60] p = 0.40096No detectable trend: 16 16 [>60] p = 0.55393 [>60] p = 0.26043 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [All] p = 0.039462[All] p = 0.982614 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ∞ ∞ 9 9

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Age at diagnosis

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Age at diagnosis

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CBX2 (non-ER binding) **CBX4** (non-ER binding) [<=60] p = 0.14365No detectable trend: [<=60] p = 0.29164No detectable trend: 16 16 [>60] p = 0.031621 [>60] p = 0.36516 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [All] p = 0.21942[AII] p = 0.00647084 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ∞ ω 9 9 30 40 50 60 70 80 90 30 40 50 60 70 80 90 Age at diagnosis Age at diagnosis CBX6 (non-ER binding) **CBX7 (non-ER binding)** [<=60] p = 0.10087No detectable trend: [<=60] p = 0.31814 No detectable trend: 16 16 [>60] p = 0.072072 [>60] p = 0.64894|FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [All] p = 0.37546[All] p = 0.153854 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ∞ ω 9 9

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Age at diagnosis

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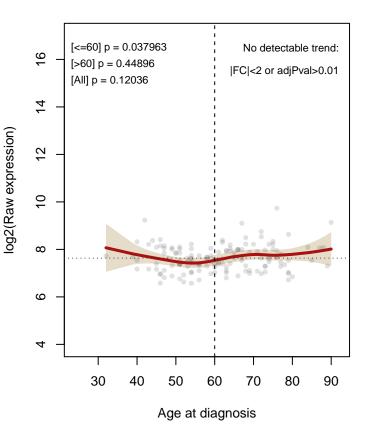
Age at diagnosis

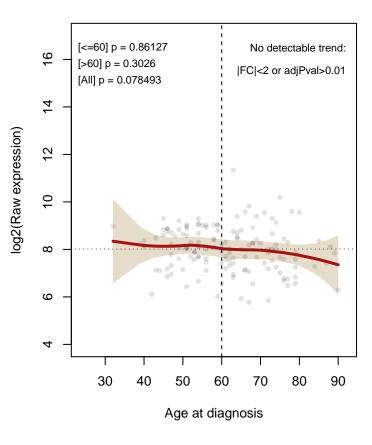
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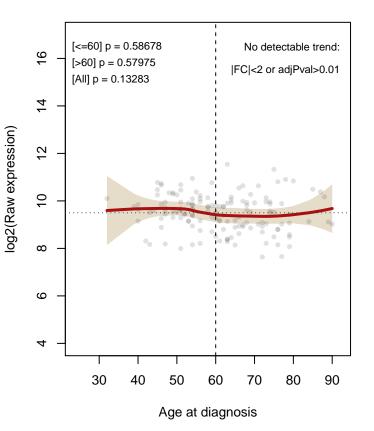
CCNA2 (non-ER binding)

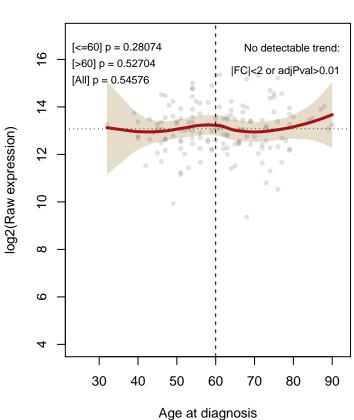




CCNB1 (non-ER binding)

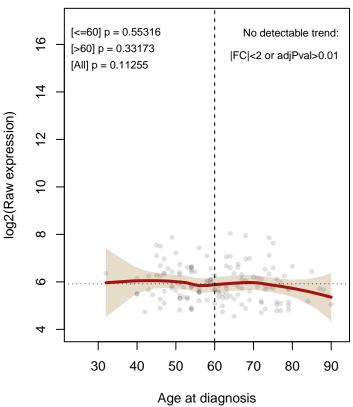
CCND1 (ER binding)

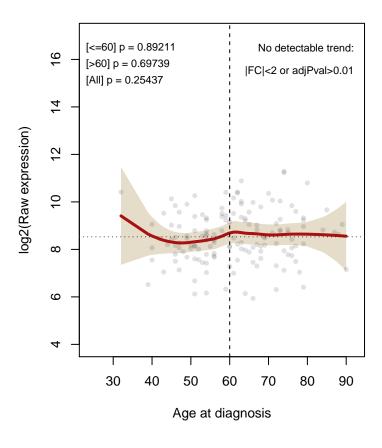






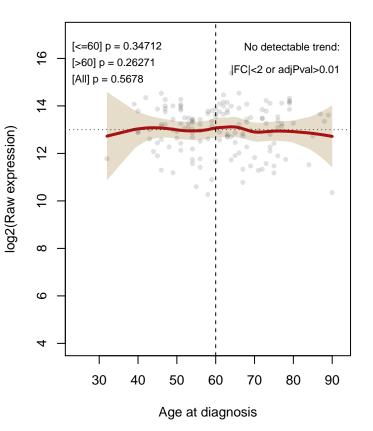
CD163 (non-ER binding)

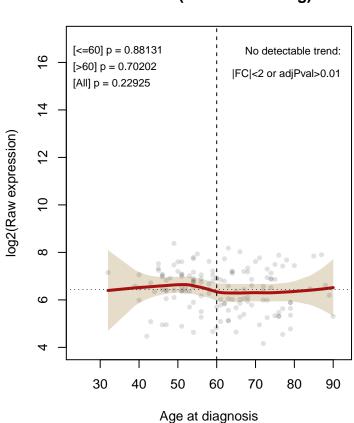


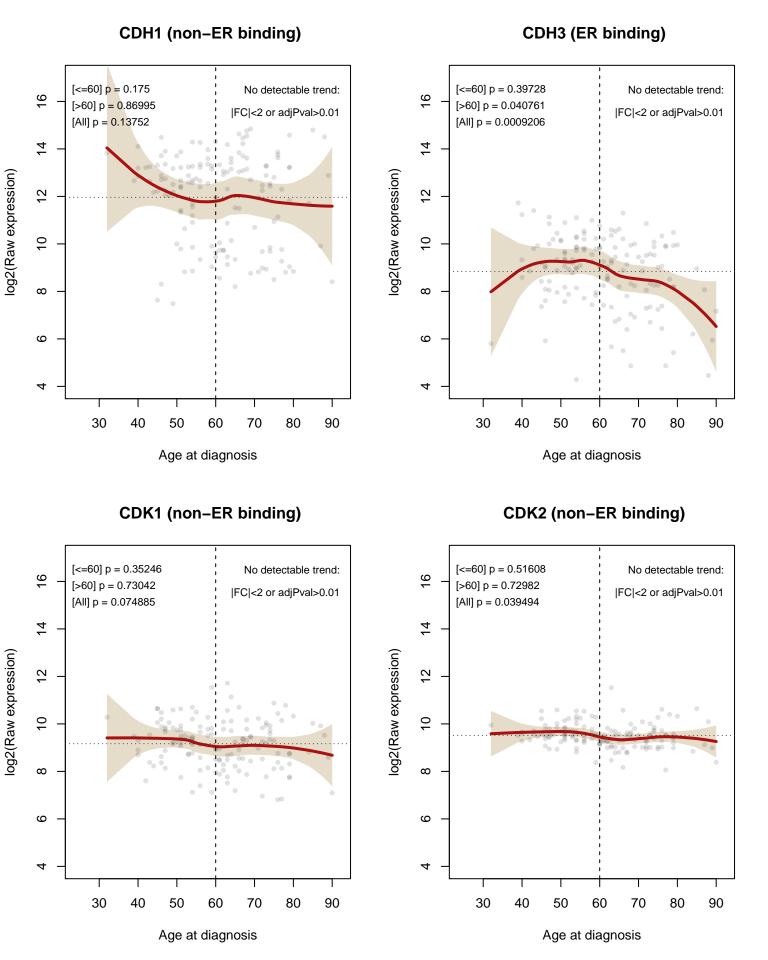


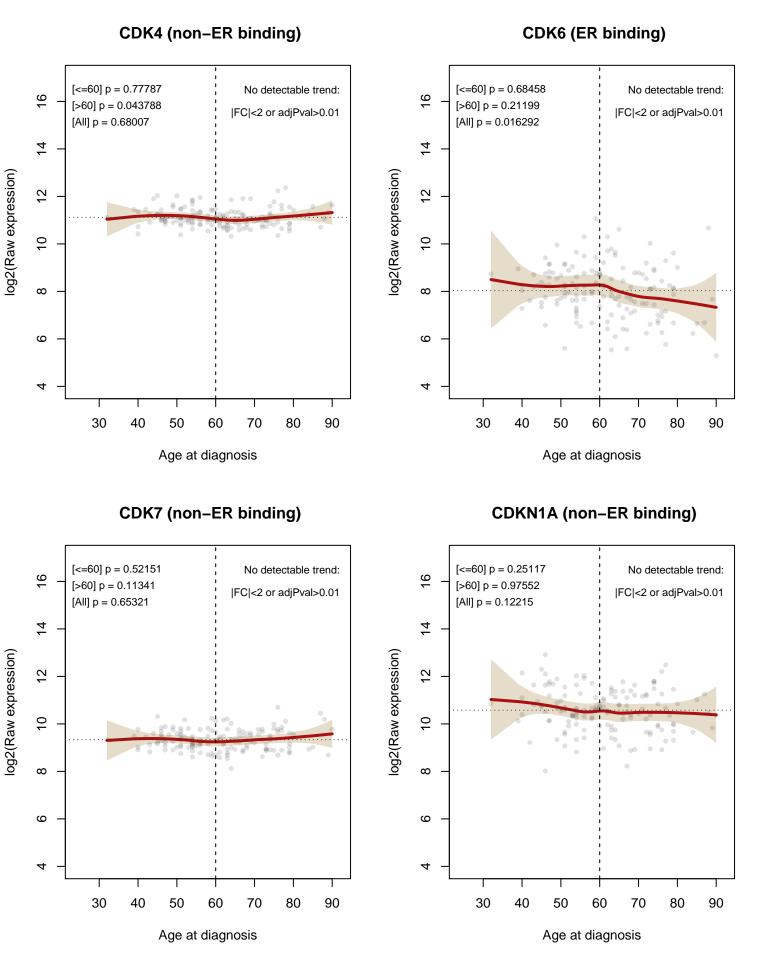
CD44 (non-ER binding)

CDC25C (non-ER binding)



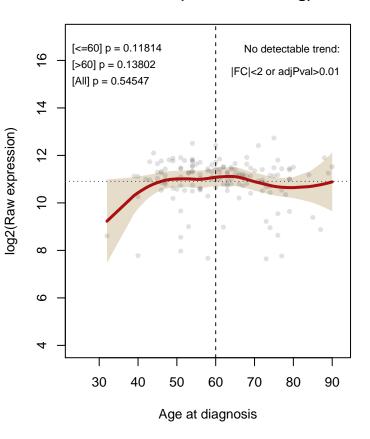


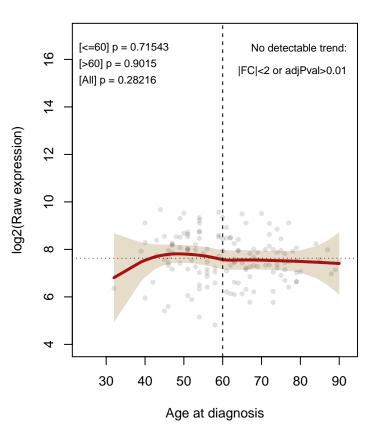




CDKN1B (non-ER binding)

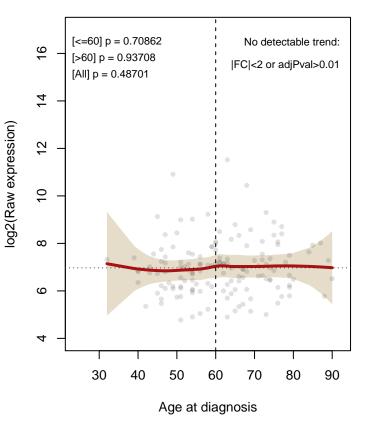
CDKN1C (non-ER binding)

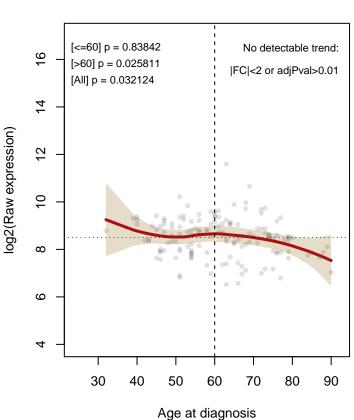




CDKN2A (non-ER binding)

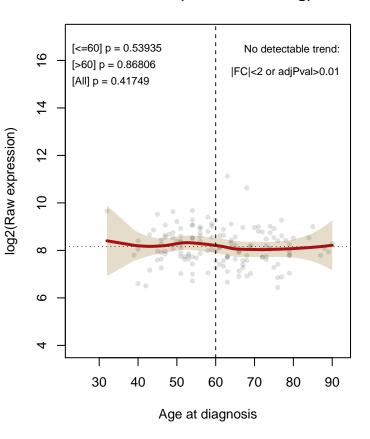
CDKN2B (non-ER binding)

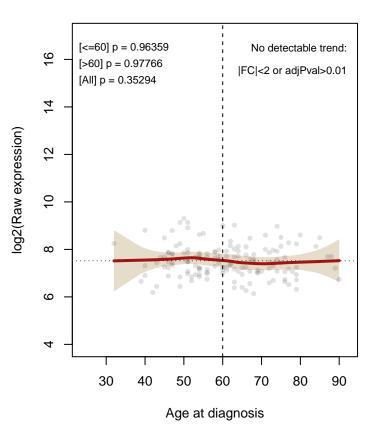




CDKN2C (non-ER binding)

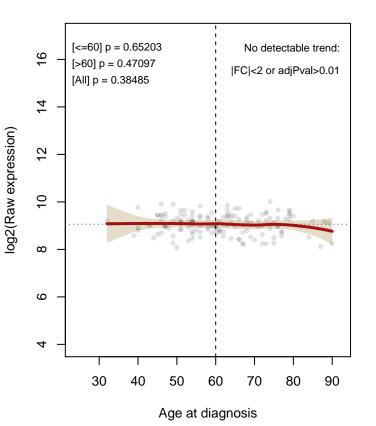
CDKN2D (non-ER binding)

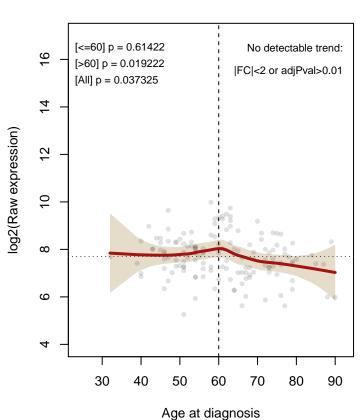




CHUK (non-ER binding)

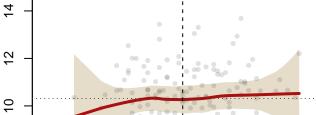
CIITA (non-ER binding)





CLDN3 (non-ER binding)

[<=60] p = 0.40437No detectable trend: 16 [>60] p = 0.58749 |FC|<2 or adjPval>0.01 [All] p = 0.32664



log2(Raw expression)



Age at diagnosis

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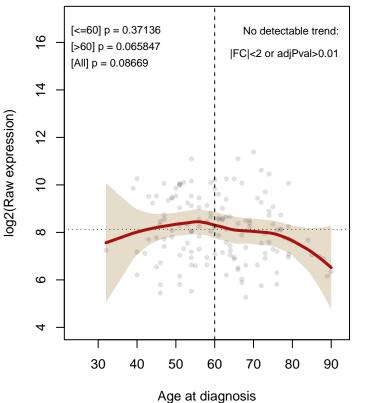
CRYAB (non-ER binding)

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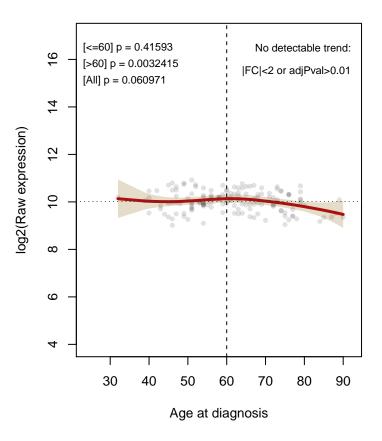
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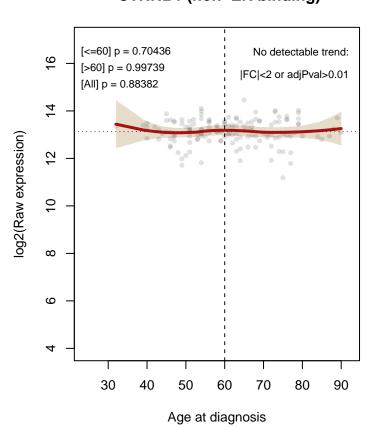
90



CREB1 (non-ER binding)



CTNNB1 (non-ER binding)



DLC1 (ER binding) DMAP1 (non-ER binding) [<=60] p = 0.027561Age-dependent trend: [<=60] p = 0.71046No detectable trend: 16 16 [>60] p = 0.14033 [>60] p = 0.22018 |FC|>2 and adjPval<0.01 |FC|<2 or adjPval>0.01 [All] p = 6.1615e-06[All] p = 0.269554 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ∞ ∞ 9 9 30 40 50 60 70 80 90 30 40 50 60 70 80 90 Age at diagnosis Age at diagnosis **DNMT1** (non-ER binding) **DNMT3A (non-ER binding)** [<=60] p = 0.2423No detectable trend: [<=60] p = 0.22838No detectable trend: 16 16 [>60] p = 0.19136 [>60] p = 1.6033e-05 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [AII] p = 0.018079[All] p = 0.0168584 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ∞ 9 9

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Age at diagnosis

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Age at diagnosis

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DNMT3B (non-ER binding) [<=60] p = 0.55564No detectable trend: 16 [>60] p = 0.057117 |FC|<2 or adjPval>0.01 [All] p = 0.363164 log2(Raw expression) 12 10

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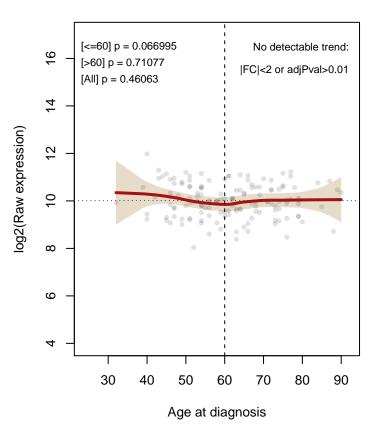
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DVL1 (non-ER binding)



E2F1 (non-ER binding)

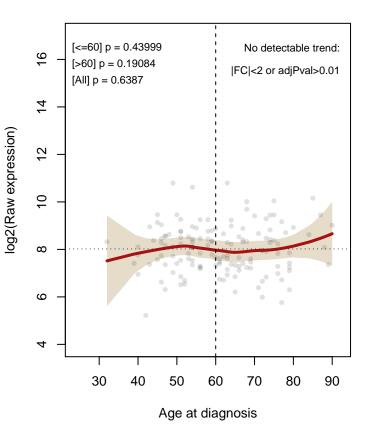
Age at diagnosis

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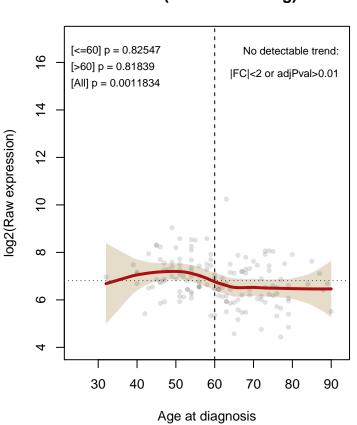
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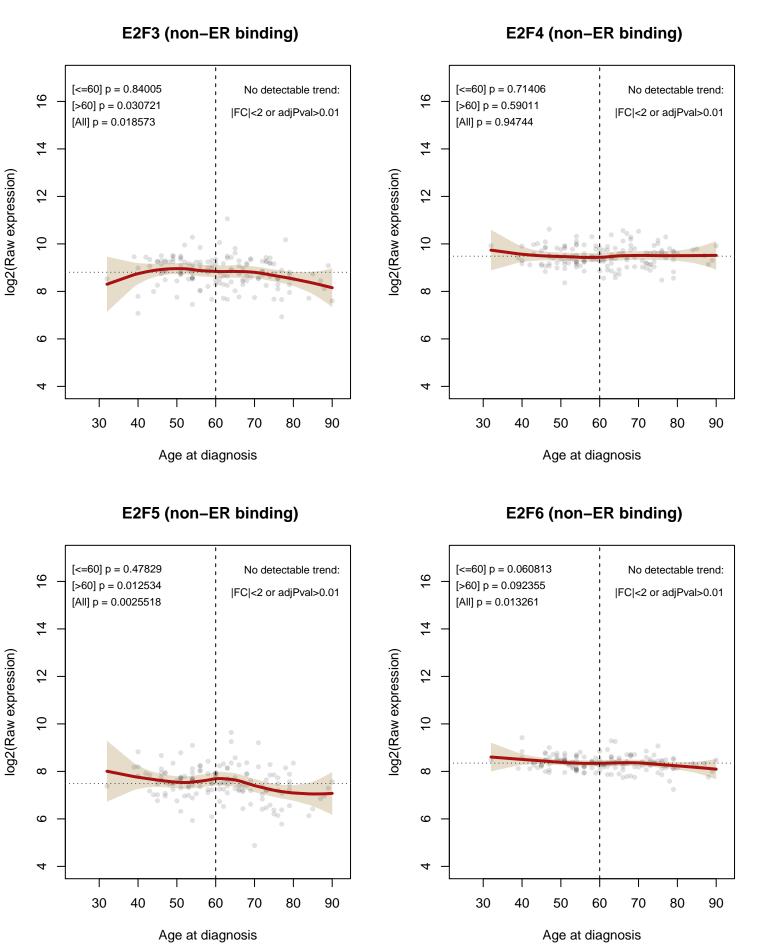
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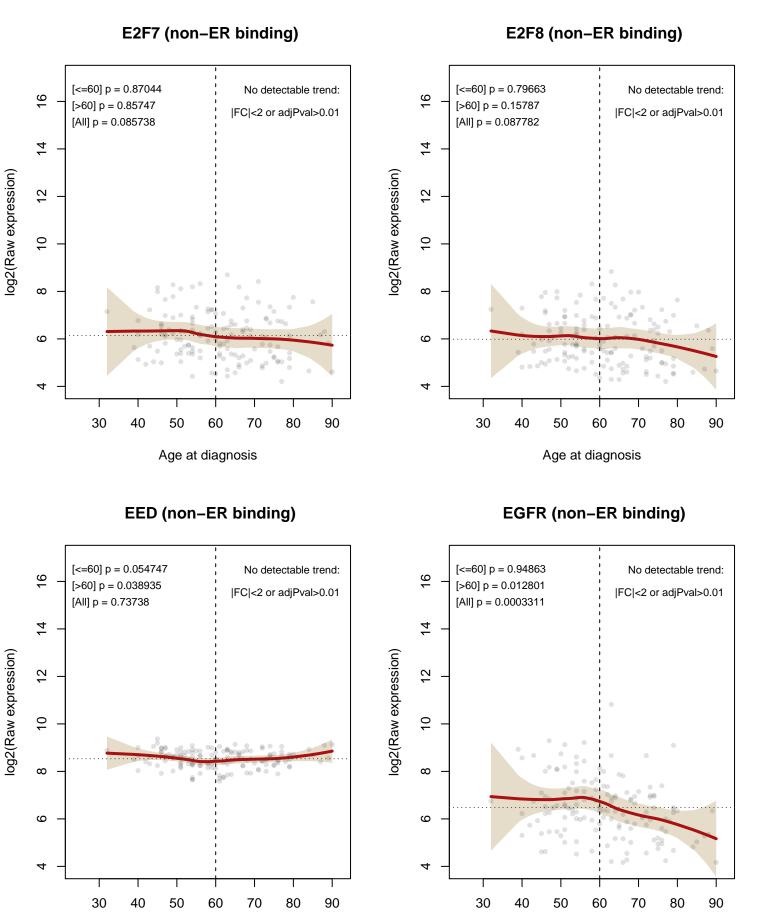
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E2F2 (non-ER binding)





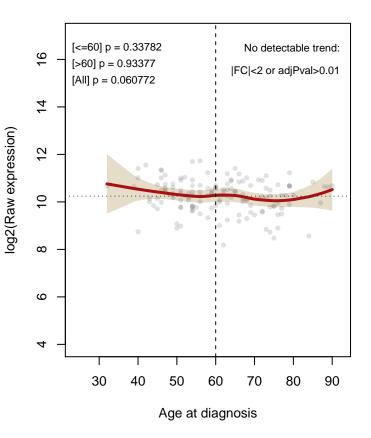


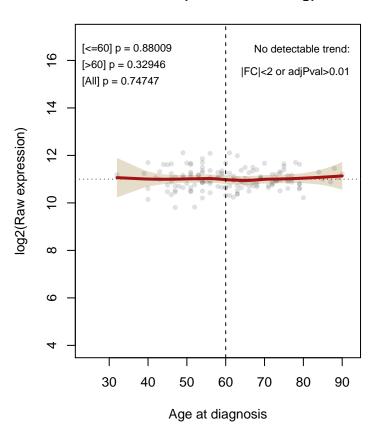
Age at diagnosis

Age at diagnosis



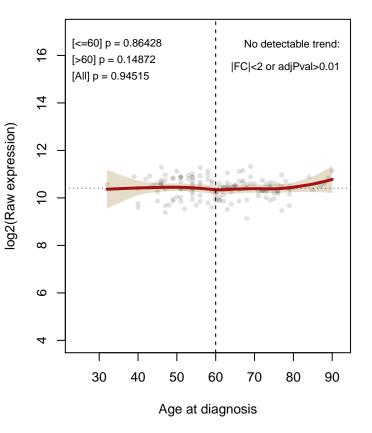
EHMT2 (non-ER binding)

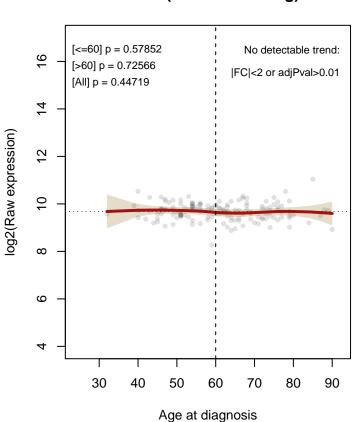




ELAC2 (non-ER binding)

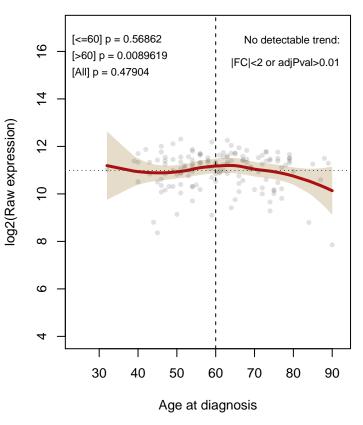
ELK1 (non-ER binding)

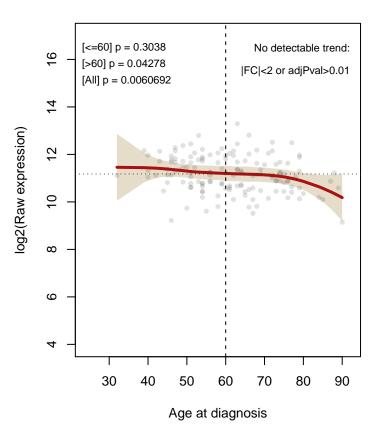






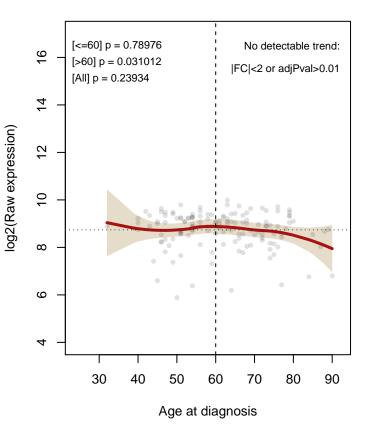
EPAS1 (non-ER binding)

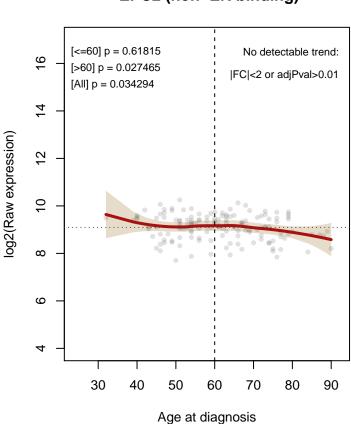


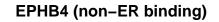


EPC1 (non-ER binding)

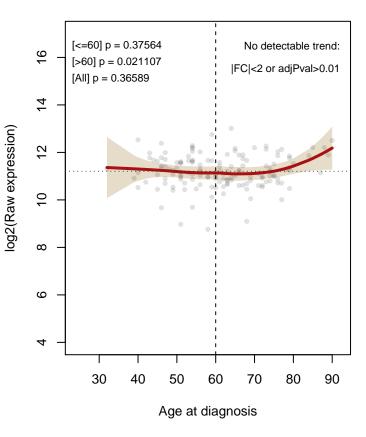
EPC2 (non-ER binding)

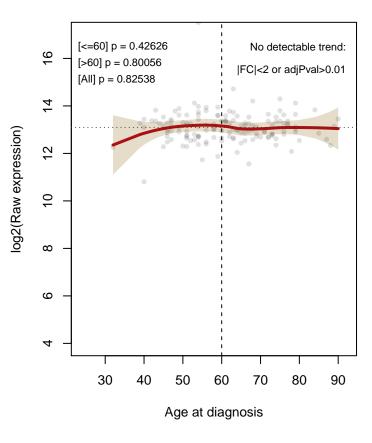






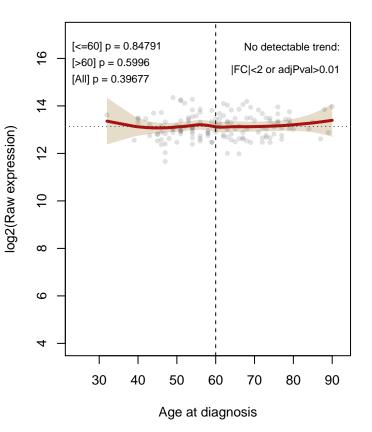
ERBB2 (non-ER binding)

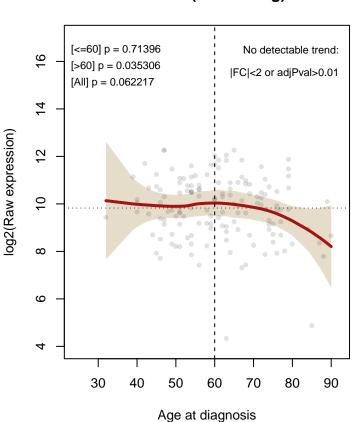


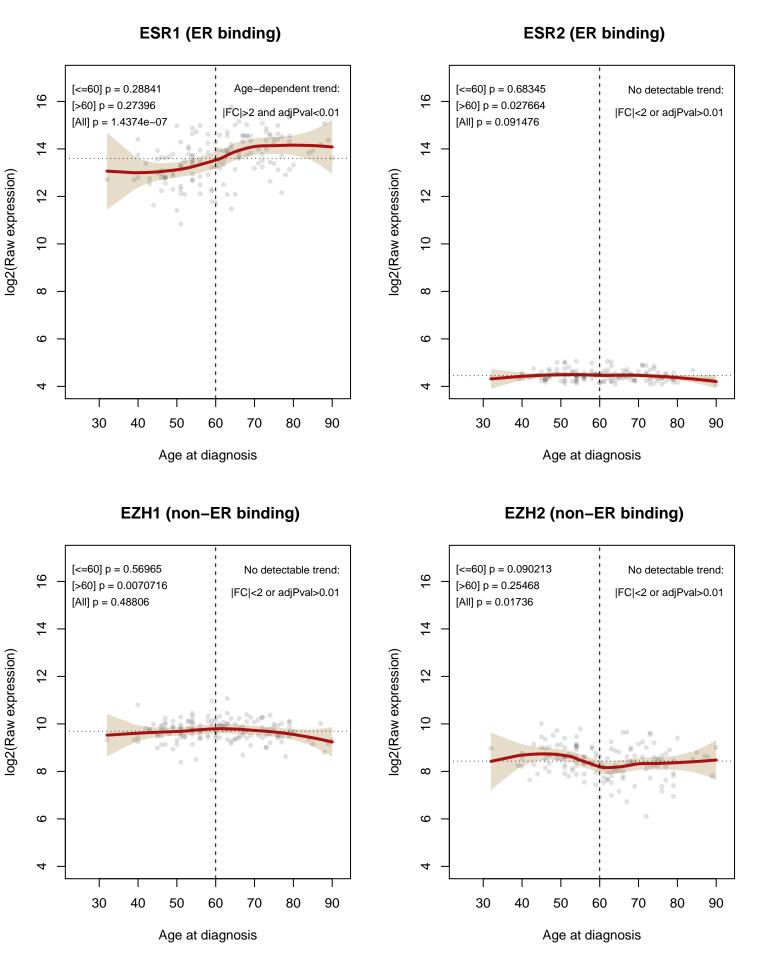


ERBB3 (non-ER binding)

ERBB4 (ER binding)







FOSL1 (non-ER binding) FOS (non-ER binding) [<=60] p = 0.93292 No detectable trend: [<=60] p = 0.84627No detectable trend: 16 16 [>60] p = 0.863[>60] p = 0.75864 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [AII] p = 0.86698[All] p = 0.125874 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ω 9 9 30 40 50 60 70 80 90 30 40 50 60 70 80 90 Age at diagnosis Age at diagnosis **FOXC1 (ER binding)** FOXA1 (ER binding) [<=60] p = 0.76096No detectable trend: [<=60] p = 0.23536No detectable trend: 16 16 [>60] p = 0.24209 [>60] p = 0.54805 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [All] p = 0.1511[All] p = 0.291284 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ω 9 9

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Age at diagnosis

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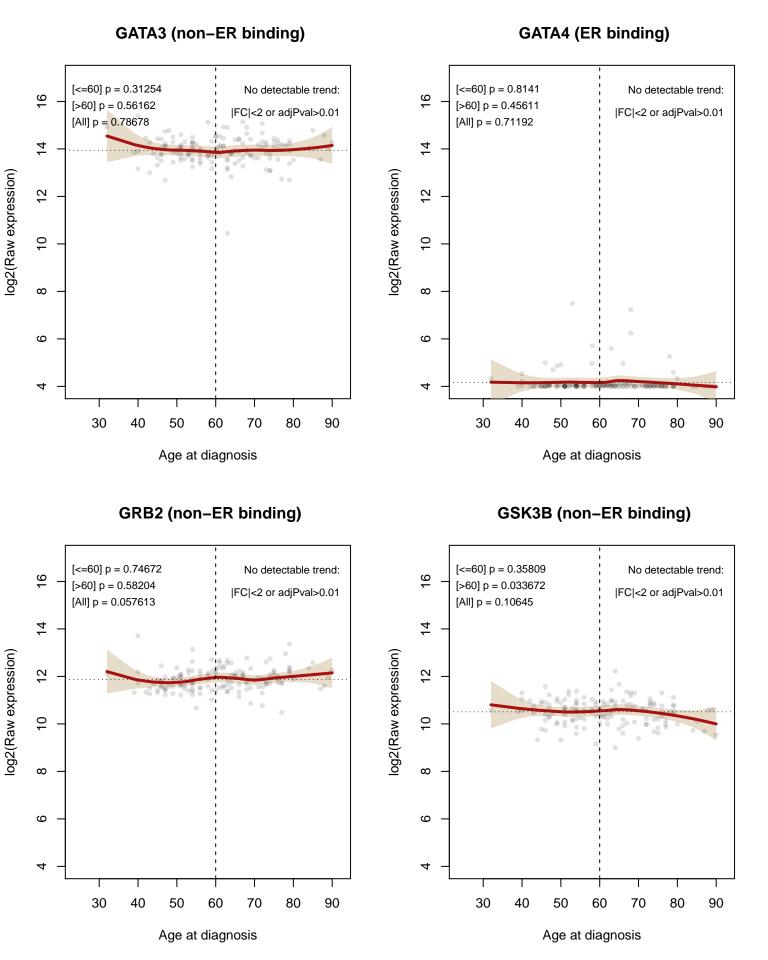
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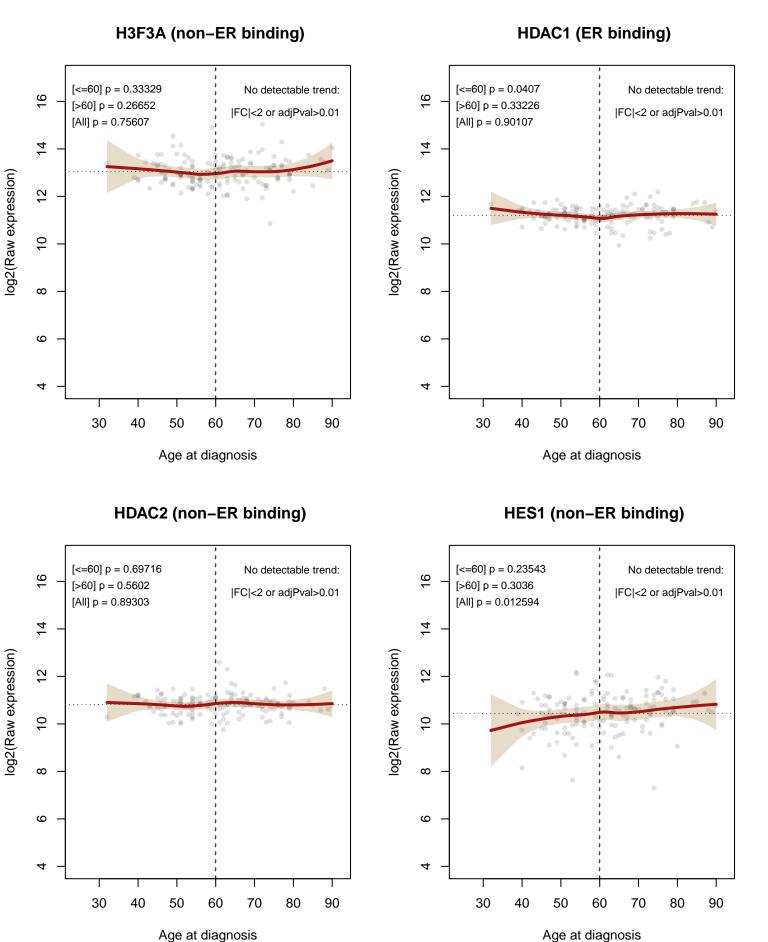
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Age at diagnosis

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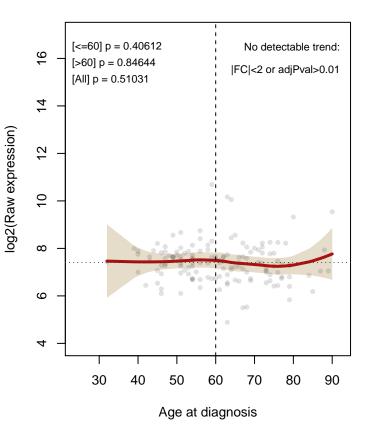
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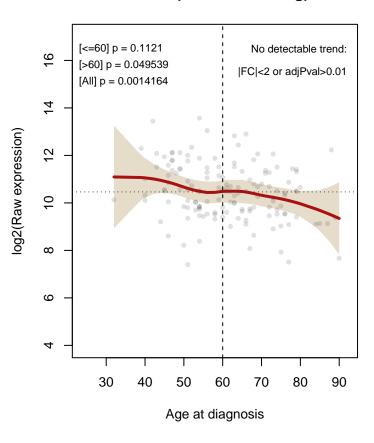






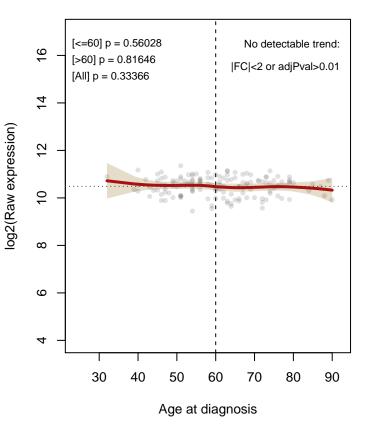
HIF1A (non-ER binding)

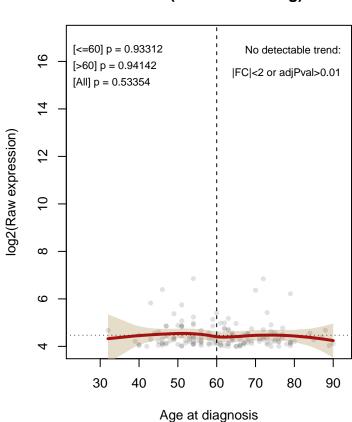




HIF1AN (non-ER binding)

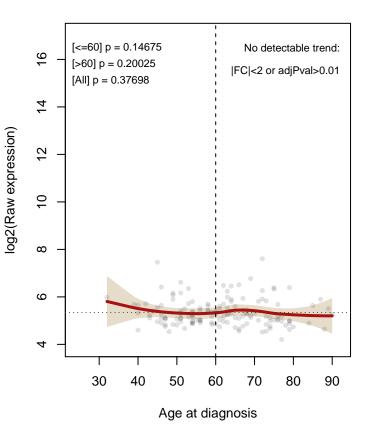
HIF3A (non-ER binding)

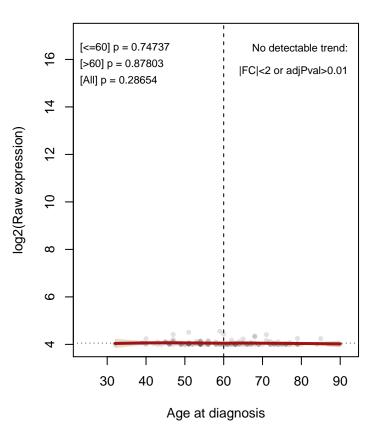




HNF1A (non-ER binding)

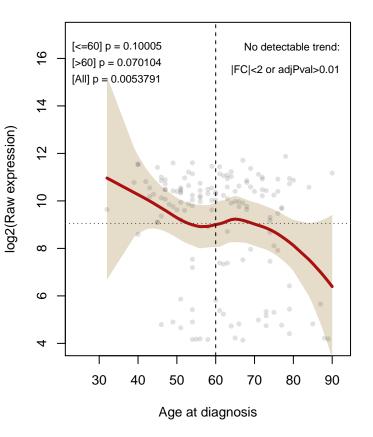
HNF1B (non-ER binding)

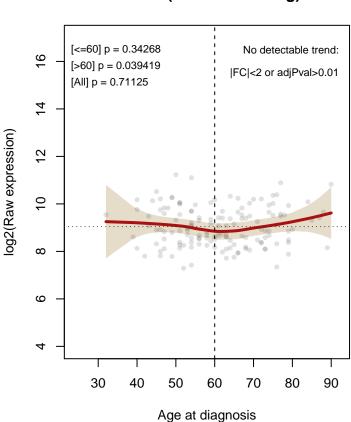




HOXC10 (non-ER binding)

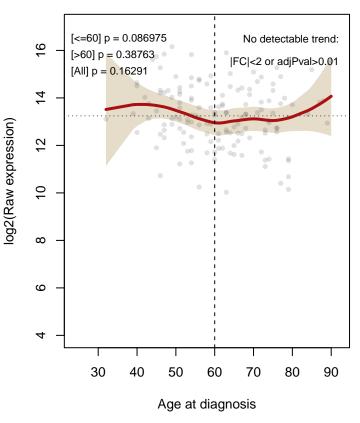
HRAS (non-ER binding)

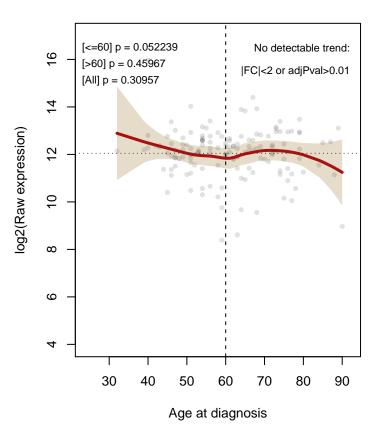






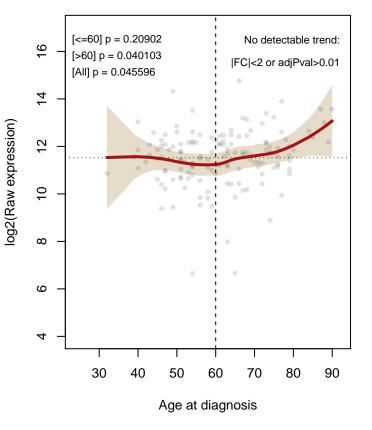
IGF1R (ER binding)

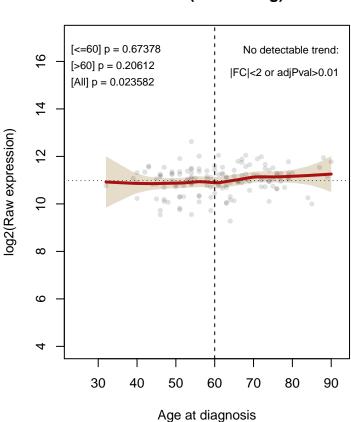




IGFBP2 (non-ER binding)

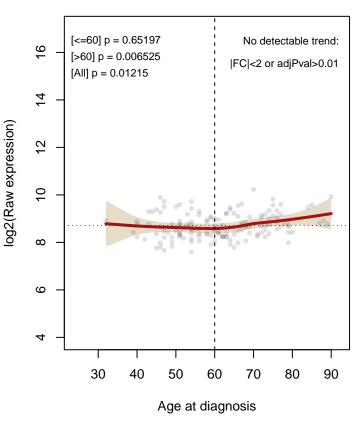
IKBKB (ER binding)

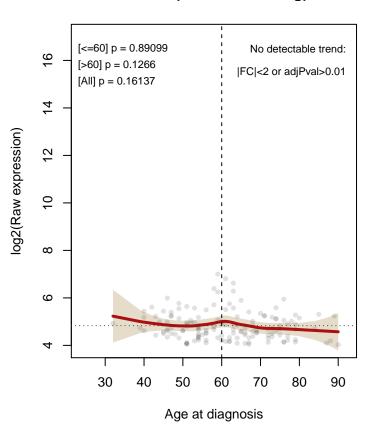






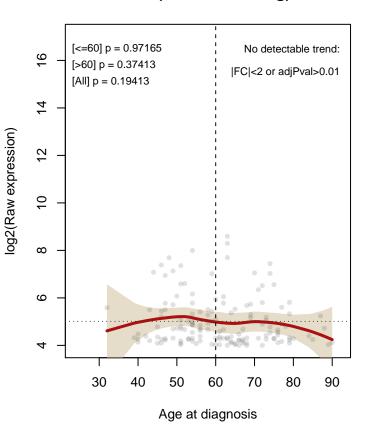
IL2RA (non-ER binding)

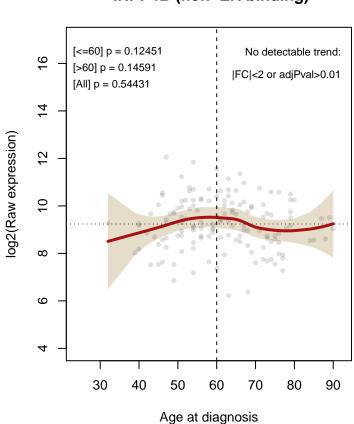


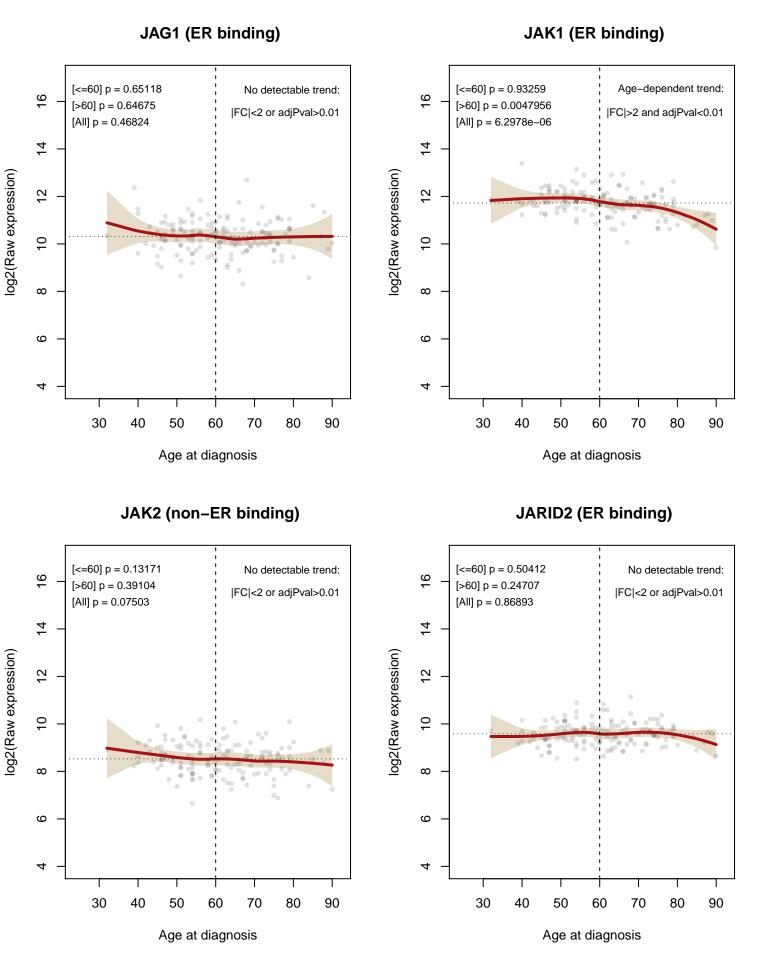


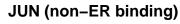
IL6 (non-ER binding)

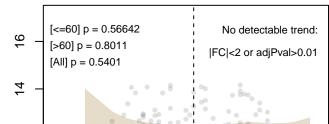
INPP4B (non-ER binding)

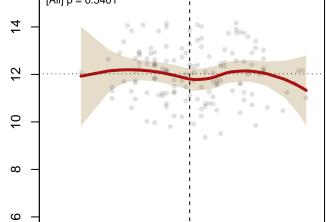






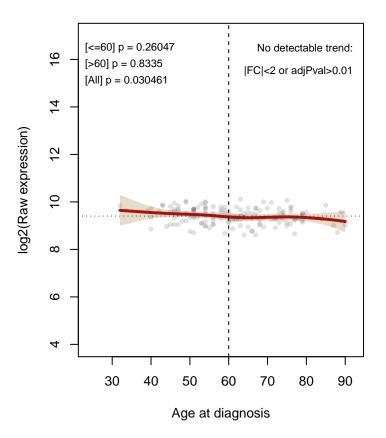






log2(Raw expression)

KDM2B (non-ER binding)



KDM6A (non-ER binding)

Age at diagnosis

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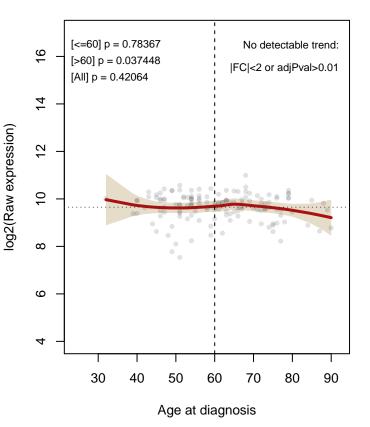
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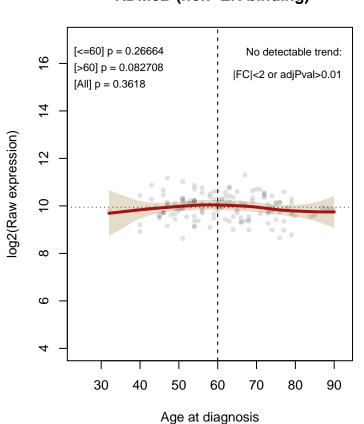
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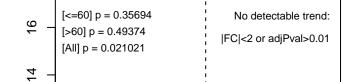
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KDM6B (non-ER binding)

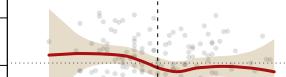








log2(Raw expression)



ω 9

50

30

40

KMT2C (non-ER binding)

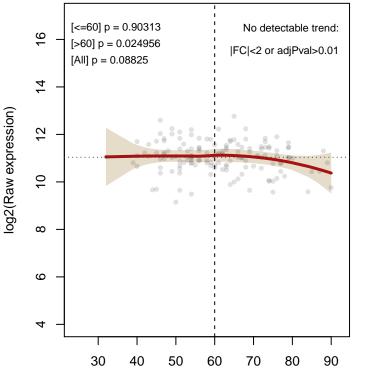
60

Age at diagnosis

70

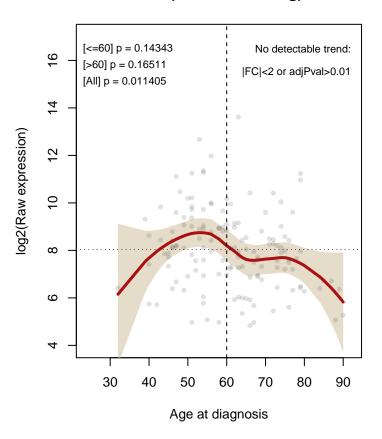
80

90

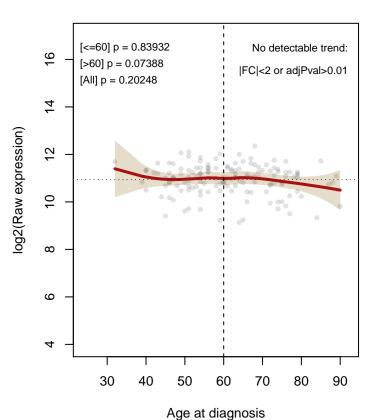


Age at diagnosis

KIT (non-ER binding)

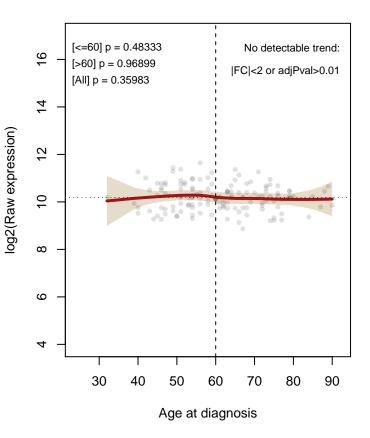


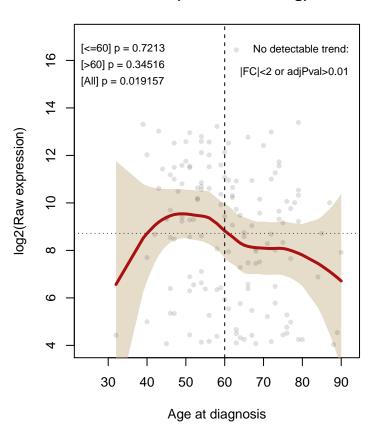
KMT2D (non-ER binding)





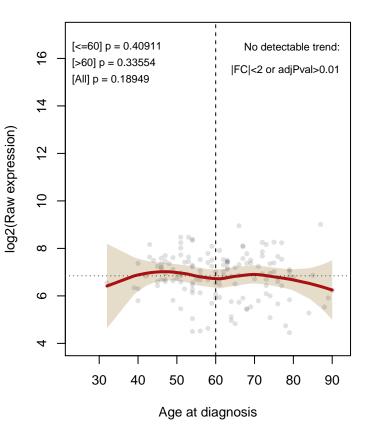
KRT5 (non-ER binding)

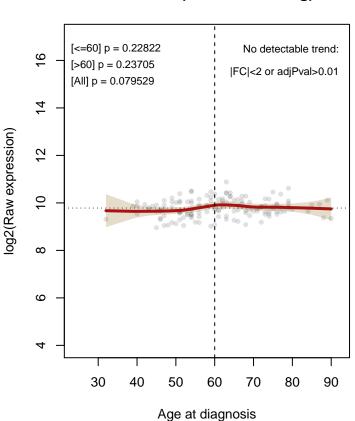




L3MBTL1 (non-ER binding)

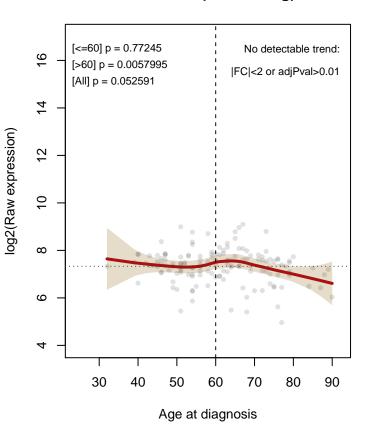
L3MBTL2 (non-ER binding)

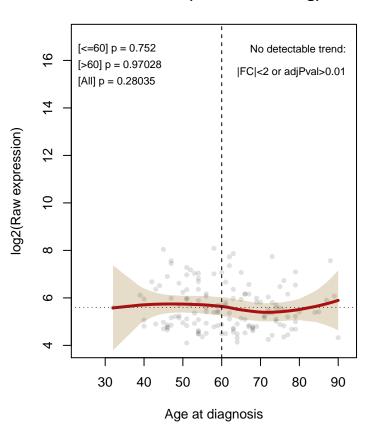




L3MBTL3 (ER binding)

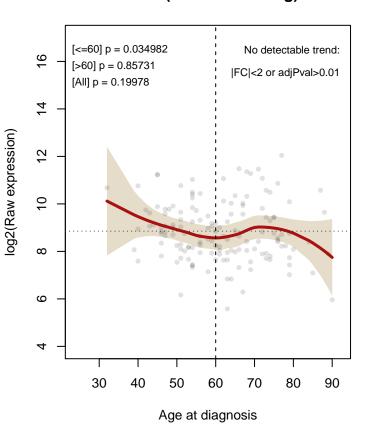
L3MBTL4 (non-ER binding)

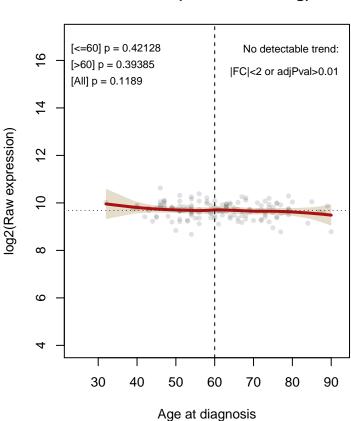




LEF1 (non-ER binding)

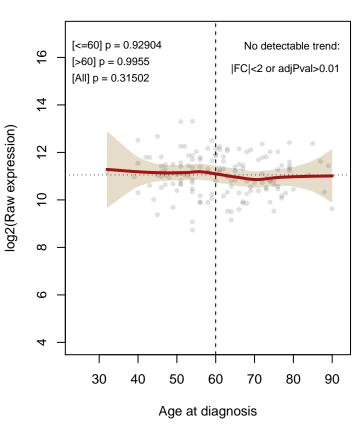
MAP2K1 (non-ER binding)

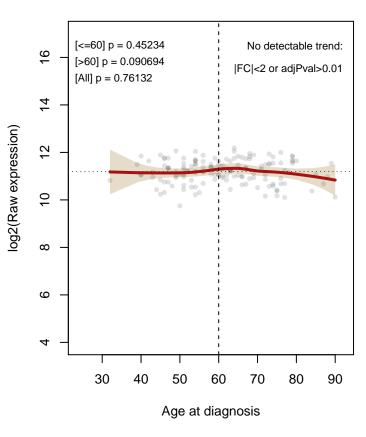




MAP3K1 (non-ER binding)

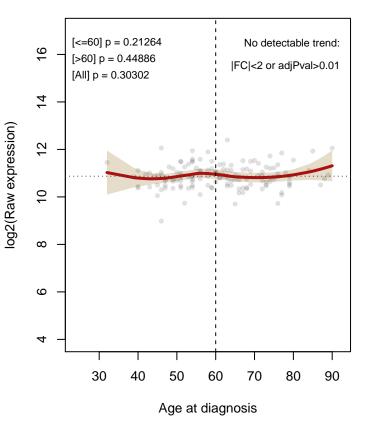
MAPK1 (non-ER binding)

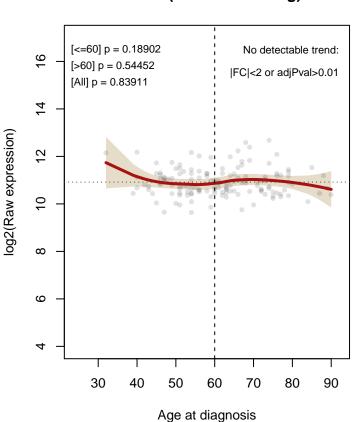




MAPK3 (non-ER binding)

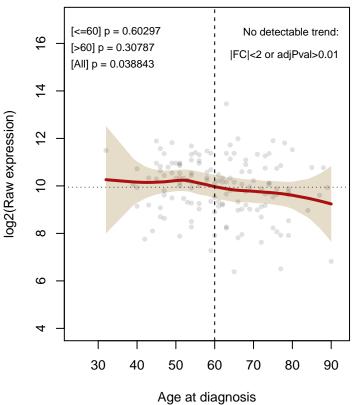
MDM2 (non-ER binding)

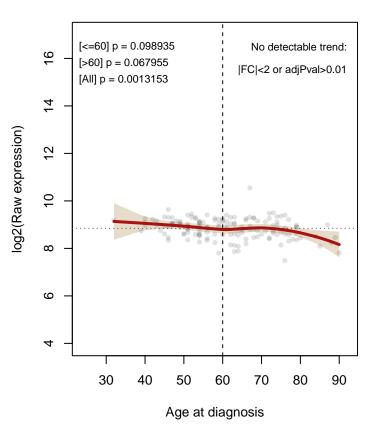






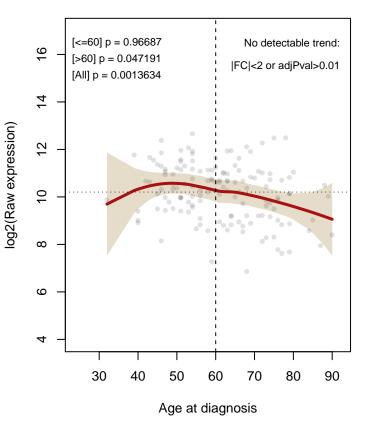
MTF2 (non-ER binding)

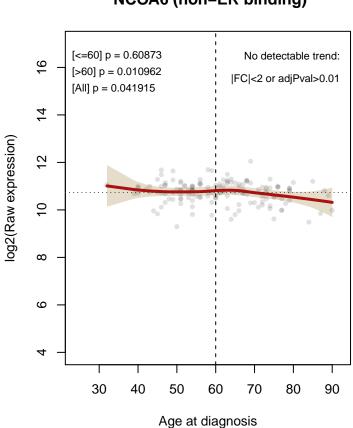


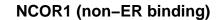


MYC (non-ER binding)

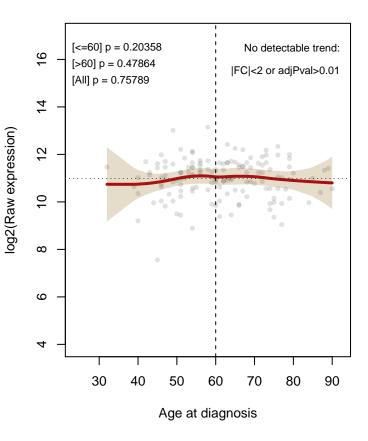
NCOA6 (non-ER binding)

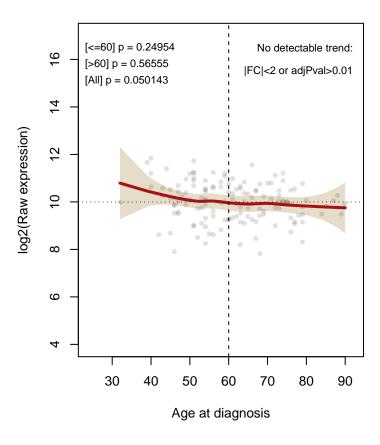






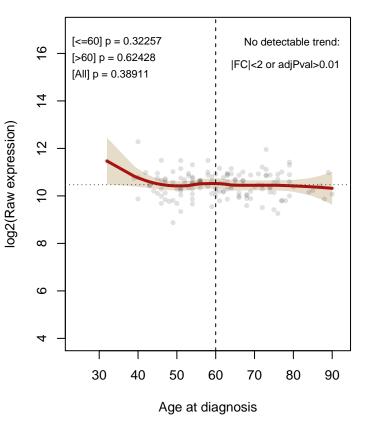
NES (non-ER binding)

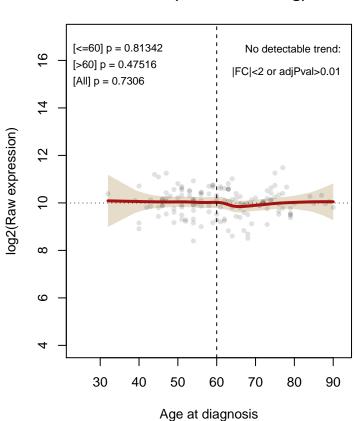




NFKB1 (non-ER binding)

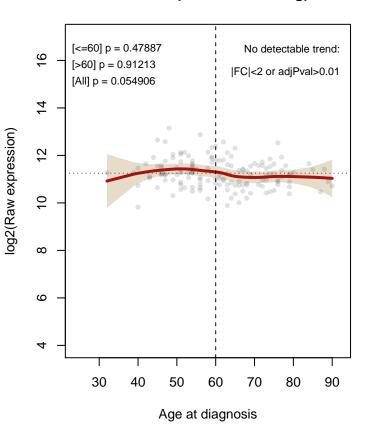
NFKB2 (non-ER binding)

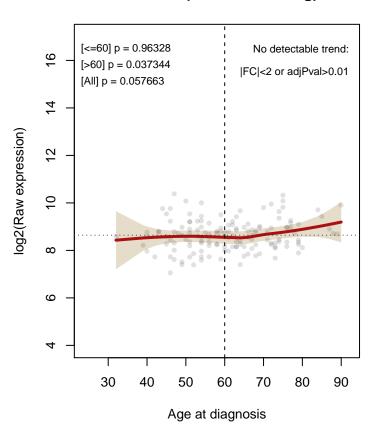




NFKBIA (non-ER binding)

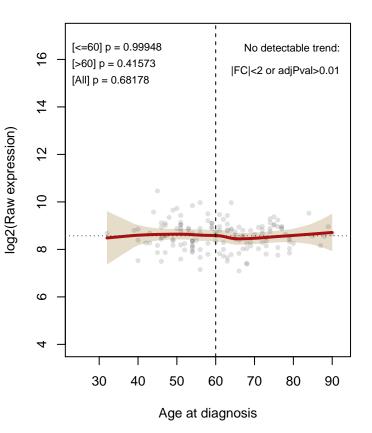
NFKBIB (non-ER binding)

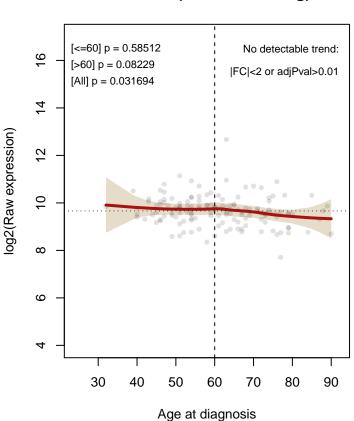




NFKBIE (non-ER binding)

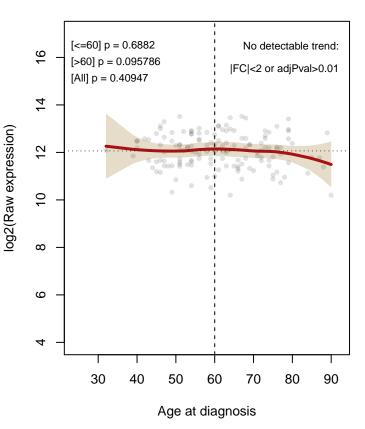
NOTCH1 (non-ER binding)

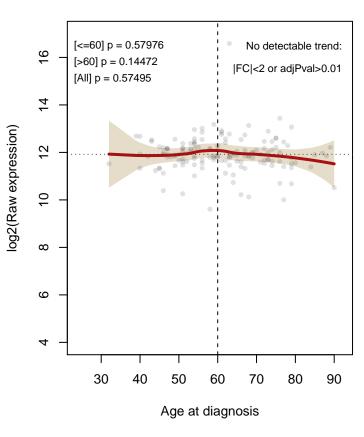




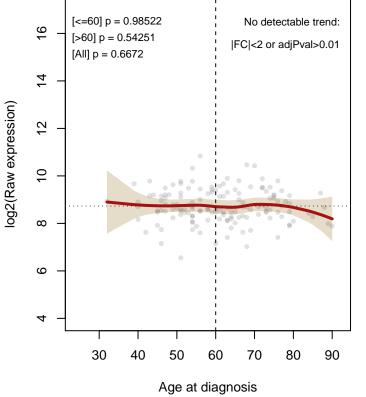
NOTCH2 (non-ER binding)

NOTCH3 (non-ER binding)

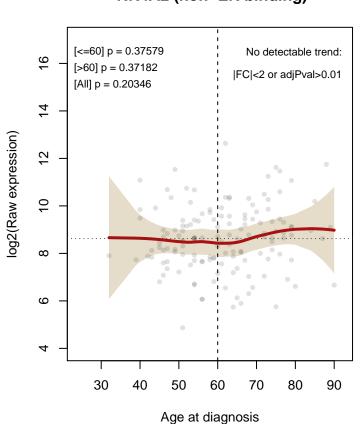




NOTCH4 (non-ER binding)

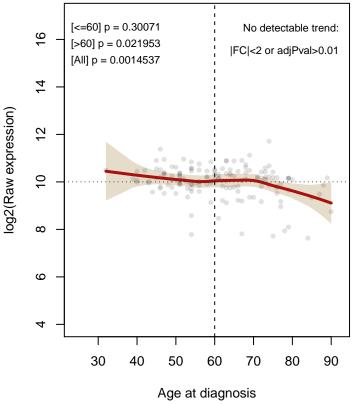


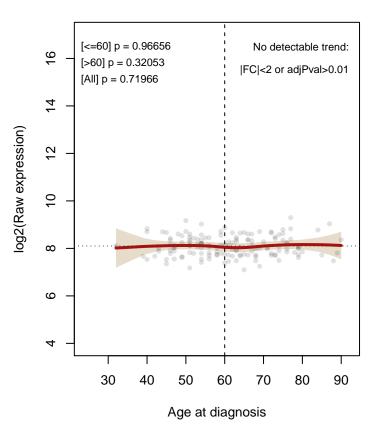
NR4A2 (non-ER binding)



NRAS (non–ER binding)

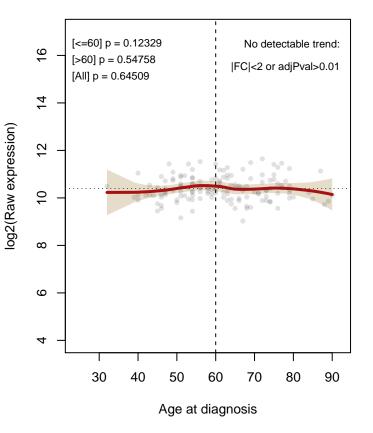
PCGF1 (non-ER binding)

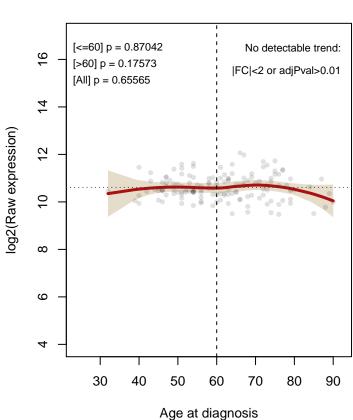




PCGF2 (non-ER binding)

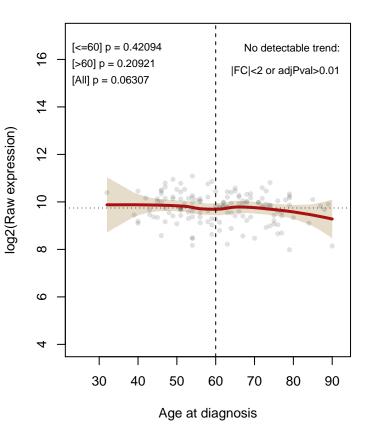
PCGF3 (non-ER binding)

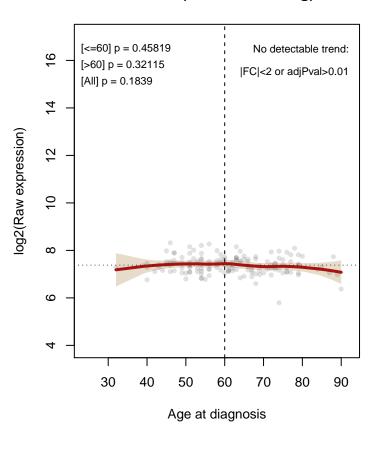






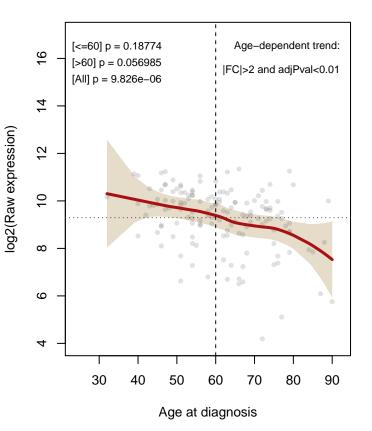
PCGF6 (non-ER binding)

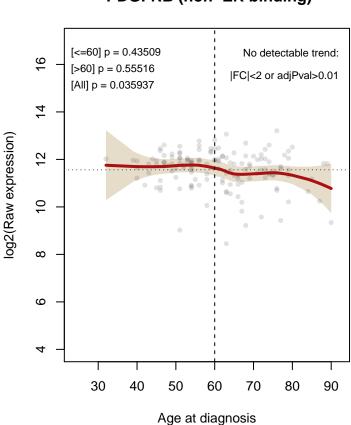


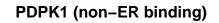


PDGFRA (non-ER binding)

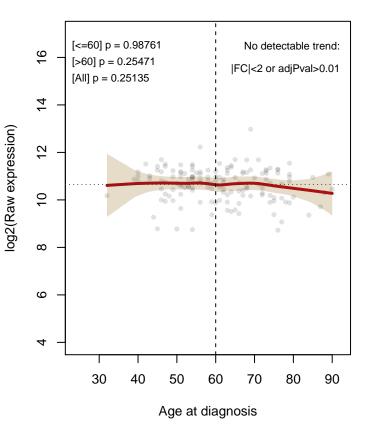
PDGFRB (non-ER binding)

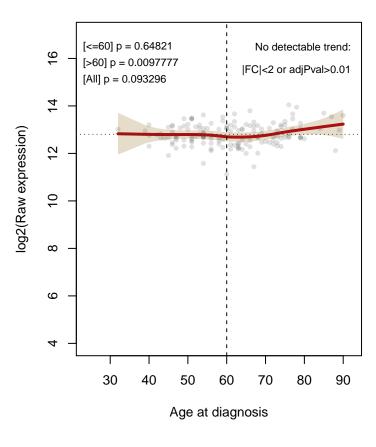






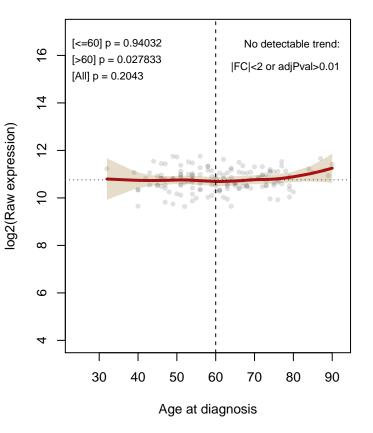
PEBP1 (non-ER binding)

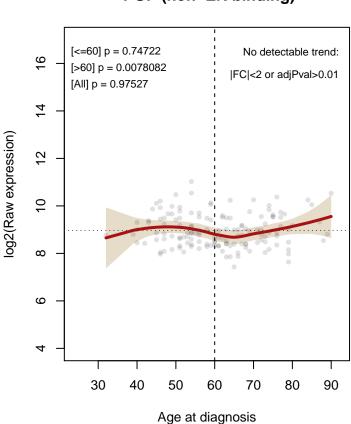


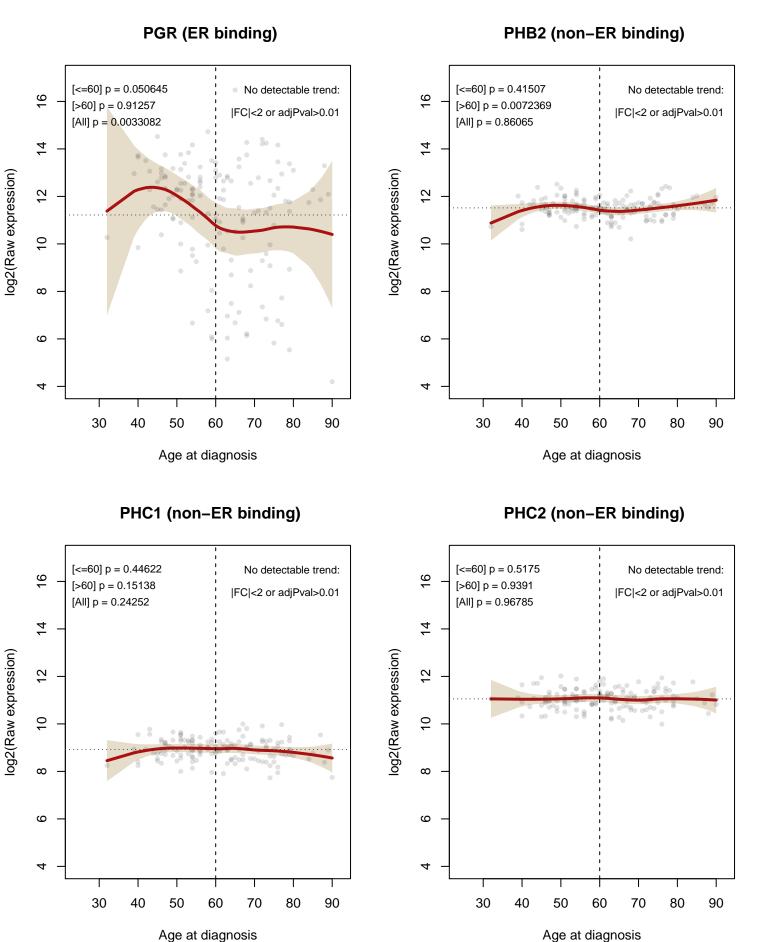


PELP1 (non-ER binding)

PGP (non-ER binding)

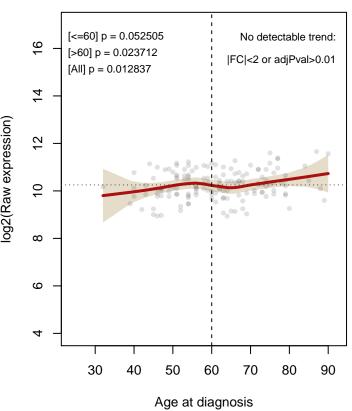




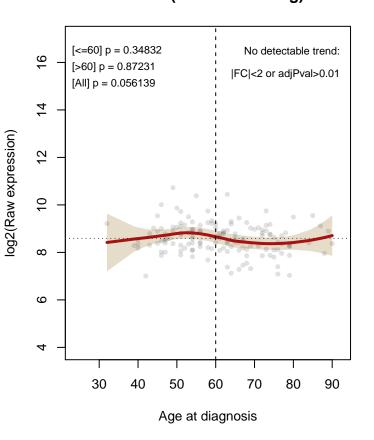


PHC3 (non-ER binding) [<=60] p = 0.7815No detectable trend: 16 16 [>60] p = 0.019576 |FC|<2 or adjPval>0.01 [AII] p = 0.7684 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ω 9 9 30 40 50 60 70 80 90 Age at diagnosis

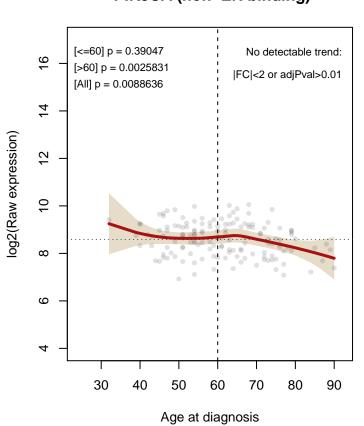
PHF1 (non-ER binding)



PHF19 (non-ER binding)

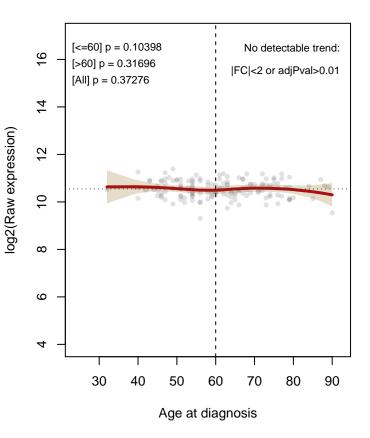


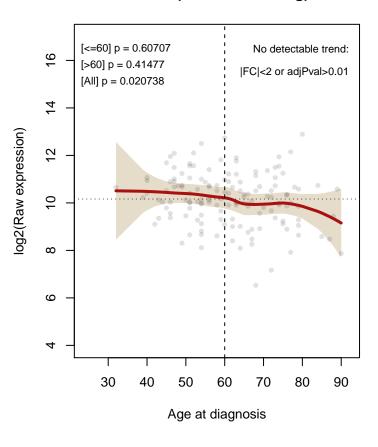
PIK3CA (non-ER binding)





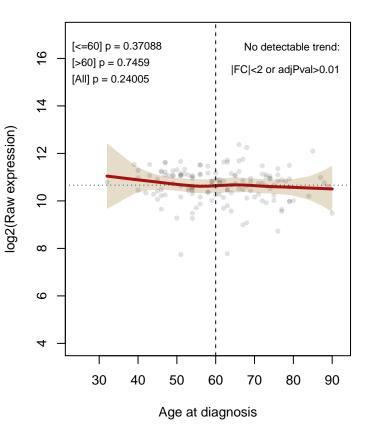
PLAU (non-ER binding)

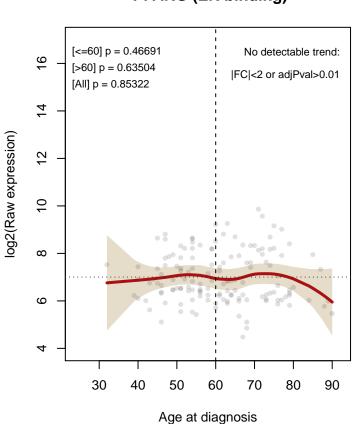


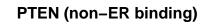


PODXL (non-ER binding)

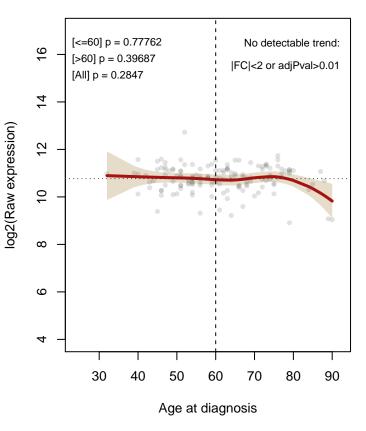
PPARG (ER binding)

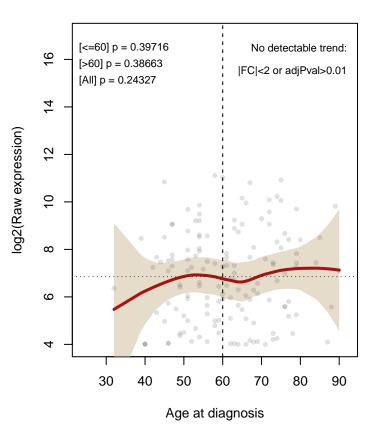






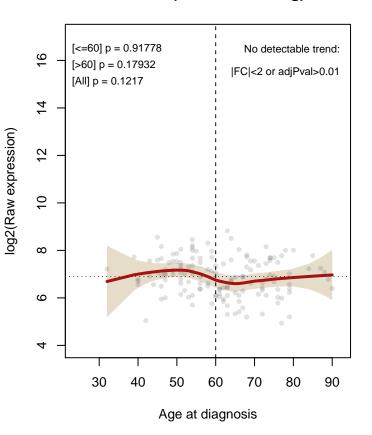
PYDC1 (non-ER binding)

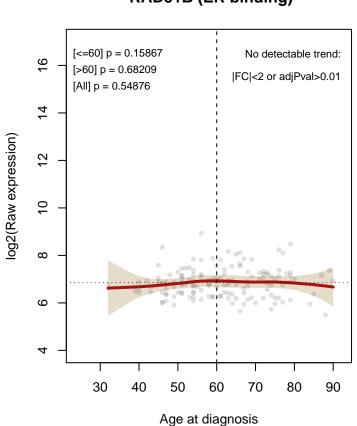




RAD51 (non-ER binding)

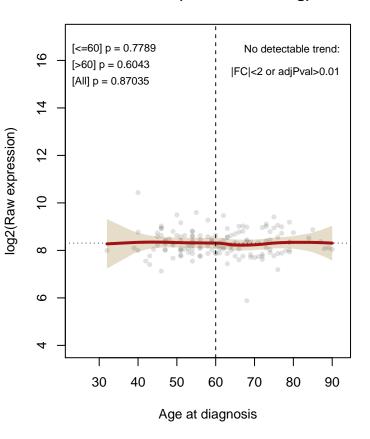
RAD51B (ER binding)

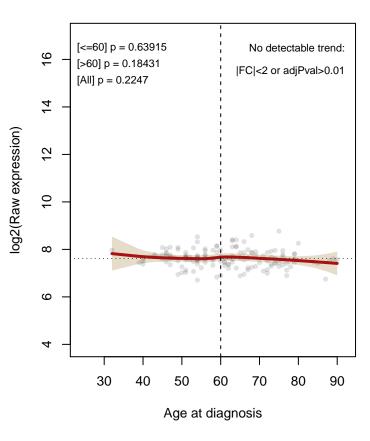




RAD51C (non-ER binding)

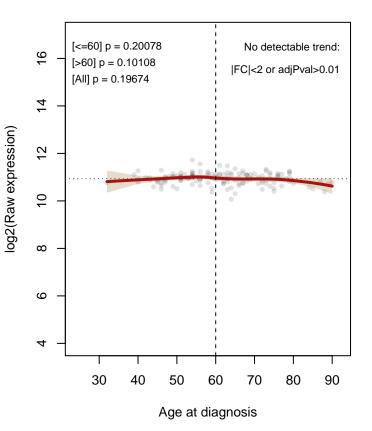
RAD51D (non-ER binding)

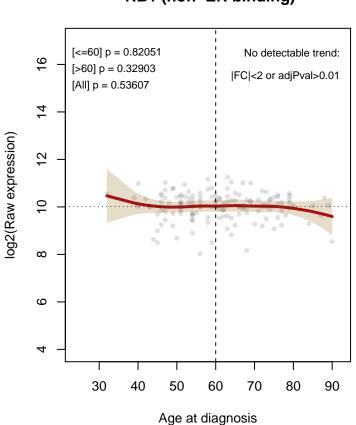


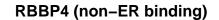


RAF1 (non-ER binding)

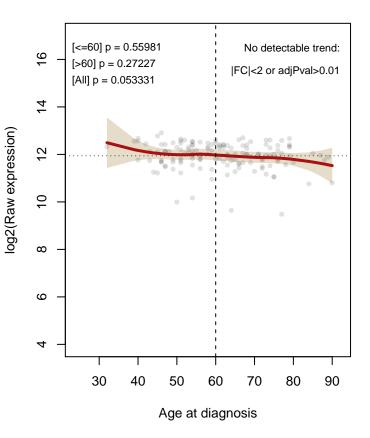
RB1 (non-ER binding)

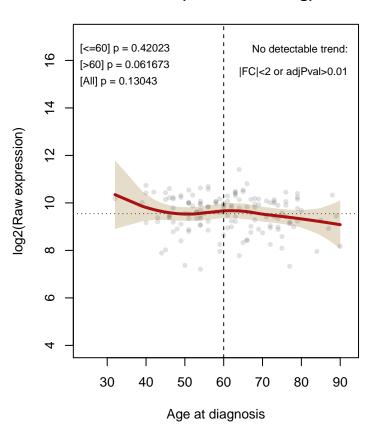






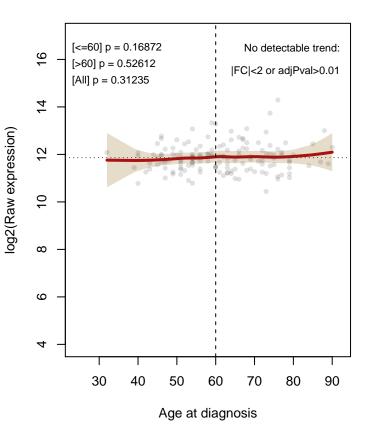
RBBP5 (non-ER binding)

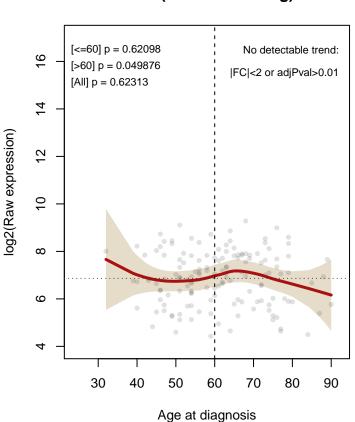




RBBP7 (non-ER binding)

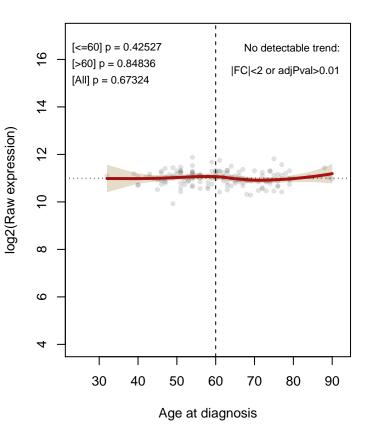
REL (non-ER binding)

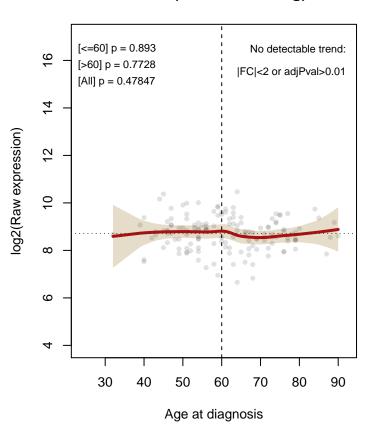






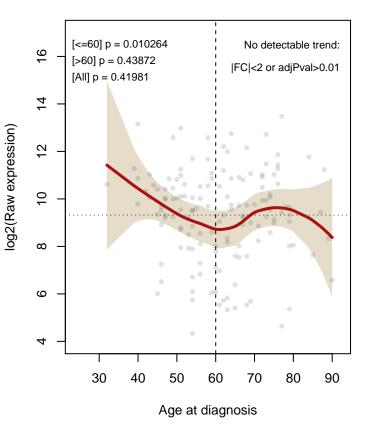
RELB (non-ER binding)

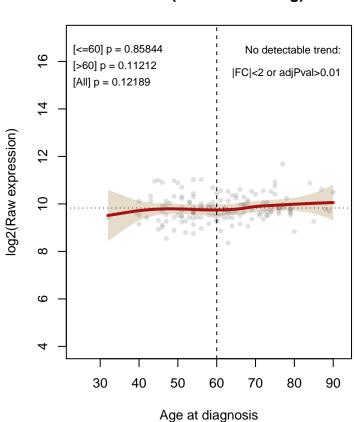




RET (ER binding)

RING1 (non-ER binding)





RNF2 (non-ER binding) **RUNX1 (ER binding)** [<=60] p = 0.59419No detectable trend: [<=60] p = 0.039614Age-dependent trend: 16 16 [>60] p = 0.26151 [>60] p = 0.096972 |FC|<2 or adjPval>0.01 |FC|>2 and adjPval<0.01 [All] p = 0.050172[AII] p = 2.2157e - 054 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ω 9 9 30 40 50 60 70 80 90 30 40 50 60 70 80 90 Age at diagnosis Age at diagnosis **RUNX3 (non-ER binding)** RYBP (non-ER binding) [<=60] p = 0.38026No detectable trend: [<=60] p = 0.39172No detectable trend: 16 16 [>60] p = 0.55869[>60] p = 0.24744 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [AII] p = 0.090393[AII] p = 0.399994 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ω

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Age at diagnosis

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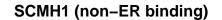
60

Age at diagnosis

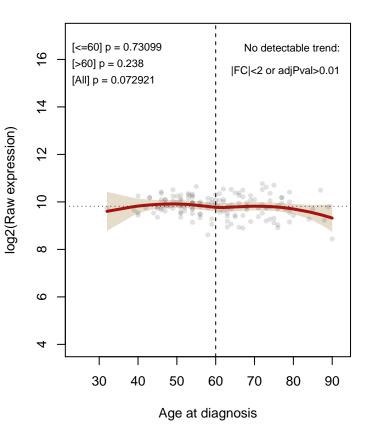
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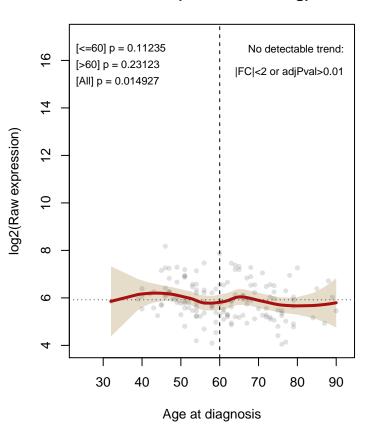
80

90



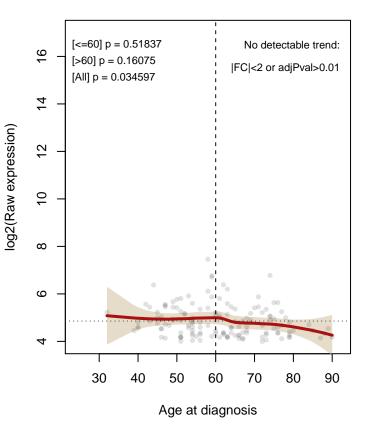
SCML2 (non-ER binding)

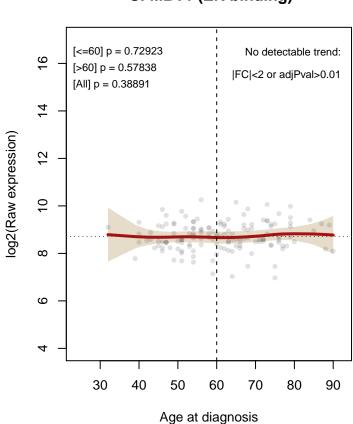




SCML4 (non-ER binding)

SFMBT1 (ER binding)





SFMBT2 (ER binding) SFPQ (non-ER binding) [<=60] p = 0.78283No detectable trend: [<=60] p = 0.013506No detectable trend: 16 16 [>60] p = 0.67691 [>60] p = 0.22485 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [All] p = 0.12561[AII] p = 1.488e-054 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ω 9 9 30 40 50 60 70 80 90 30 40 50 60 70 80 90 Age at diagnosis Age at diagnosis SHC1 (non-ER binding) SIRT1 (non-ER binding) [<=60] p = 0.12545No detectable trend: [<=60] p = 0.58997No detectable trend: 16 16 [>60] p = 0.19349 [>60] p = 0.85615 |FC|<2 or adjPval>0.01 |FC|<2 or adjPval>0.01 [All] p = 0.61885[All] p = 0.398434 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ω 9 9

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Age at diagnosis

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Age at diagnosis

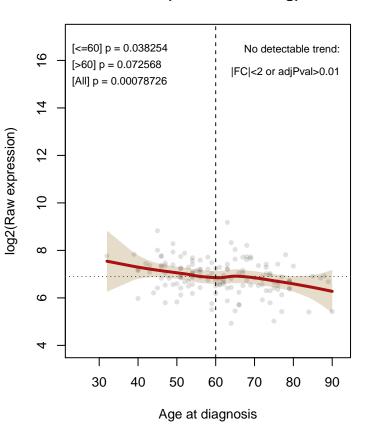
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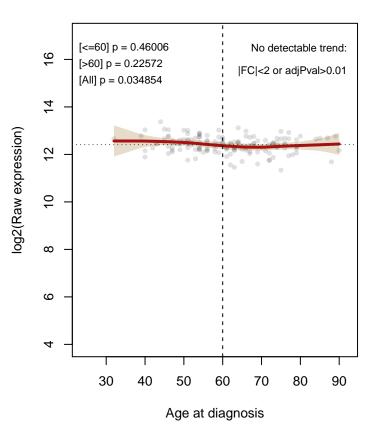
80

90

SKP2 (non-ER binding)

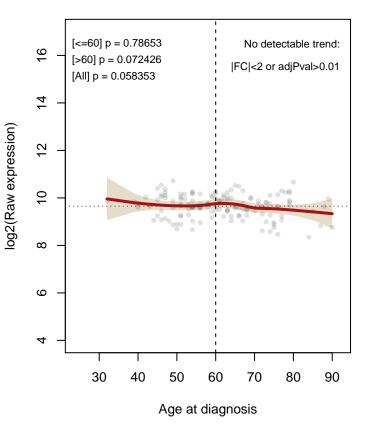
SLC25A3 (non-ER binding)

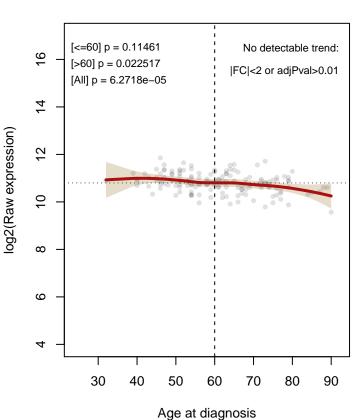




SMAD1 (non-ER binding)

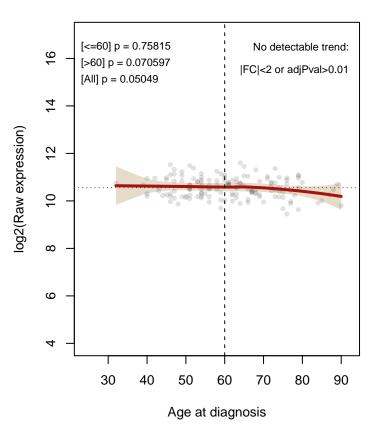
SMAD2 (non-ER binding)





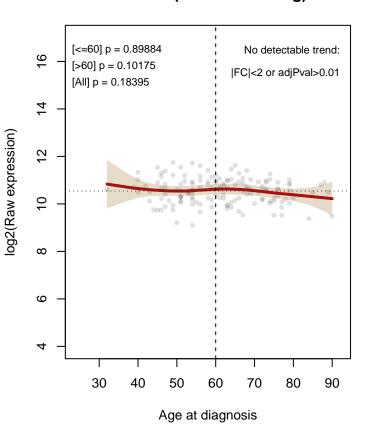
SMAD3 (ER binding) [<=60] p = 0.17616No detectable trend: 16 [>60] p = 0.090746 |FC|<2 or adjPval>0.01 [All] p = 0.719644 log2(Raw expression) 12 10 ω 9 30 40 50 60 70 80 90

SMAD4 (non-ER binding)

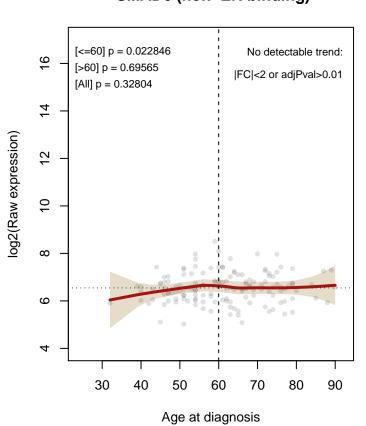


SMAD5 (non-ER binding)

Age at diagnosis

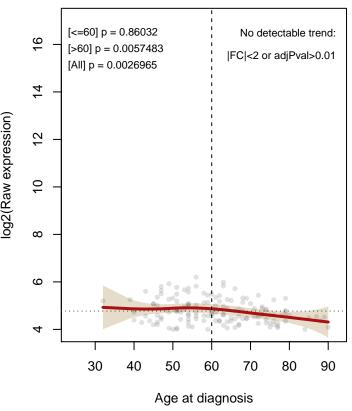


SMAD6 (non-ER binding)



SMAD7 (non-ER binding) [<=60] p = 0.6617No detectable trend: 16 16 [>60] p = 0.65655 |FC|<2 or adjPval>0.01 [All] p = 0.318174 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ω

SMAD9 (non-ER binding)



SOS1 (non-ER binding)

Age at diagnosis

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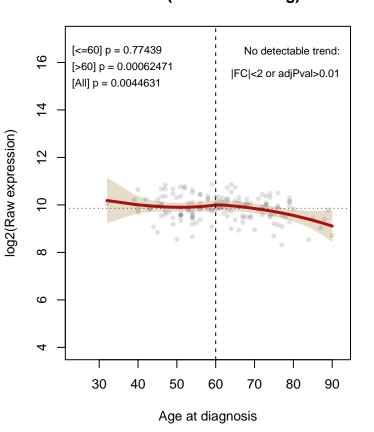
90

9

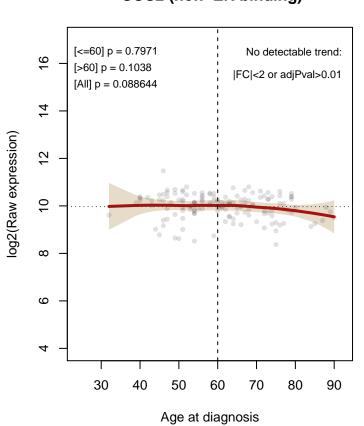
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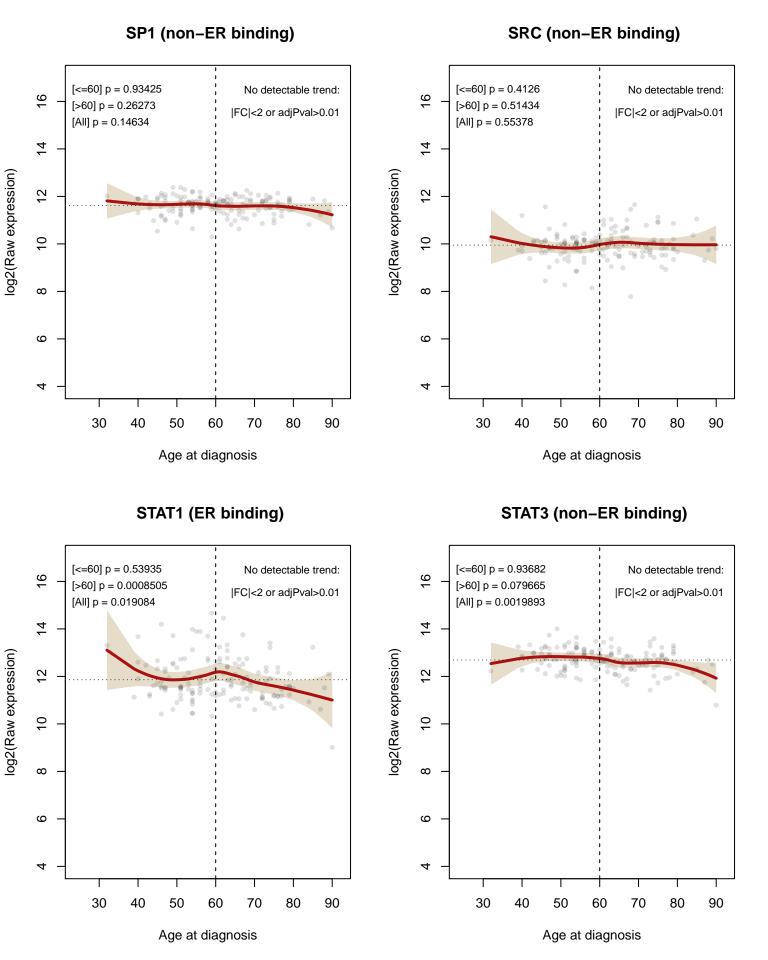
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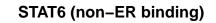
50



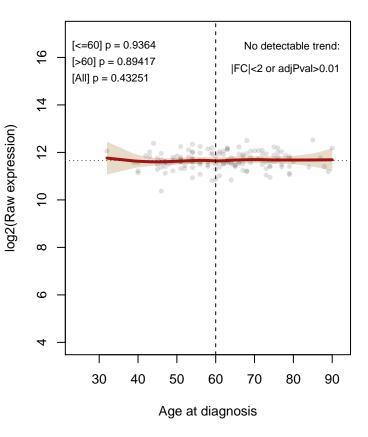
SOS2 (non-ER binding)

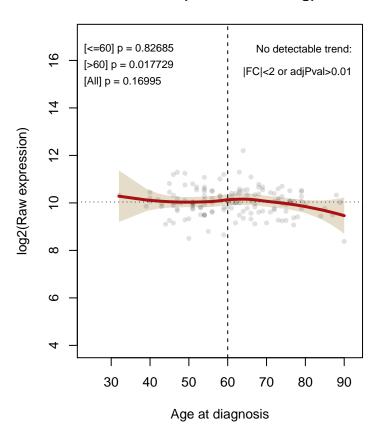






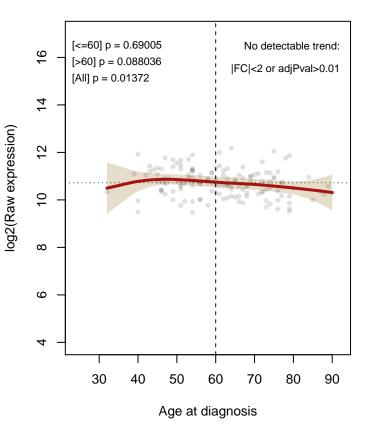
SUZ12 (non-ER binding)

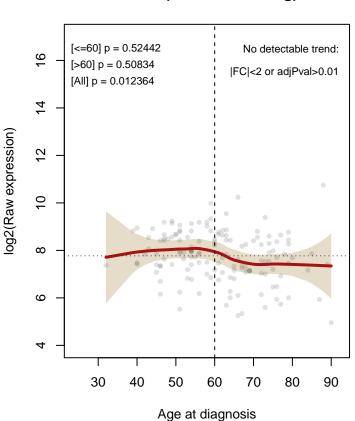




TCF3 (non-ER binding)

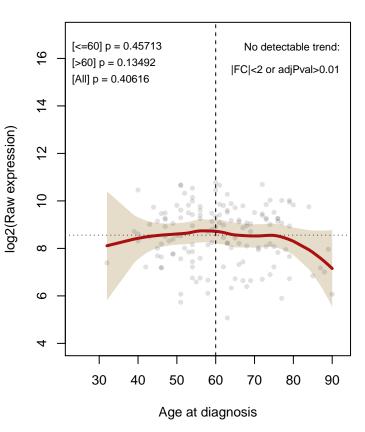
TCF7 (non-ER binding)

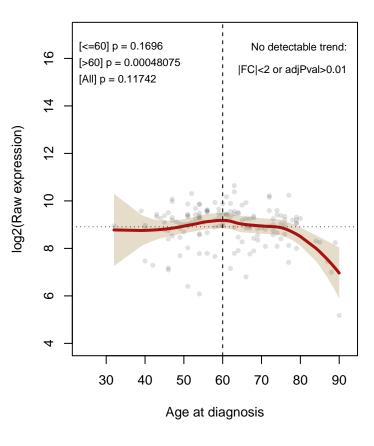






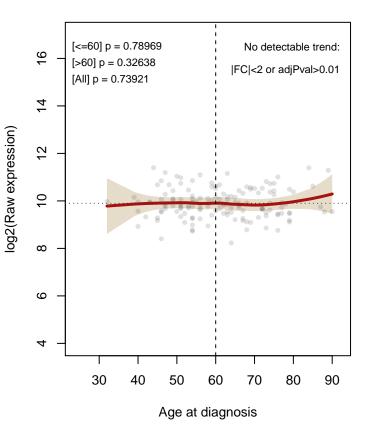
TCF7L2 (non-ER binding)

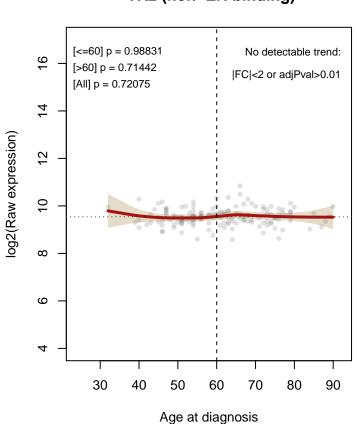


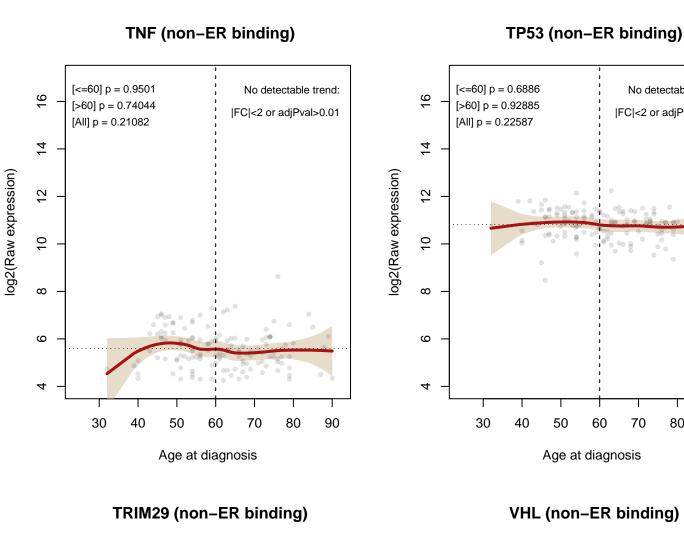


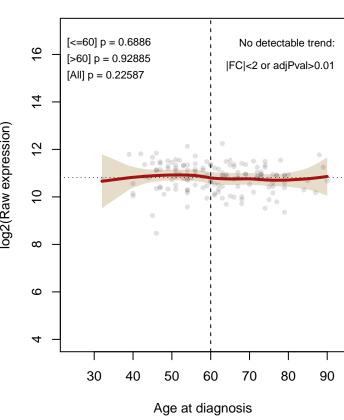
TGFB1 (non-ER binding)

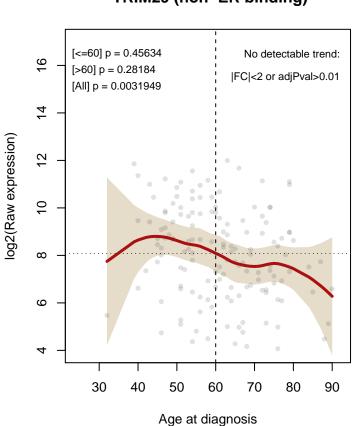
TK2 (non-ER binding)

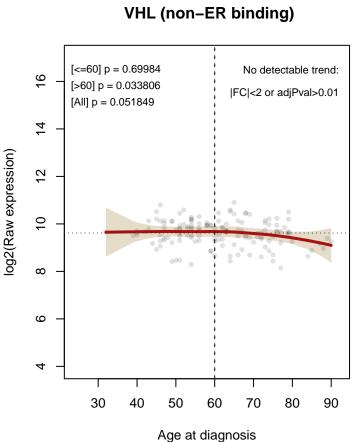


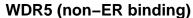




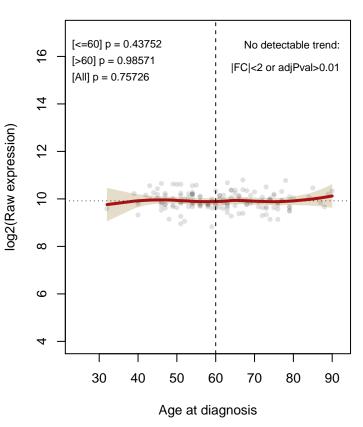


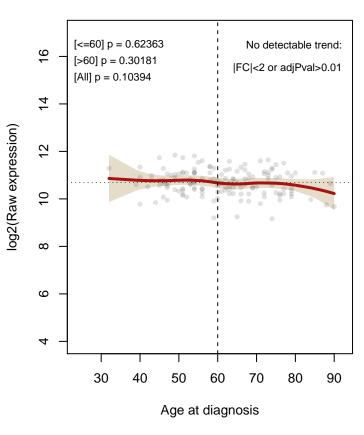






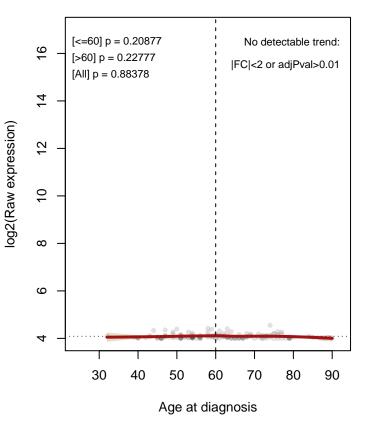
binding) WHSC1 (non–ER binding)

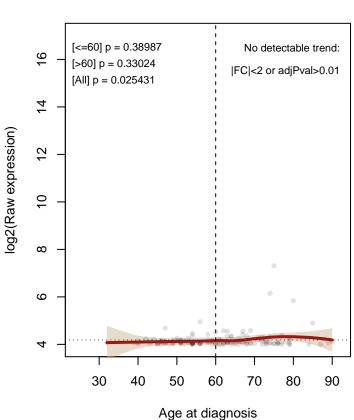


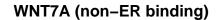


WNT1 (non-ER binding)

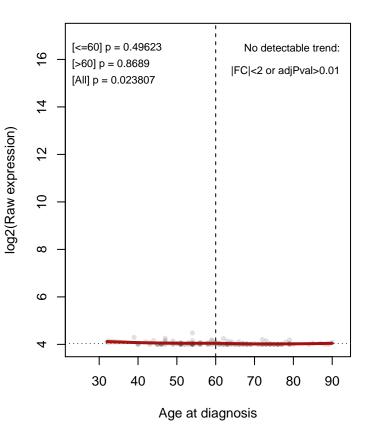
WNT3A (non-ER binding)

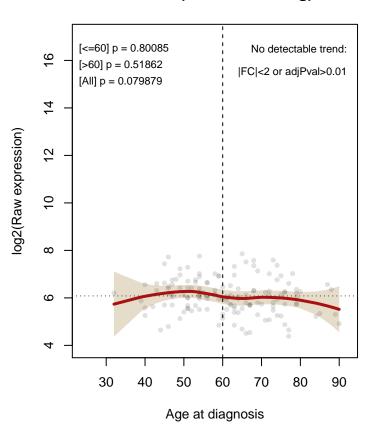






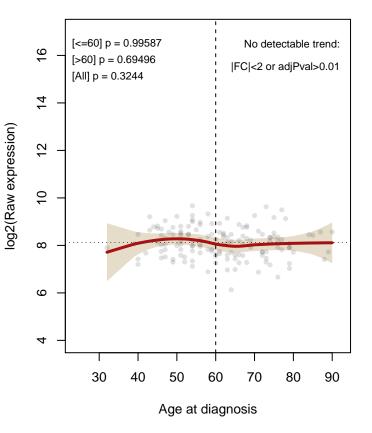
XRCC2 (non-ER binding)

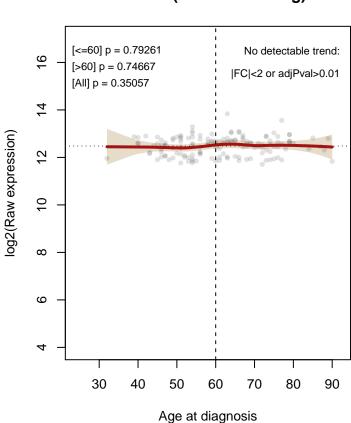




XRCC3 (non-ER binding)

XRCC6 (non-ER binding)





YAF2 (non-ER binding)

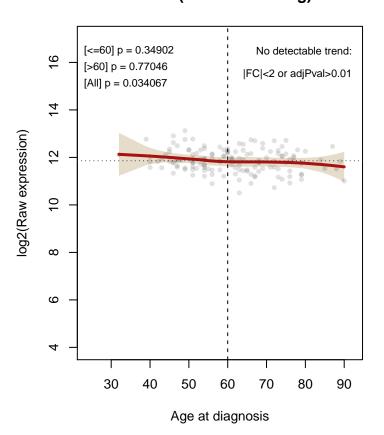
90 - [<=60] p = 0.052009 | No detectable trend: |FC|<2 or adjPval>0.01 | FC|<2 or adjPval>0.01 | No detectable trend: |FC|<2 or adjPval>0.01 | No detectable tre

30

40

50

YBX1 (non-ER binding)



YY1 (non-ER binding)

Age at diagnosis

60

70

80

90

