

#### ASXL3 (non-ER binding) ATM (non-ER binding) [<=60] p = 0.40667No detectable trend: [<=60] p = 0.5111No detectable trend: 16 16 [>60] p = 0.38385 [>60] p = 0.00047518 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [AII] p = 0.047805[All] p = 0.0694474 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 = 0.61264No detectable trend: [<=60] p = 0.91077No detectable trend: 16 16 [>60] p = 0.00045735 [>60] p = 0.015557 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [AII] p = 0.022647[AII] p = 0.000727984 4 log2(Raw expression) log2(Raw expression) 12 12 19 10 ω ω 9 9

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Age at diagnosis

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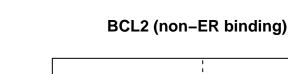
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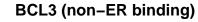
Age at diagnosis

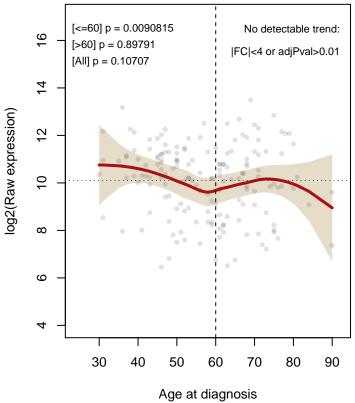
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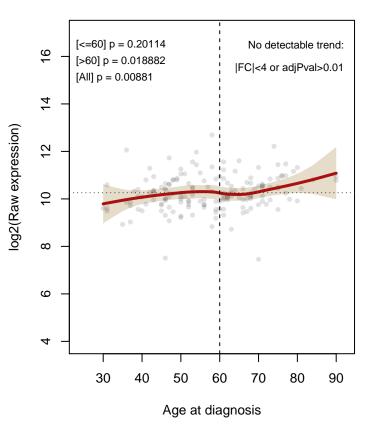
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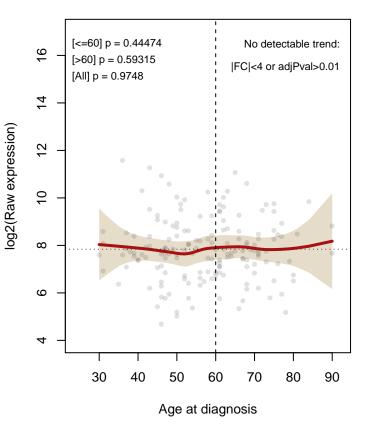


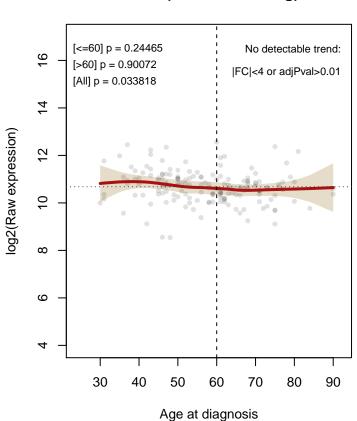




**BIRC5** (non-ER binding)

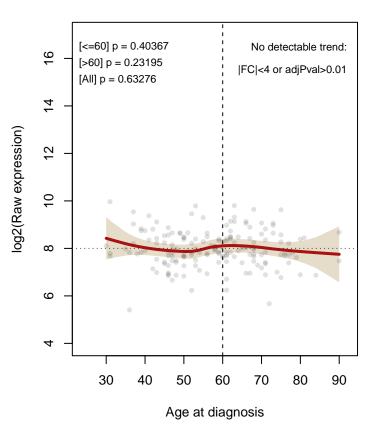
BMI1 (non-ER binding)





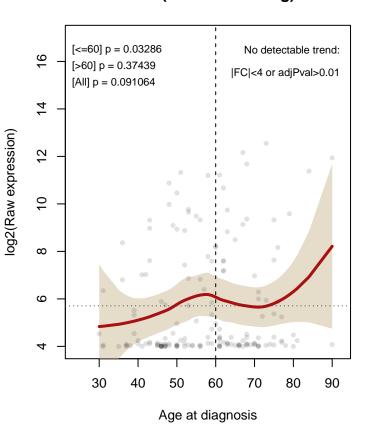
### BMX (non-ER binding) [<=60] p = 0.97954No detectable trend: 16 [>60] p = 0.3256 |FC|<4 or adjPval>0.01 [All] p = 0.211154 log2(Raw expression) 12 10 ω 9 30 50 70 80 90 40 60

#### BRCA1 (non-ER binding)

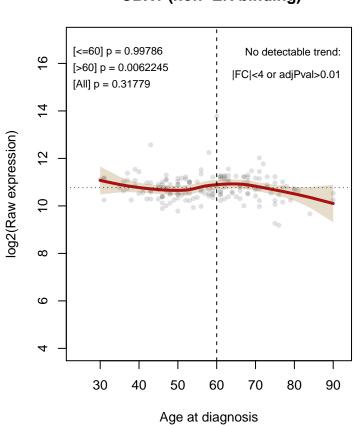


CA9 (non-ER binding)

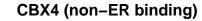
Age at diagnosis

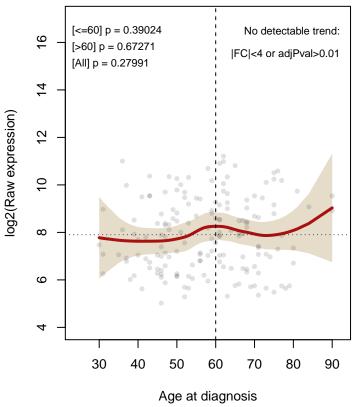


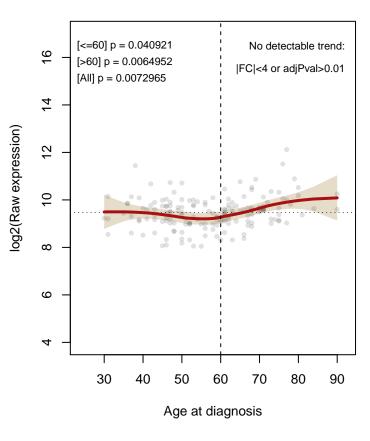
#### CBX1 (non-ER binding)



# CBX2 (non-ER binding)

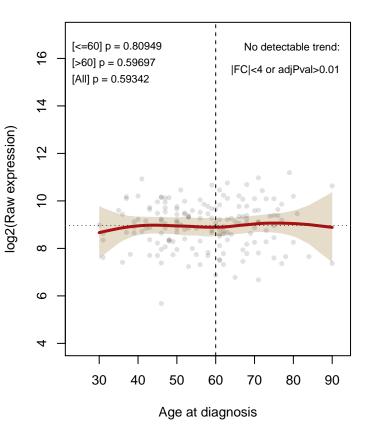


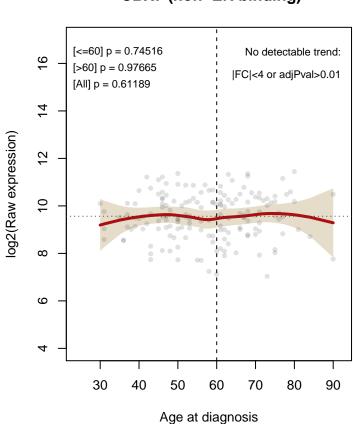


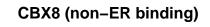


CBX6 (non-ER binding)

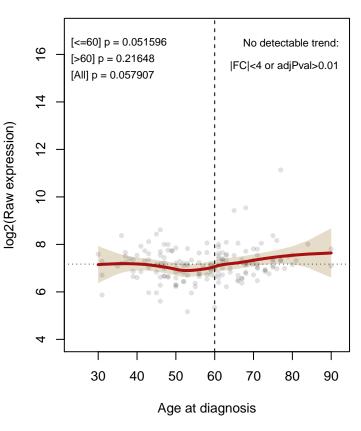
CBX7 (non-ER binding)

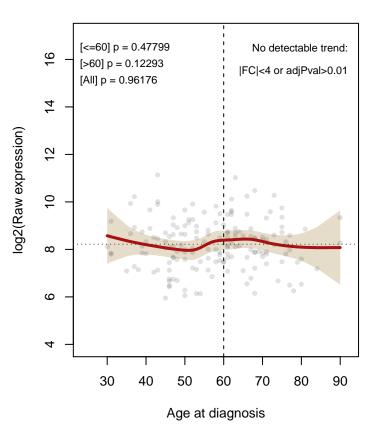






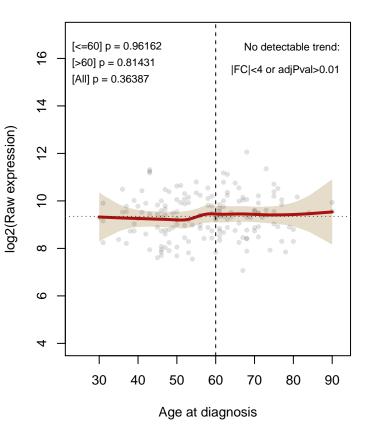
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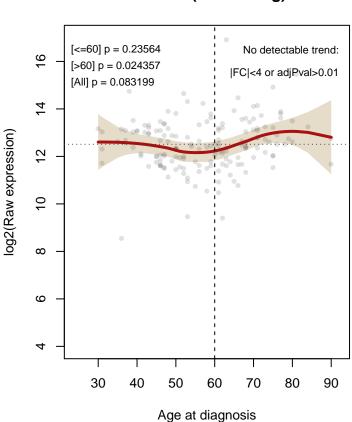


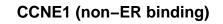


#### CCNB1 (non-ER binding)

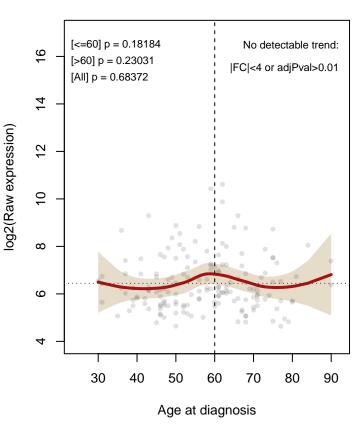
**CCND1 (ER binding)** 

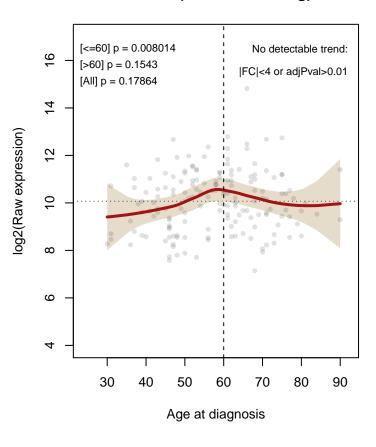






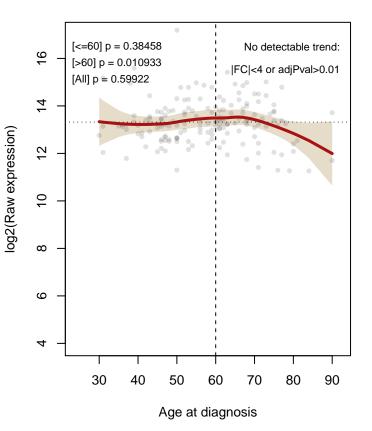
#### CD163 (non-ER binding)

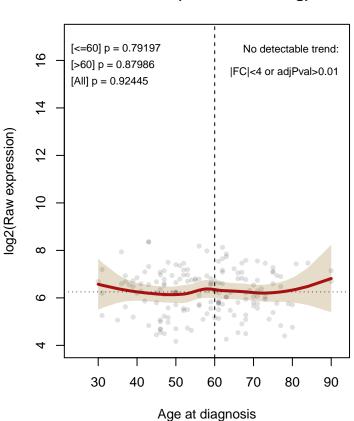


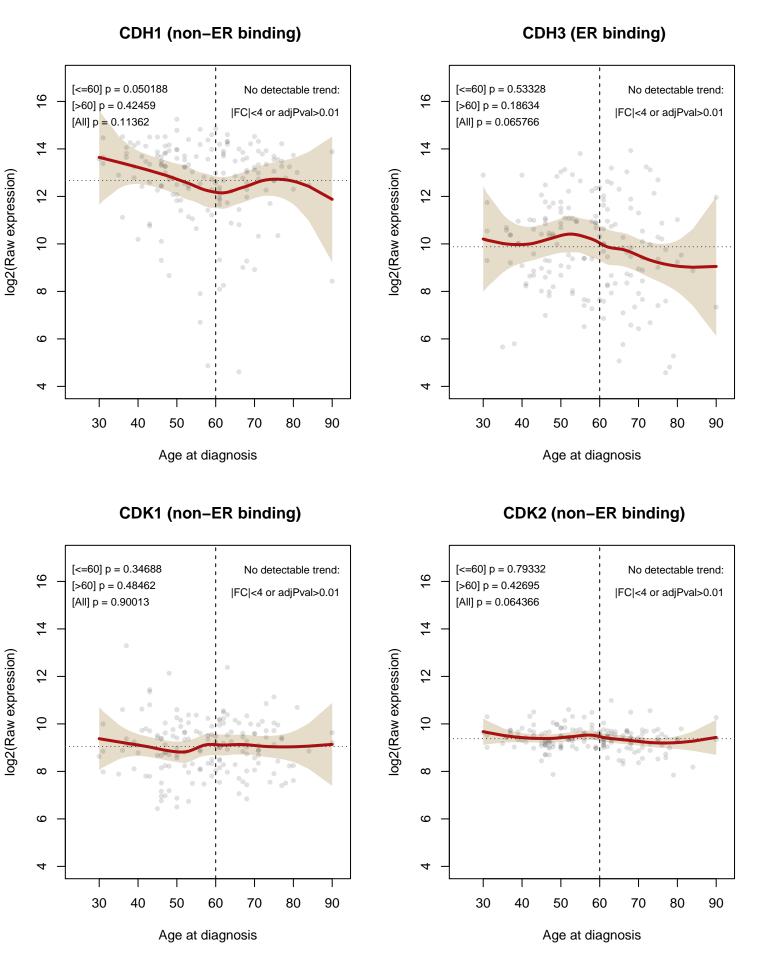


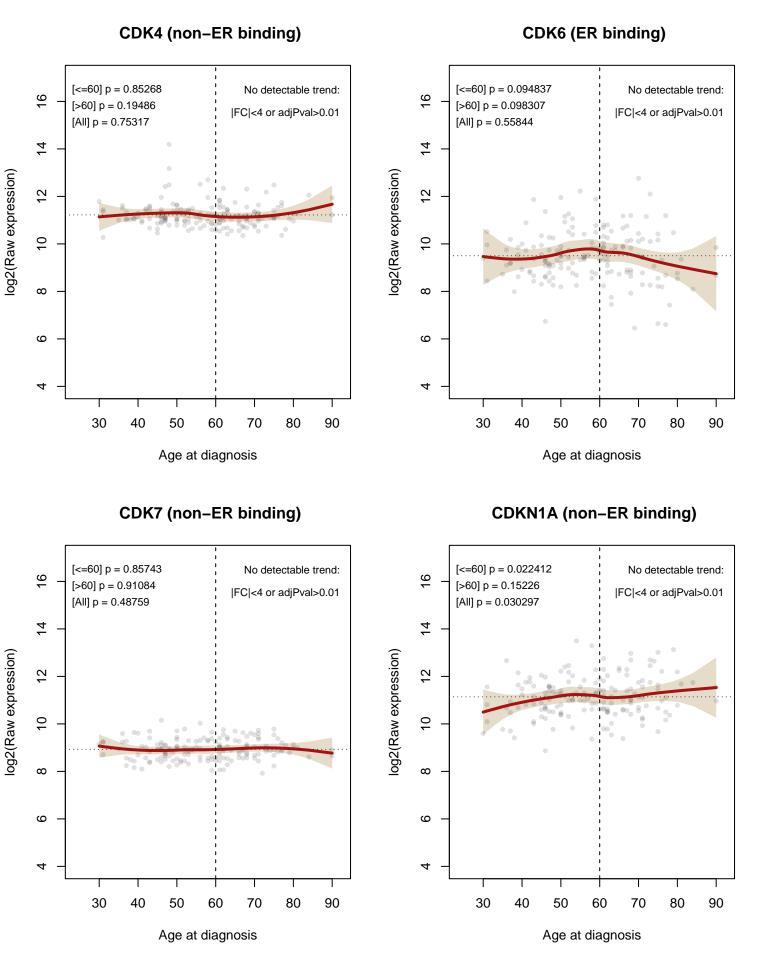
#### CD44 (non-ER binding)

CDC25C (non-ER binding)



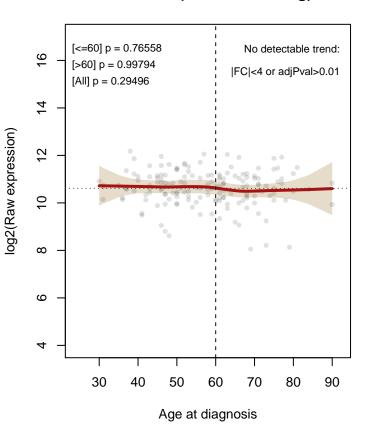


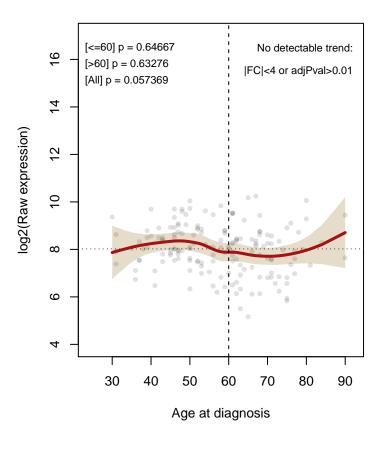




#### CDKN1B (non-ER binding)

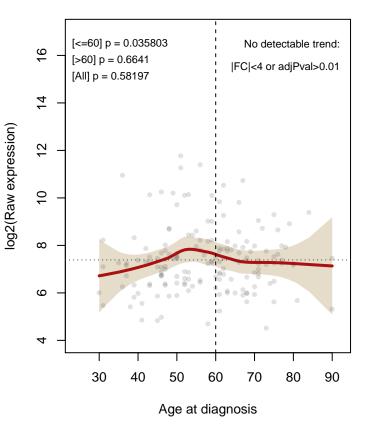
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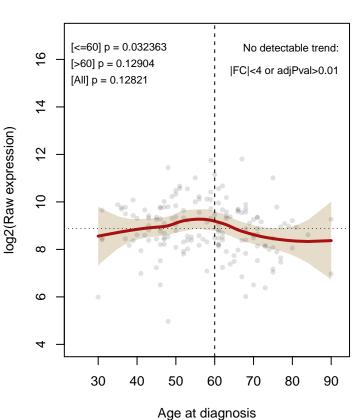




#### CDKN2A (non-ER binding)

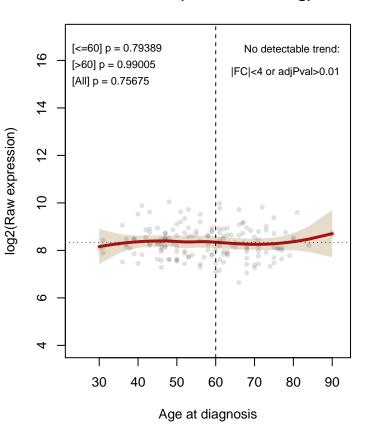
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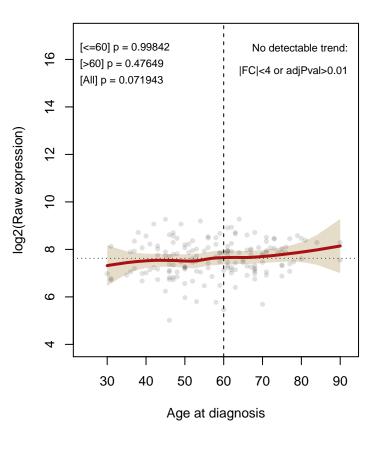




#### CDKN2C (non-ER binding)

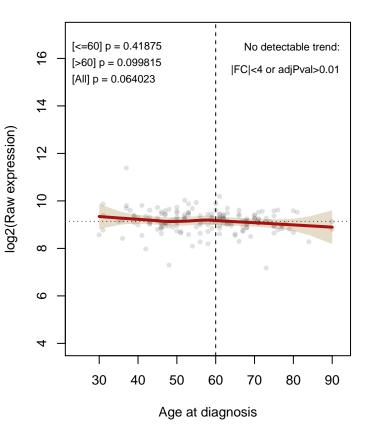
#### CDKN2D (non-ER binding)

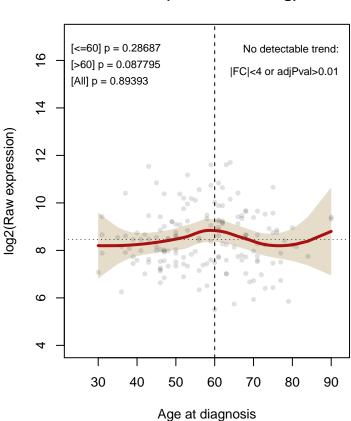




#### CHUK (non-ER binding)

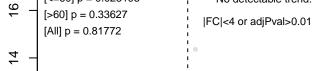
#### CIITA (non-ER binding)





#### CLDN3 (non-ER binding)

### [<=60] p = 0.023193No detectable trend:





log2(Raw expression)

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## 10 ω



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Age at diagnosis

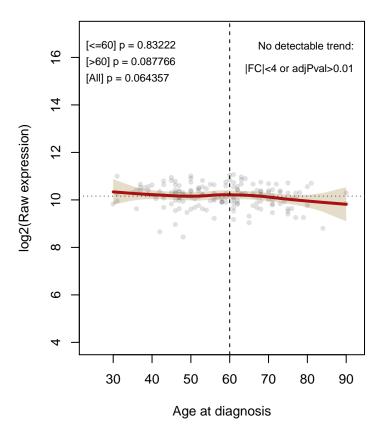
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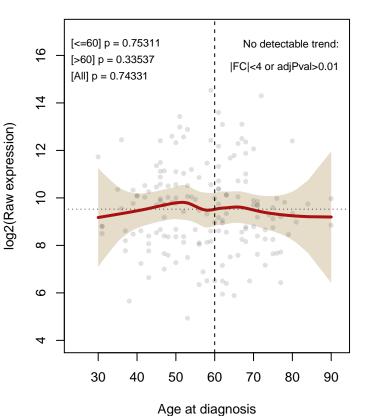
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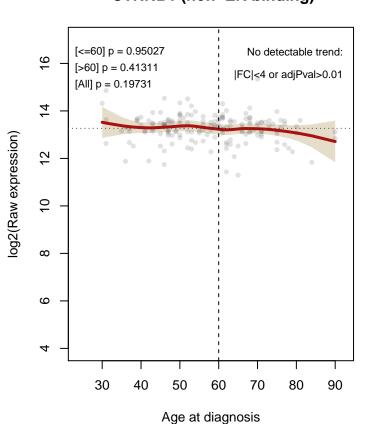
#### CREB1 (non-ER binding)



#### **CRYAB** (non-ER binding)



#### CTNNB1 (non-ER binding)



#### **DLC1 (ER binding)** DMAP1 (non-ER binding) [<=60] p = 0.14524No detectable trend: [<=60] p = 0.91061No detectable trend: 16 16 [>60] p = 0.32924 [>60] p = 0.14359 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [All] p = 0.034483[All] p = 0.267024 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 **DNMT1** (non-ER binding) **DNMT3A (non-ER binding)** [<=60] p = 0.74174No detectable trend: [<=60] p = 0.76078No detectable trend: 16 16 [>60] p = 0.024103 [>60] p = 0.29604 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [All] p = 0.54225[All] p = 0.162134 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ω

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Age at diagnosis

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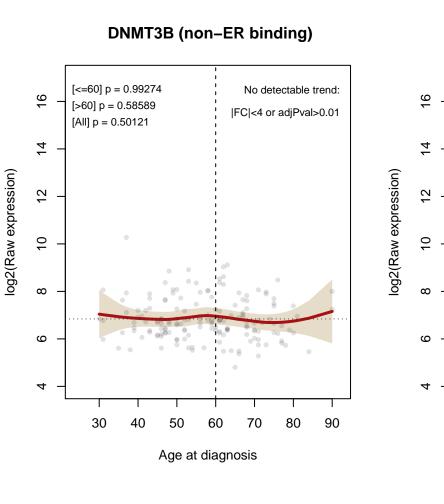
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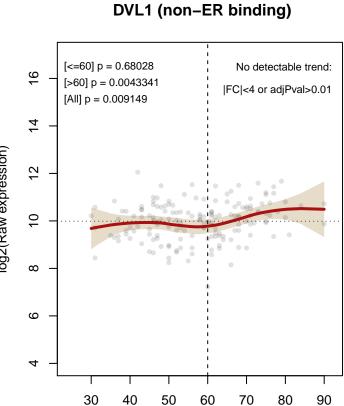
Age at diagnosis

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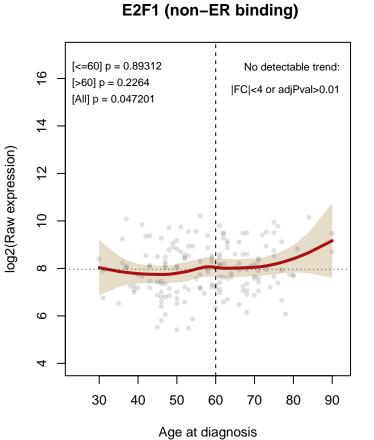
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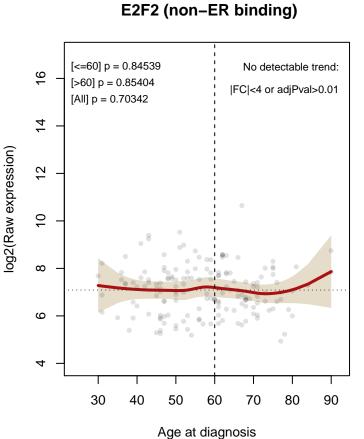
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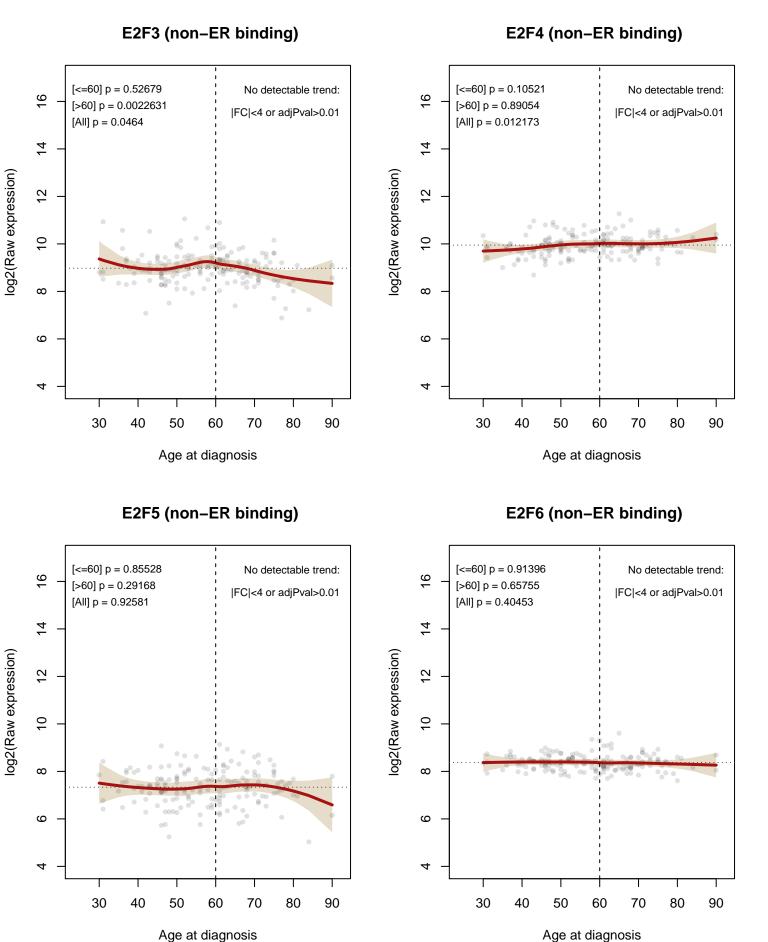


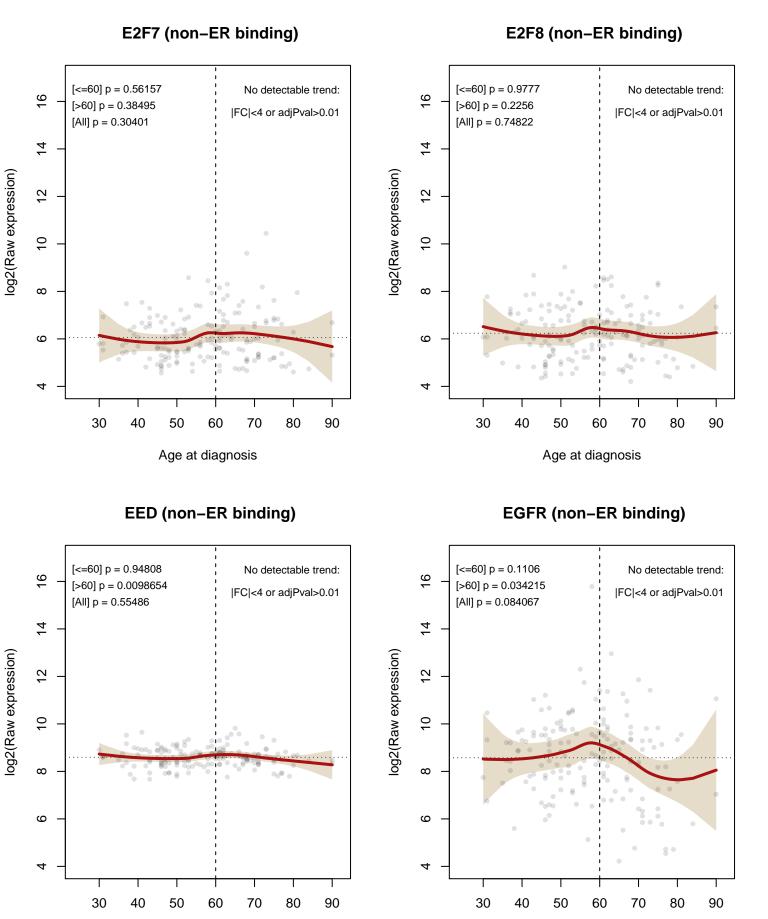


Age at diagnosis







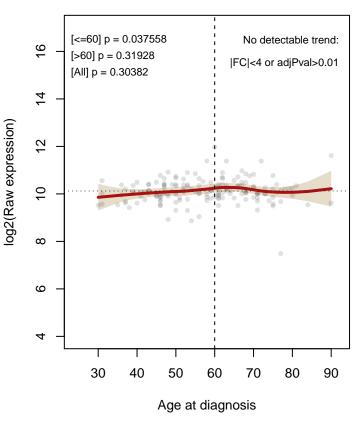


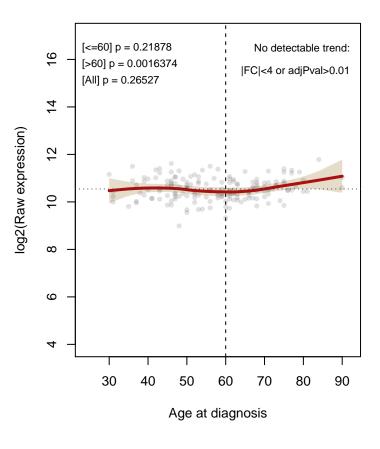
Age at diagnosis

Age at diagnosis



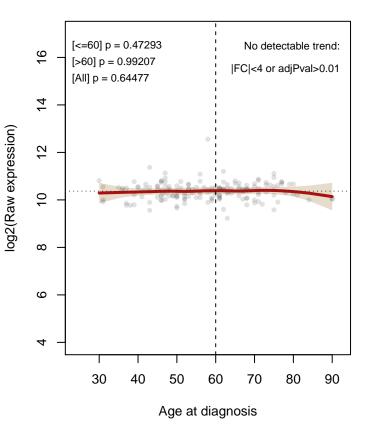
#### EHMT2 (non-ER binding)

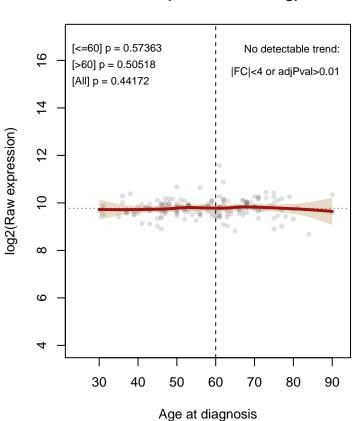




#### **ELAC2 (non-ER binding)**

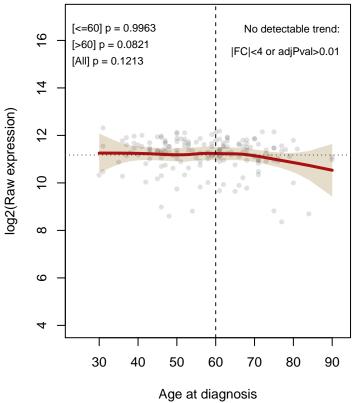
**ELK1 (non-ER binding)** 

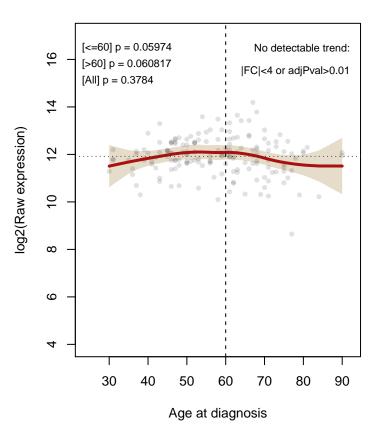






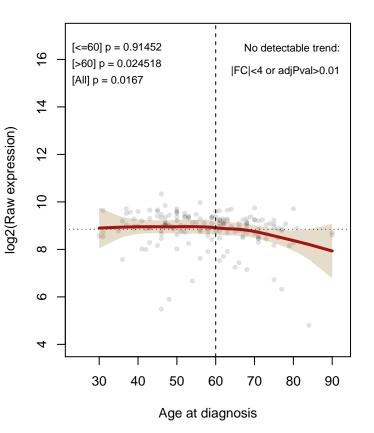
#### **EPAS1** (non-ER binding)

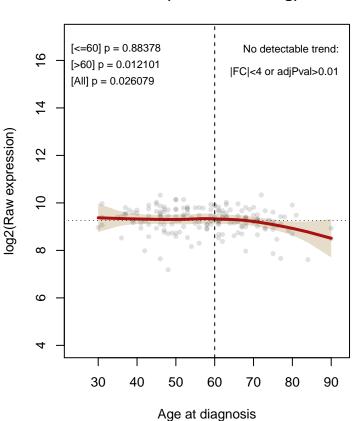




**EPC1 (non-ER binding)** 

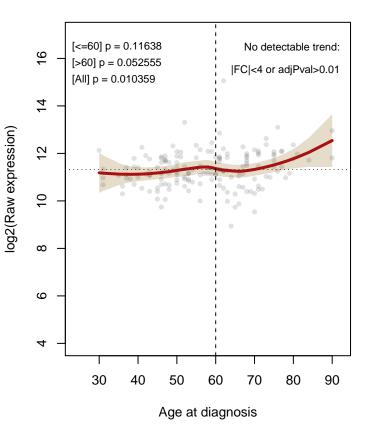
**EPC2** (non-ER binding)

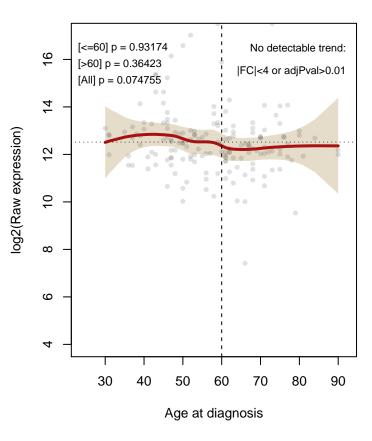






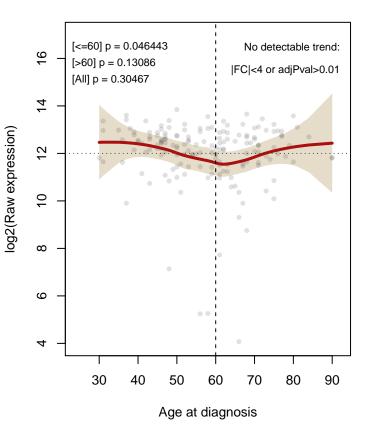
#### ERBB2 (non-ER binding)

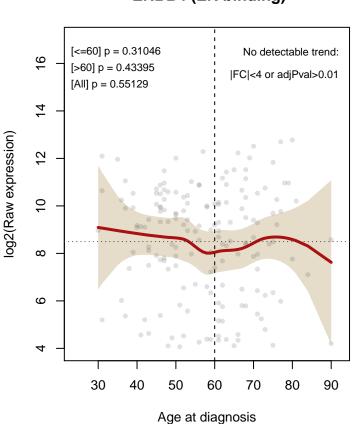


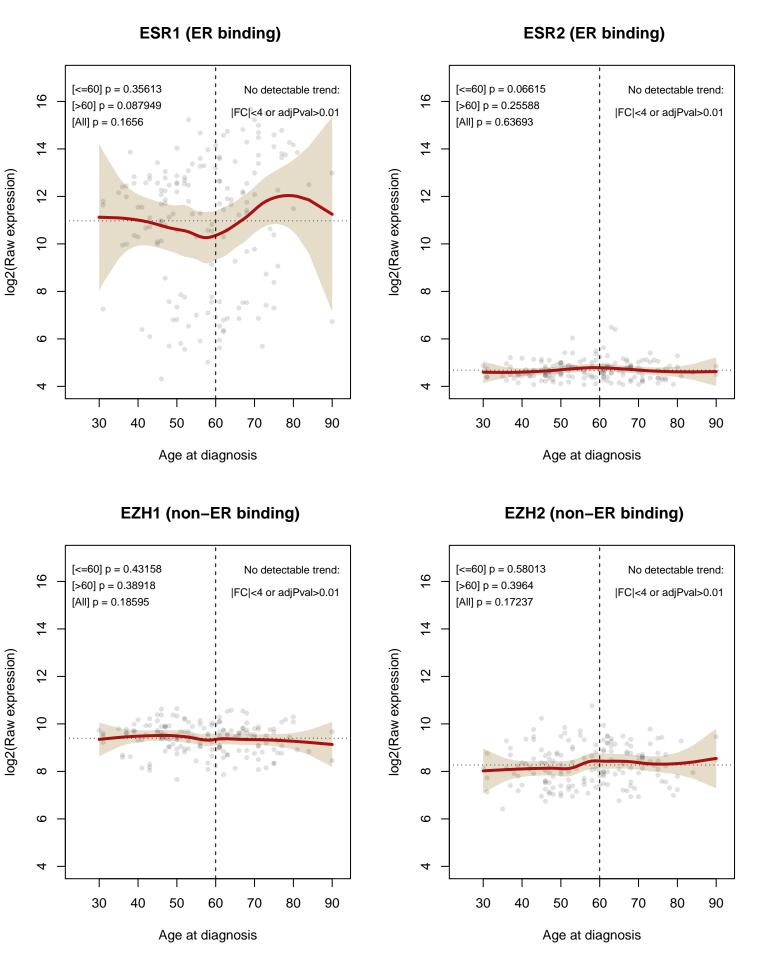


#### ERBB3 (non-ER binding)

**ERBB4 (ER binding)** 

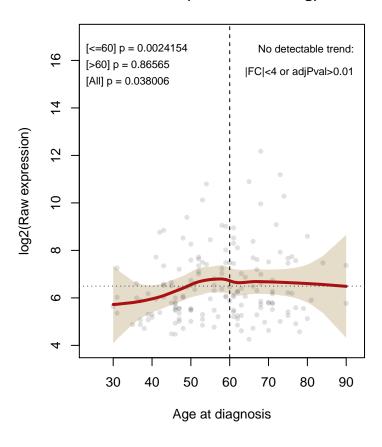


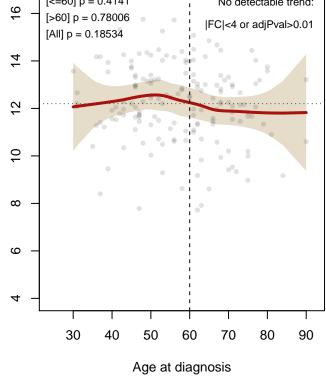




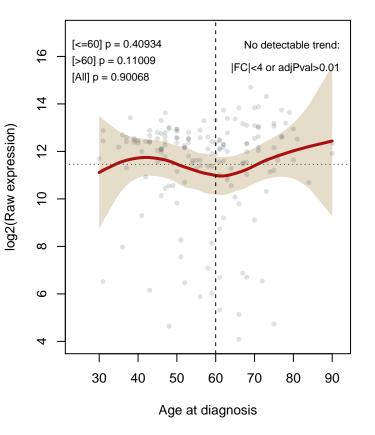
### FOS (non-ER binding) [<=60] p = 0.4141 No detectable trend: 16 [>60] p = 0.78006 [AII] p = 0.185344 log2(Raw expression)

### FOSL1 (non-ER binding)

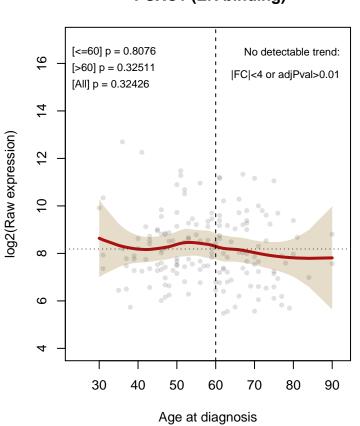


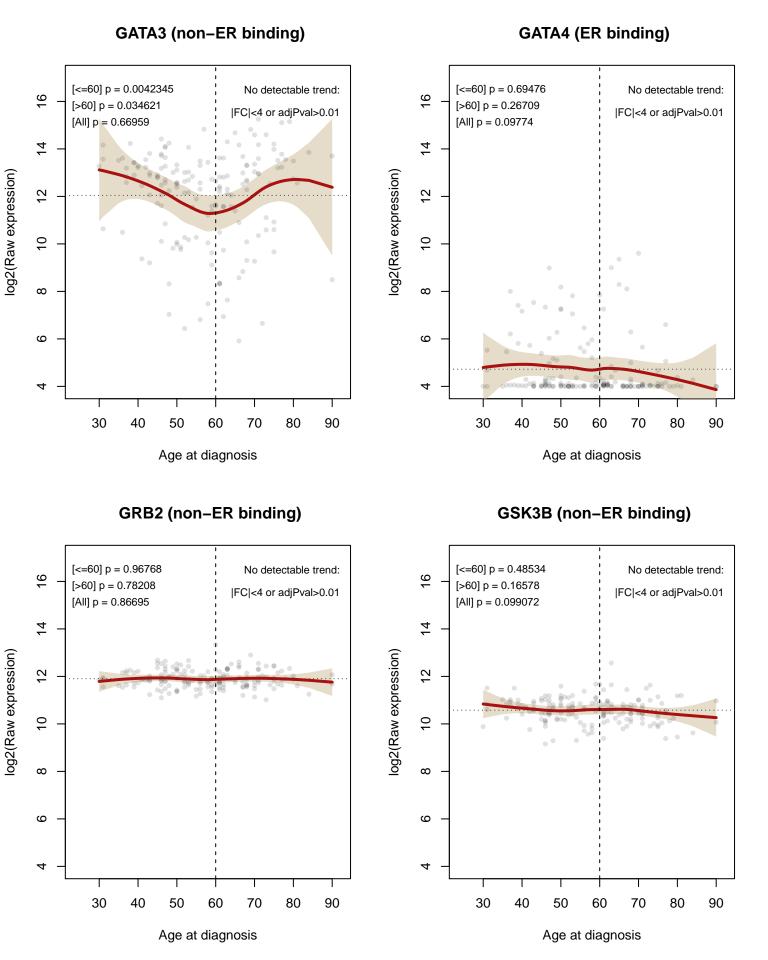


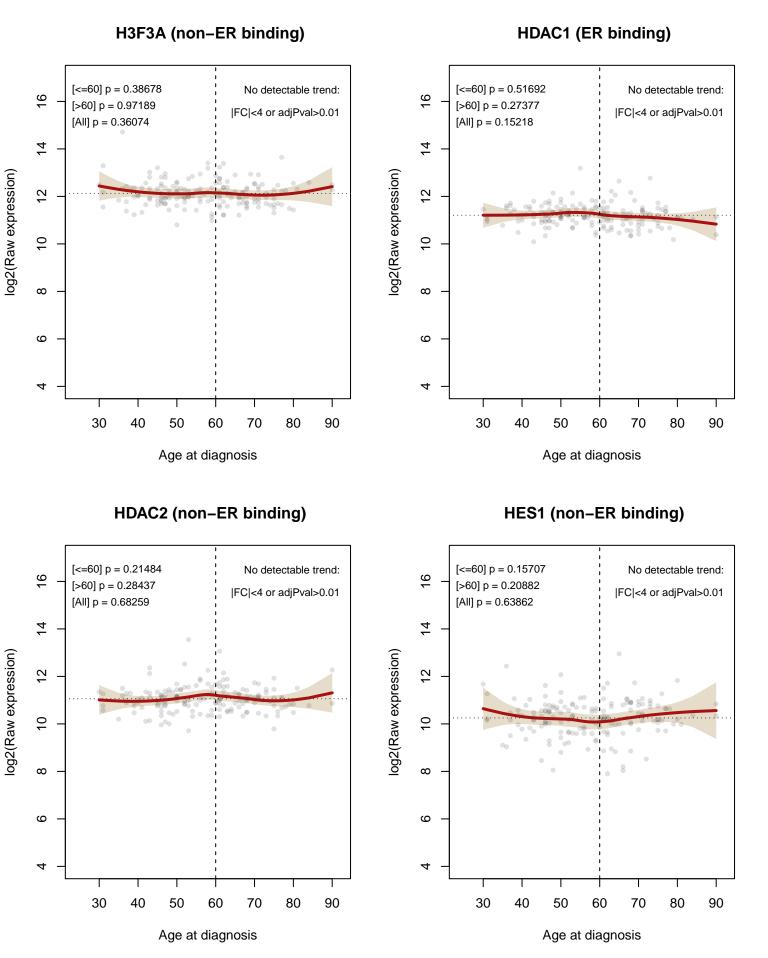
#### FOXA1 (ER binding)



**FOXC1 (ER binding)** 

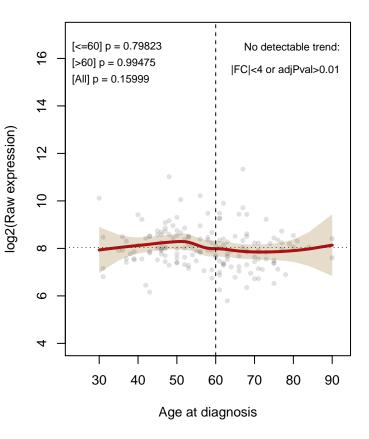


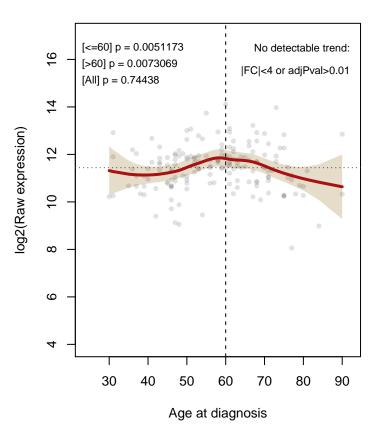






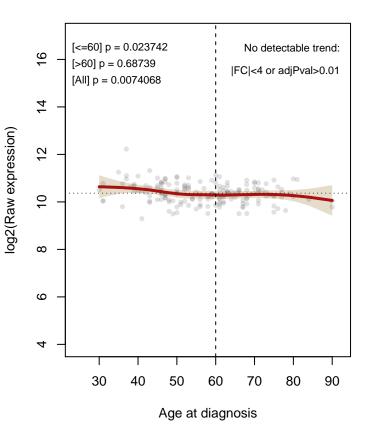
#### HIF1A (non-ER binding)

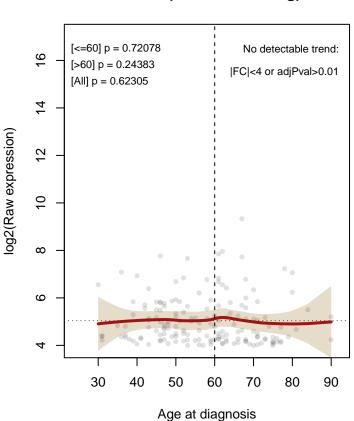




#### **HIF1AN (non-ER binding)**

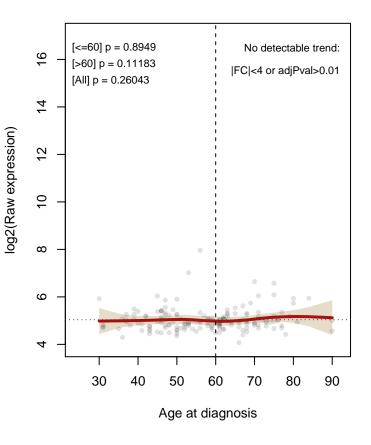
#### HIF3A (non-ER binding)

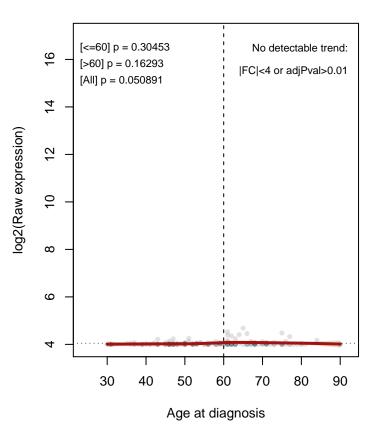




#### **HNF1A** (non-ER binding)

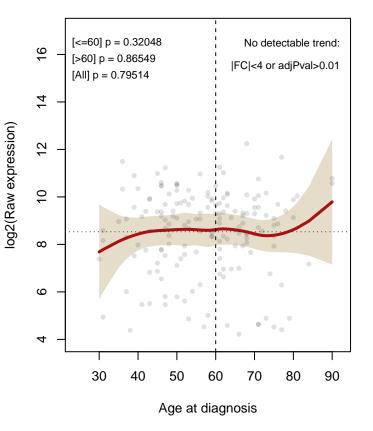
#### HNF1B (non-ER binding)

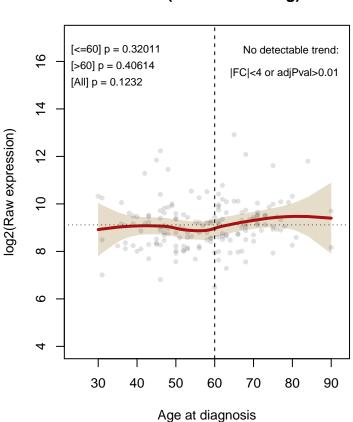




#### **HOXC10 (non-ER binding)**

HRAS (non-ER binding)





#### **HSPB1** (non-ER binding) IGF1R (ER binding) [<=60] p = 0.70579No detectable trend: [<=60] p = 0.5004No detectable trend: 16 16 [>60] p = 0.024216 [>60] p = 0.48609|FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [AII] p = 0.022096[All] p = 0.108574 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω $\infty$ 9 9 30 40 50 70 80 90 30 40 50 60 70 80 90 60 Age at diagnosis Age at diagnosis IGFBP2 (non-ER binding) **IKBKB (ER binding)** [<=60] p = 0.093984No detectable trend: [<=60] p = 0.2389No detectable trend: 16 16 [>60] p = 0.067002 [>60] p = 0.2996 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [All] p = 0.59914[All] p = 0.0387314 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω $\infty$ 9 9

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Age at diagnosis

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Age at diagnosis

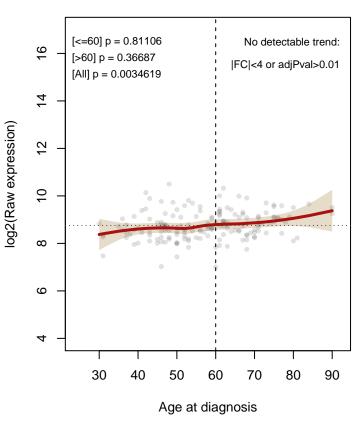
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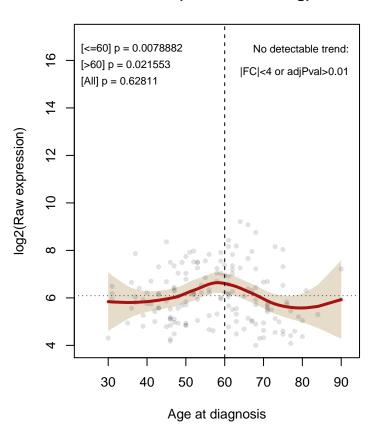
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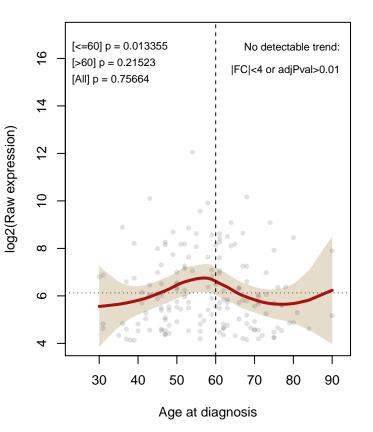
#### IL2RA (non-ER binding)

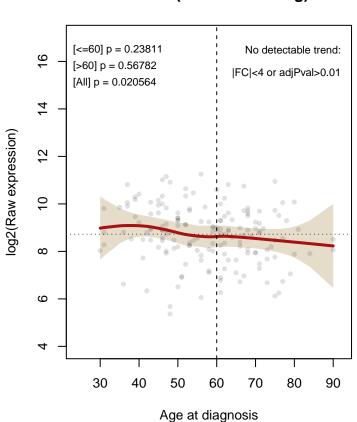


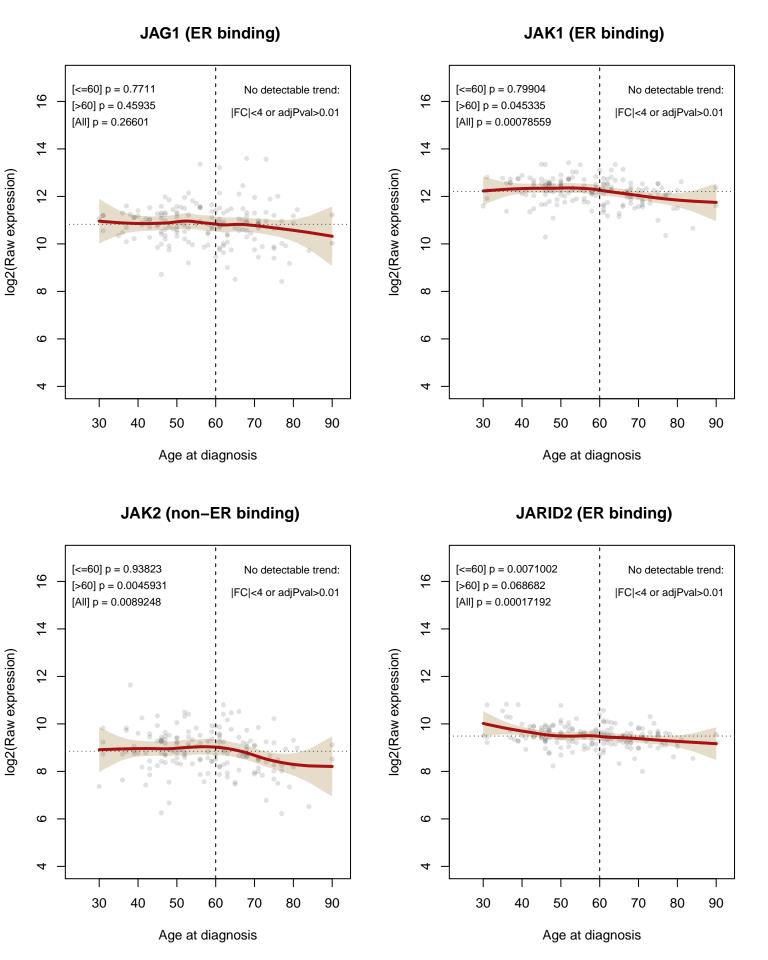


#### IL6 (non-ER binding)

#### INPP4B (non-ER binding)

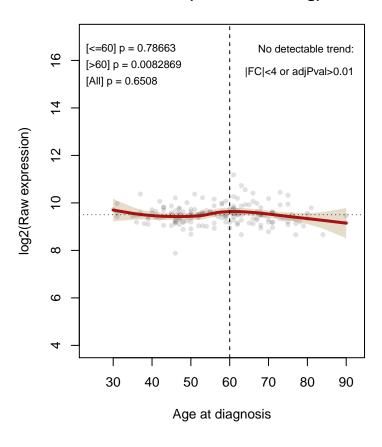


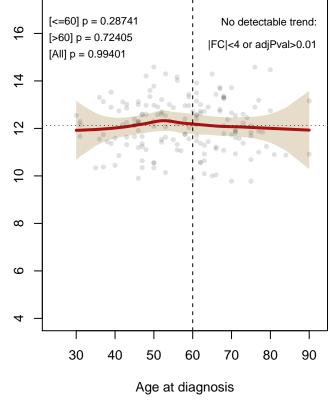




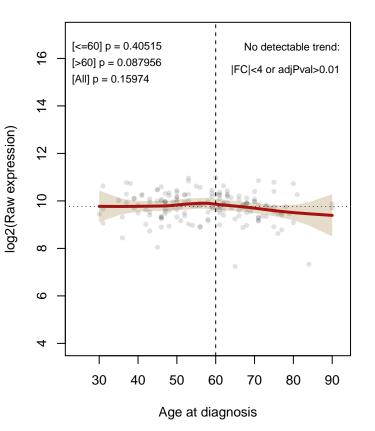
# JUN (non-ER binding) [<=60] p = 0.2874116 [>60] p = 0.72405 [All] p = 0.994014 log2(Raw expression)

#### KDM2B (non-ER binding)

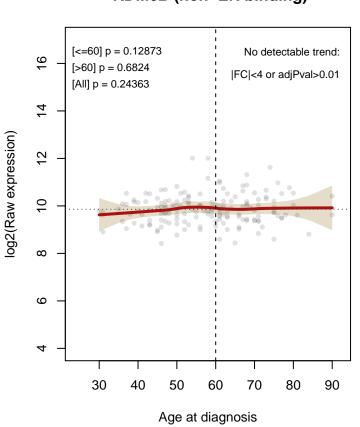


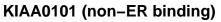


#### KDM6A (non-ER binding)



#### KDM6B (non-ER binding)





### MAAUTUT (HOH-ER Billallig)





log2(Raw expression)

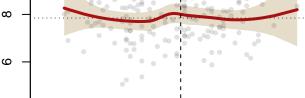
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Age at diagnosis

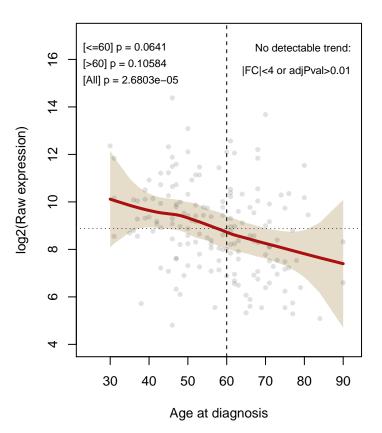
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#### KIT (non-ER binding)

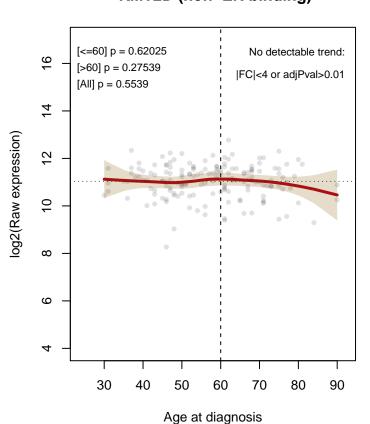


#### KMT2C (non-ER binding)

#### [<=60] p = 0.57225No detectable trend: 16 [>60] p = 0.26189 |FC|<4 or adjPval>0.01 [All] p = 0.151334 log2(Raw expression) 12 10 ω 9 30 40 50 60 70 80 90

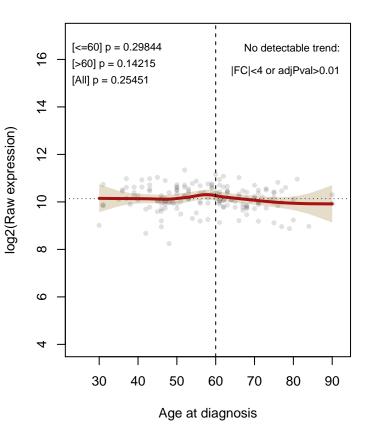
Age at diagnosis

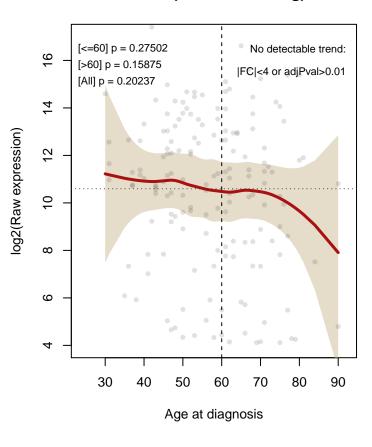
#### KMT2D (non-ER binding)





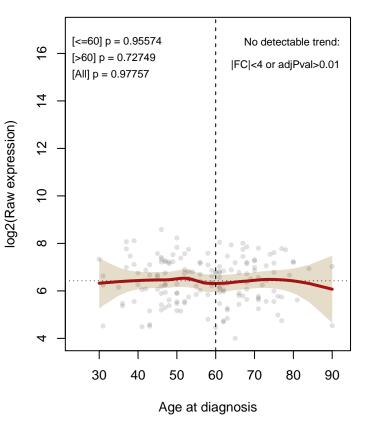
#### KRT5 (non-ER binding)

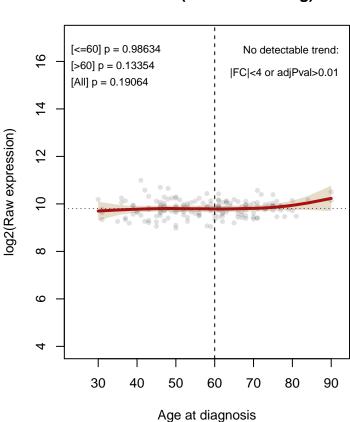




#### L3MBTL1 (non-ER binding)

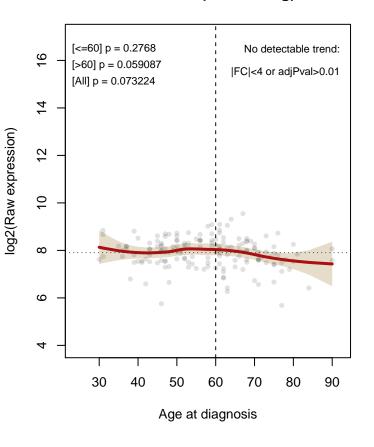
#### L3MBTL2 (non-ER binding)

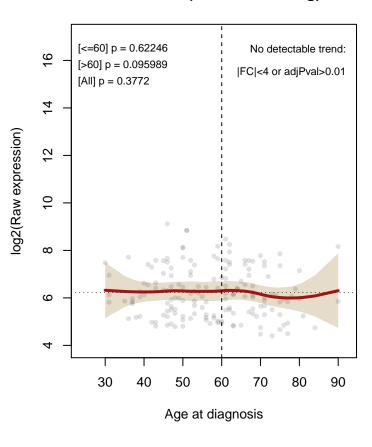




#### L3MBTL3 (ER binding)

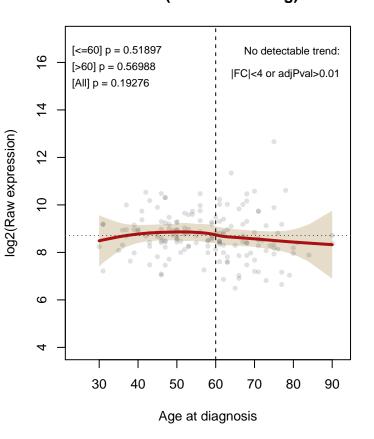
### L3MBTL4 (non-ER binding)

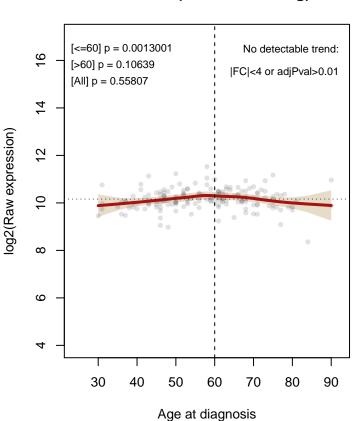




#### LEF1 (non-ER binding)

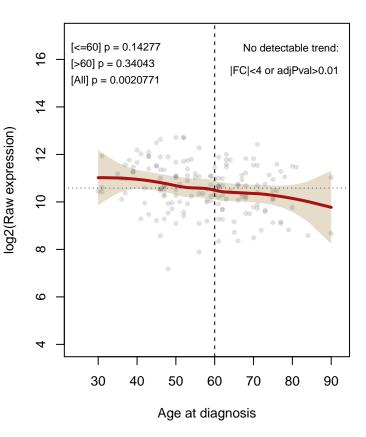
MAP2K1 (non-ER binding)

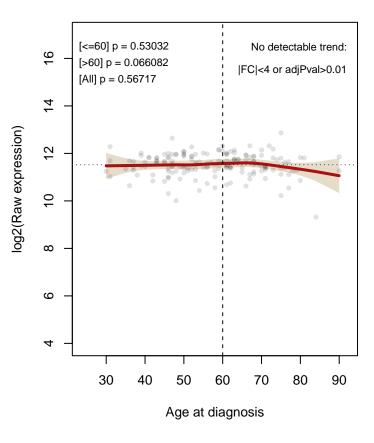






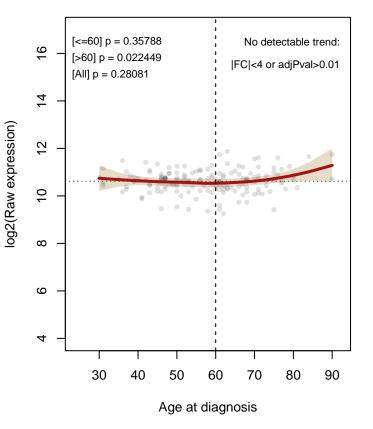
#### MAPK1 (non-ER binding)

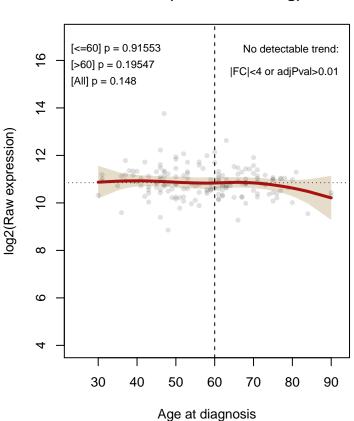




#### MAPK3 (non-ER binding)

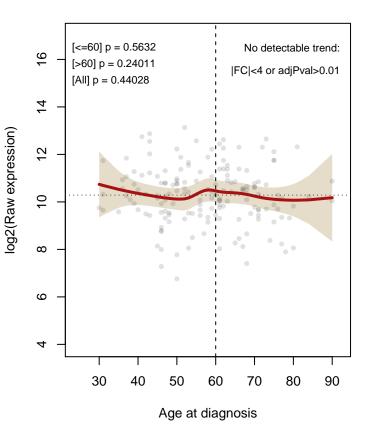
MDM2 (non-ER binding)

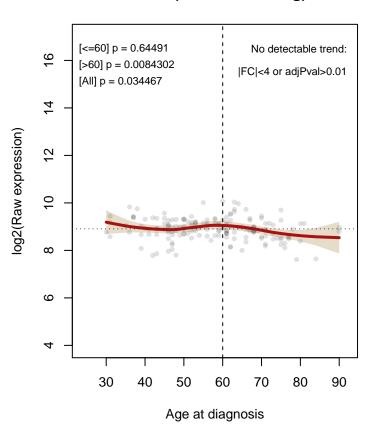






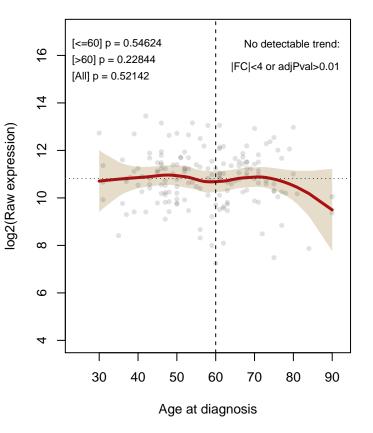
#### MTF2 (non-ER binding)

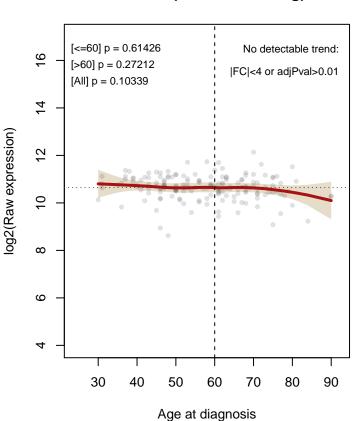




#### MYC (non-ER binding)

NCOA6 (non-ER binding)





#### NCOR1 (non-ER binding) **NES (non-ER binding)** [<=60] p = 0.97414No detectable trend: [<=60] p = 0.3443No detectable trend: 16 16 [>60] p = 0.098245 [>60] p = 0.46091 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [All] p = 0.085719[All] p = 0.146354 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 NFKB1 (non-ER binding) NFKB2 (non-ER binding) [<=60] p = 0.3712No detectable trend: [<=60] p = 0.49772No detectable trend: 16 16 [>60] p = 0.36979 [>60] p = 0.85175 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [All] p = 0.17343[AII] p = 0.598994 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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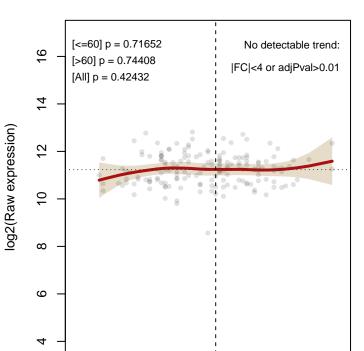
60

Age at diagnosis

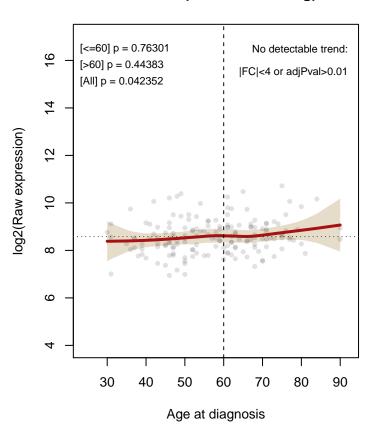
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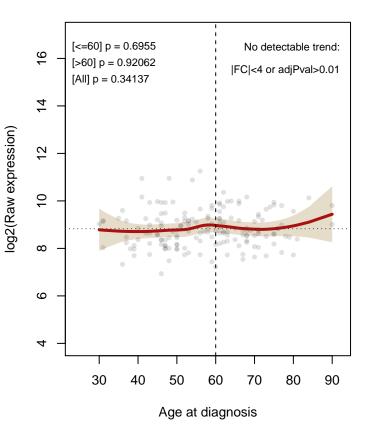


## NFKBIB (non-ER binding)

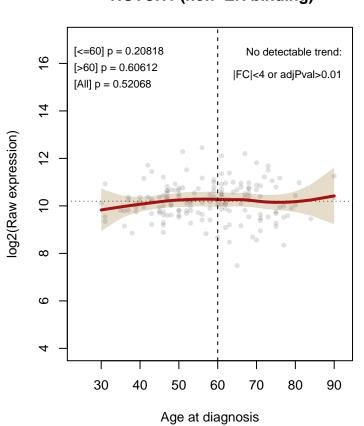


## NFKBIE (non-ER binding)

Age at diagnosis

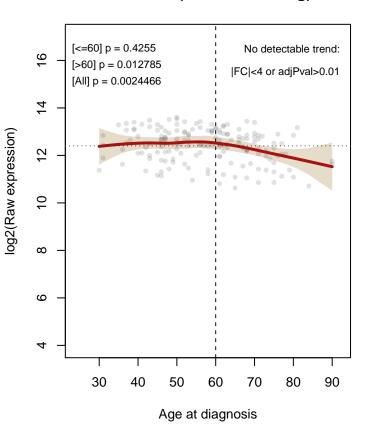


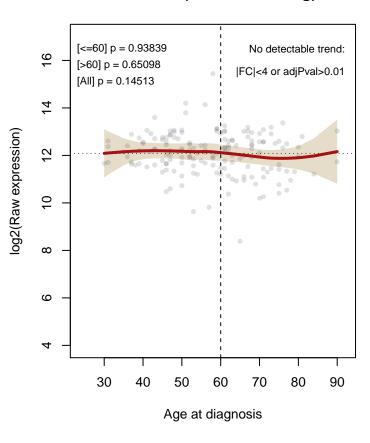
## NOTCH1 (non-ER binding)



## **NOTCH2** (non-ER binding)

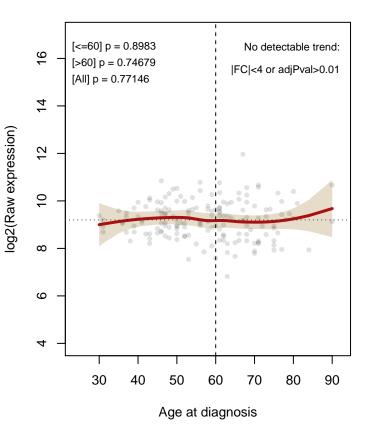
## NOTCH3 (non-ER binding)

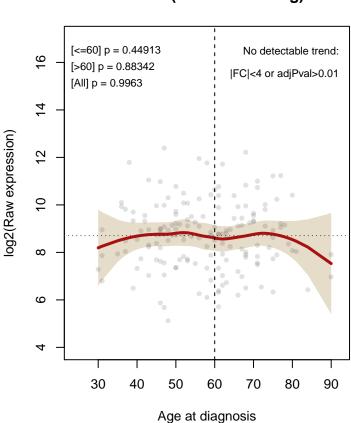




## NOTCH4 (non-ER binding)

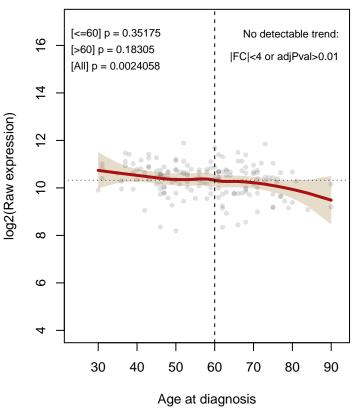
## NR4A2 (non-ER binding)

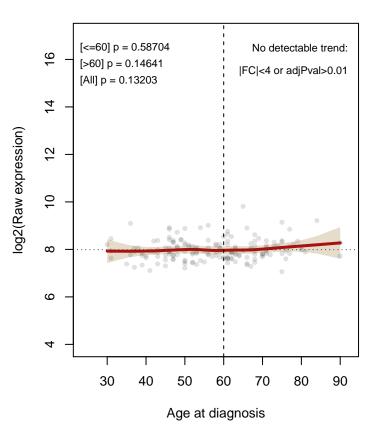






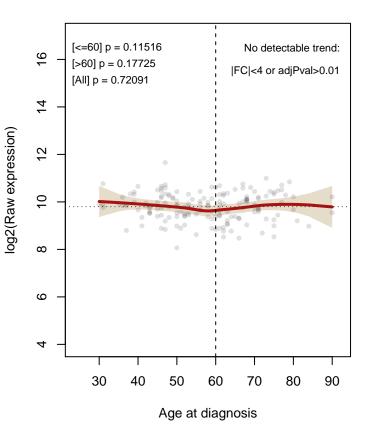
## PCGF1 (non-ER binding)

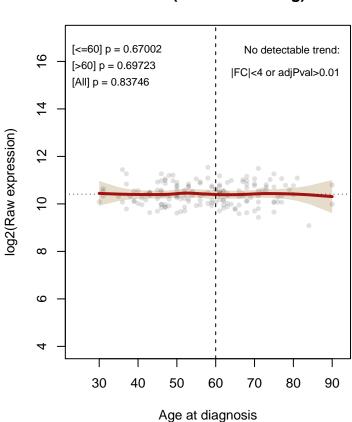




## PCGF2 (non-ER binding)

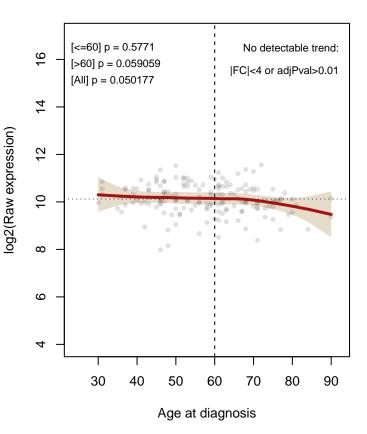
PCGF3 (non-ER binding)

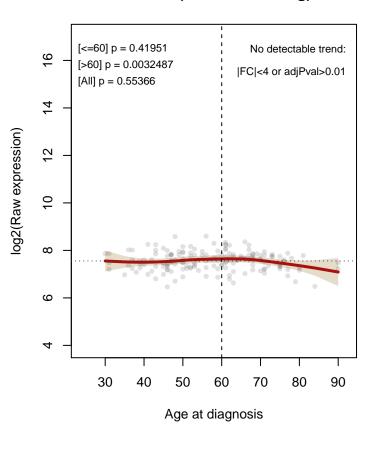






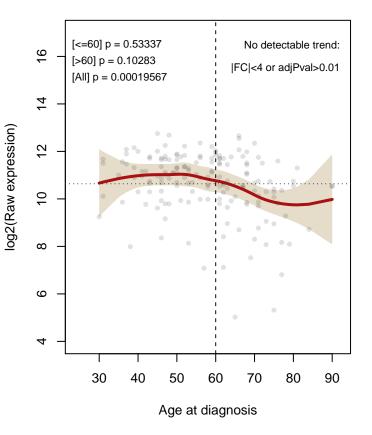
## PCGF6 (non-ER binding)

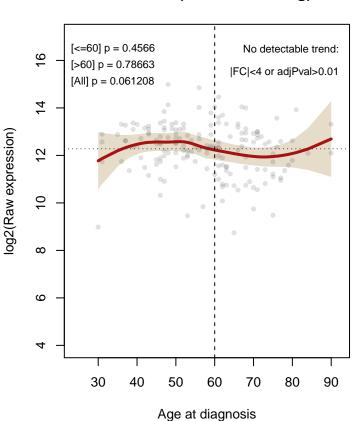




## PDGFRA (non-ER binding)

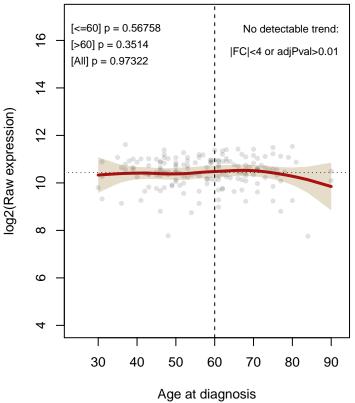
## PDGFRB (non-ER binding)

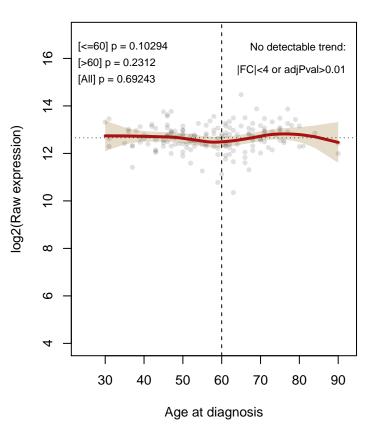






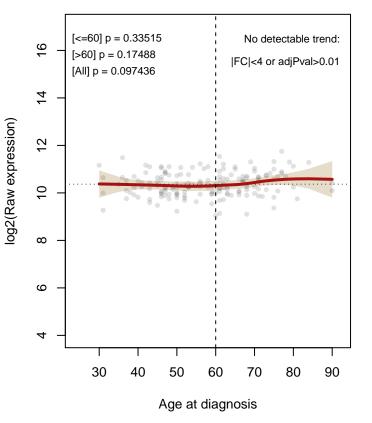
## PEBP1 (non-ER binding)

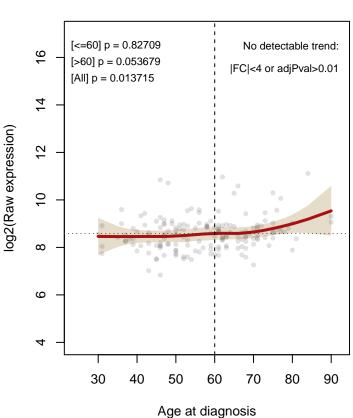


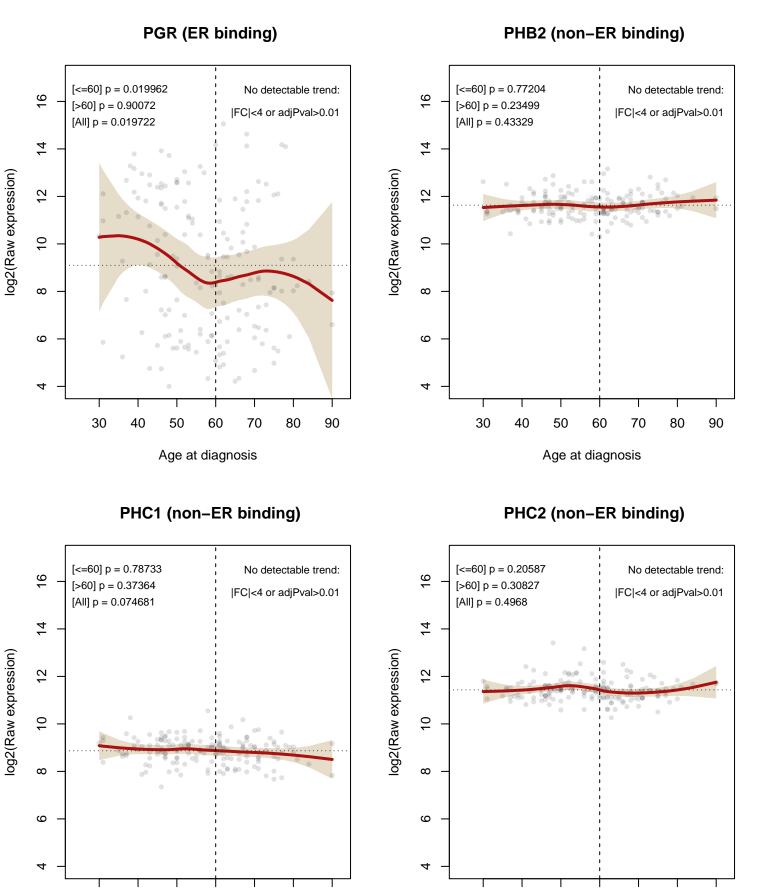


PELP1 (non-ER binding)

-ER binding) PGP (non–ER binding)







Age at diagnosis

Age at diagnosis

#### PHC3 (non-ER binding) PHF1 (non-ER binding) [<=60] p = 0.91457No detectable trend: [<=60] p = 0.42558No detectable trend: 16 16 [>60] p = 0.010024 [>60] p = 0.25561 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [AII] p = 0.064228[All] p = 0.0567964 4 log2(Raw expression) log2(Raw expression) 12 12 19 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 PHF19 (non-ER binding) PIK3CA (non-ER binding) [<=60] p = 0.76894No detectable trend: [<=60] p = 0.63698No detectable trend: 16 16 [>60] p = 0.68564[>60] p = 8.2298e-05 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [AII] p = 0.80832[AII] p = 0.000349164 4 log2(Raw expression) log2(Raw expression) 12 12 19 10

ω

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Age at diagnosis

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ω

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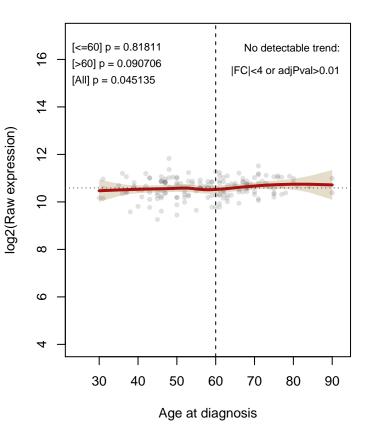
Age at diagnosis

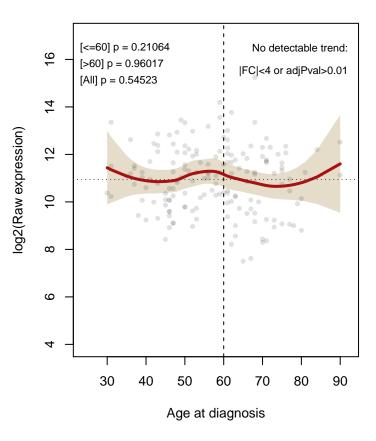
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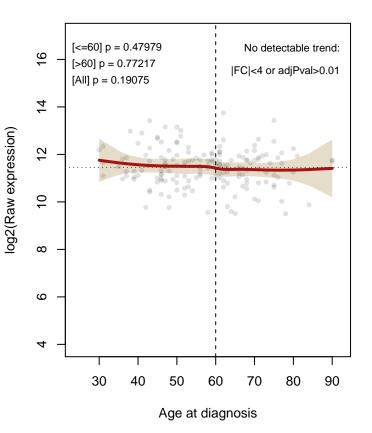
## PLAU (non-ER binding)

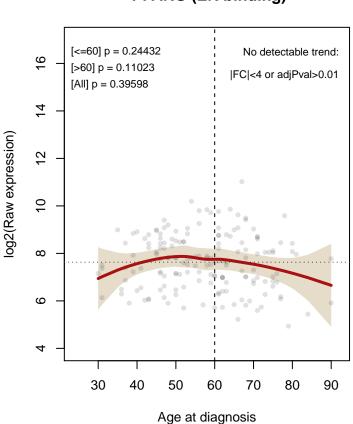




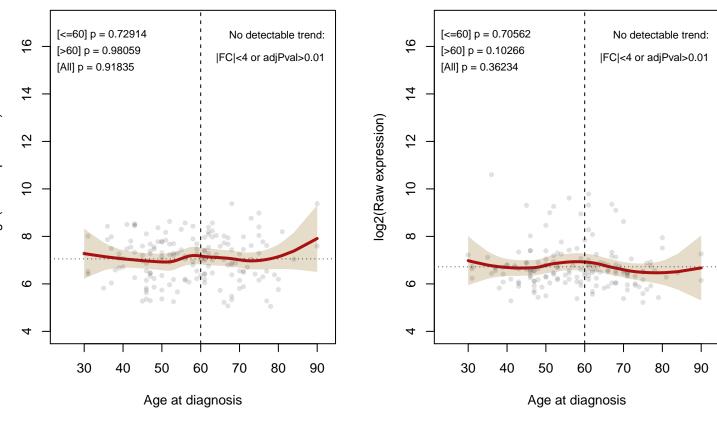
## PODXL (non-ER binding)

## **PPARG (ER binding)**



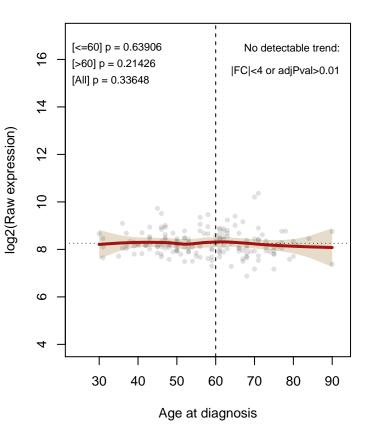


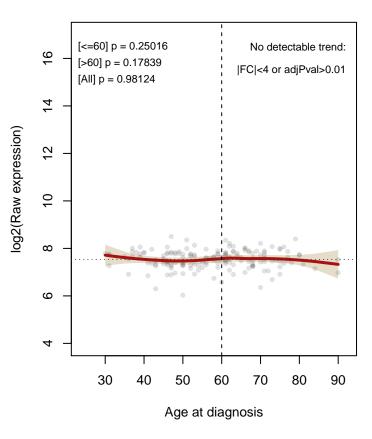
### **PYDC1** (non-ER binding) PTEN (non-ER binding) [<=60] p = 0.19446No detectable trend: [<=60] p = 0.45301No detectable trend: 16 16 [>60] p = 0.019116 [>60] p = 0.19984 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [AII] p = 0.00028504[AII] p = 0.059024 4 log2(Raw expression) log2(Raw expression) 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 RAD51 (non-ER binding) RAD51B (ER binding) [<=60] p = 0.72914No detectable trend: [<=60] p = 0.70562No detectable trend: 16 16 [>60] p = 0.98059 [>60] p = 0.10266 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [All] p = 0.91835[All] p = 0.362344 4 log2(Raw expression) 12 12



## RAD51C (non-ER binding)

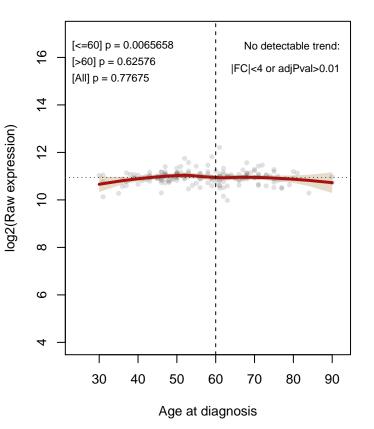
## RAD51D (non-ER binding)

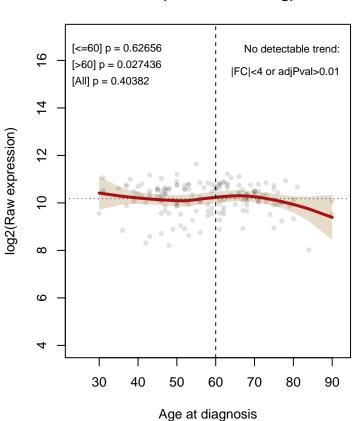




RAF1 (non-ER binding)

RB1 (non-ER binding)





#### RBBP4 (non-ER binding) RBBP5 (non-ER binding) [<=60] p = 0.92888No detectable trend: [<=60] p = 0.97991No detectable trend: 16 16 [>60] p = 0.045665 [>60] p = 0.068536 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [AII] p = 0.0031877[AII] p = 0.112944 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 RBBP7 (non-ER binding) **REL** (non-ER binding) [<=60] p = 0.39981No detectable trend: [<=60] p = 0.91615 No detectable trend: 16 16 [>60] p = 0.020672 [>60] p = 0.037788 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [All] p = 0.12202[All] p = 0.453184 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω ω

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Age at diagnosis

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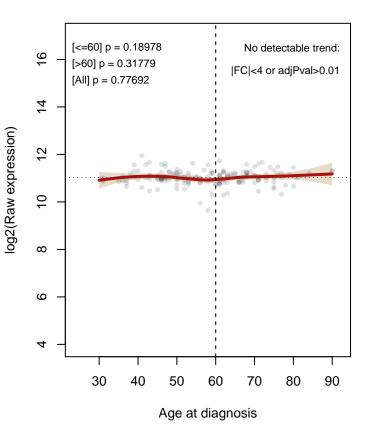
Age at diagnosis

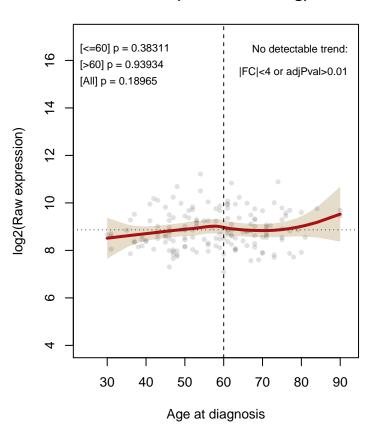
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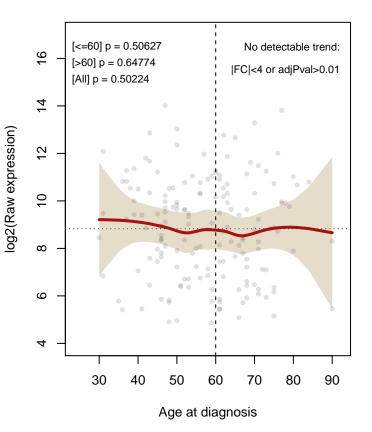
## **RELB** (non-ER binding)

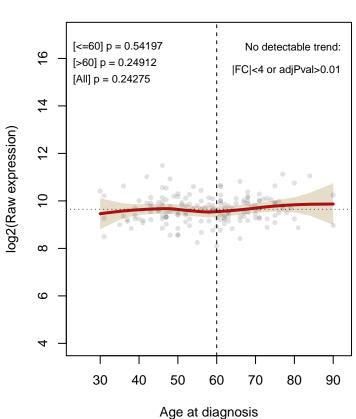


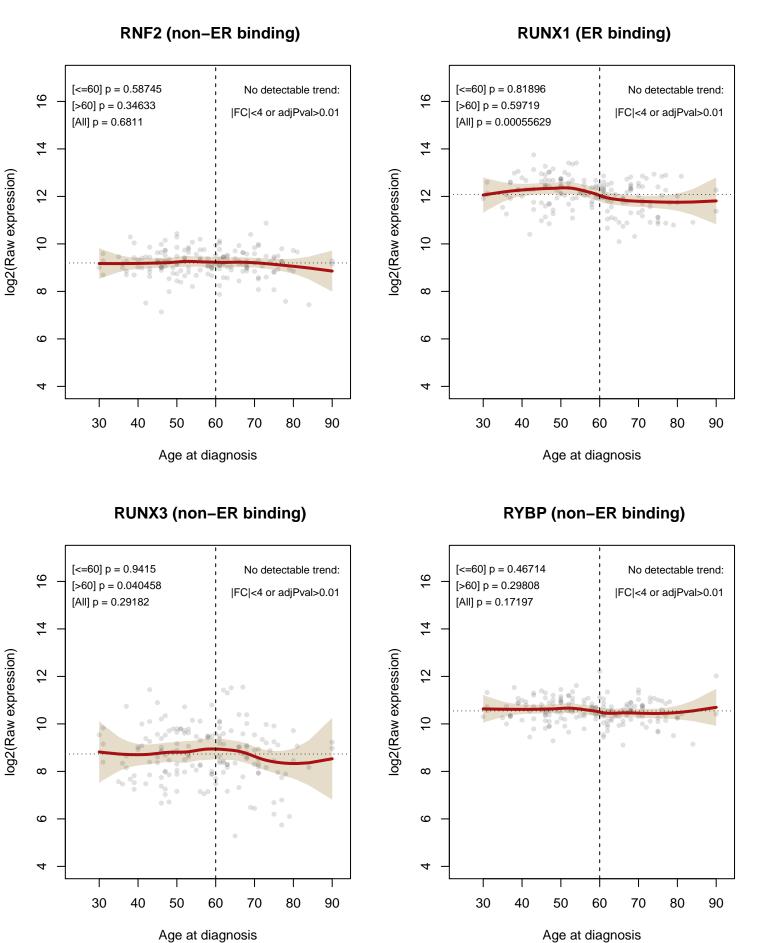


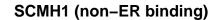
## **RET (ER binding)**

## RING1 (non-ER binding)

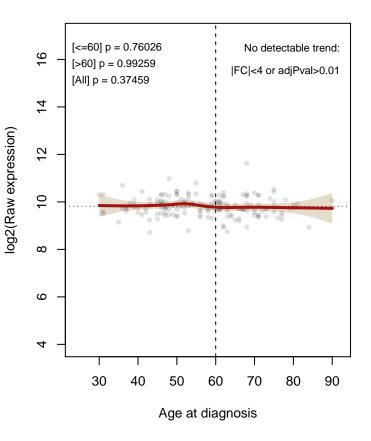


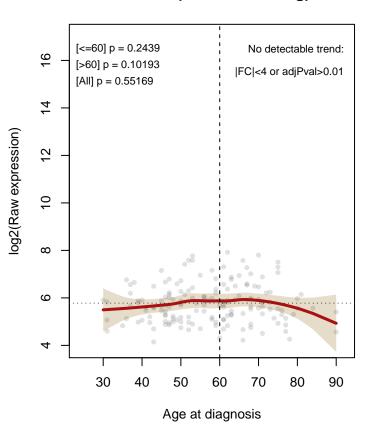






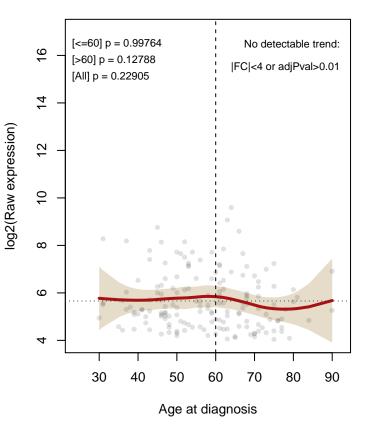
## SCML2 (non-ER binding)

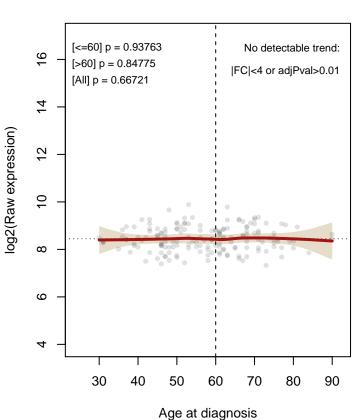




## SCML4 (non-ER binding)

## SFMBT1 (ER binding)





### SFMBT2 (ER binding) SFPQ (non-ER binding) [<=60] p = 0.54164No detectable trend: [<=60] p = 0.8443No detectable trend: 16 16 [>60] p = 0.072376 [>60] p = 0.22766 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [AII] p = 0.030762[All] p = 0.18434 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 $\infty$ $\infty$ 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 = 0.04297 No detectable trend: [<=60] p = 0.74849No detectable trend: 16 16 [>60] p = 0.99356 [>60] p = 0.059343 |FC|<4 or adjPval>0.01 |FC|<4 or adjPval>0.01 [AII] p = 0.93289[All] p = 0.0712754 4 log2(Raw expression) log2(Raw expression) 12 12 10 10 ω $\infty$ 9 9

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Age at diagnosis

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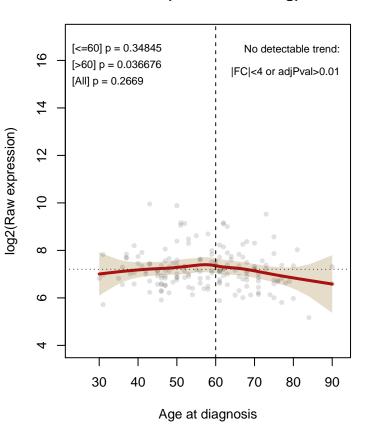
Age at diagnosis

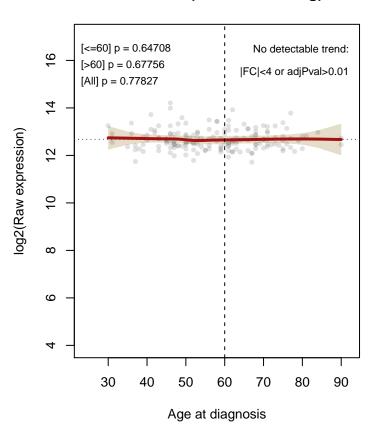
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## SKP2 (non-ER binding)

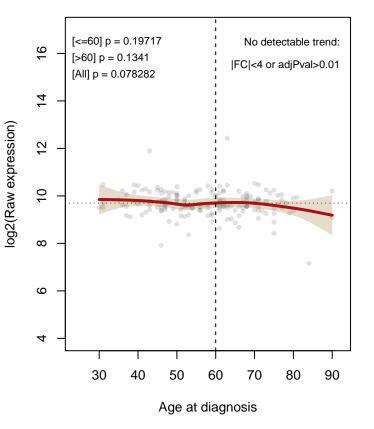
## SLC25A3 (non-ER binding)

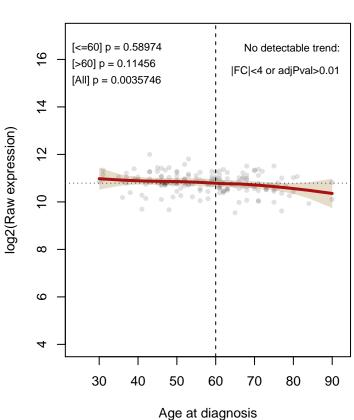




## SMAD1 (non-ER binding)

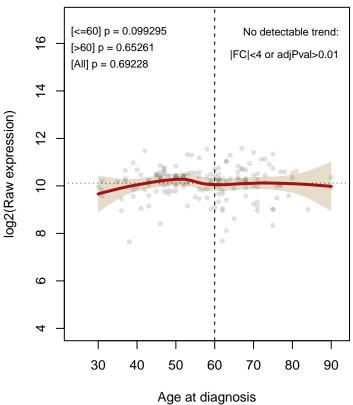
## SMAD2 (non-ER binding)

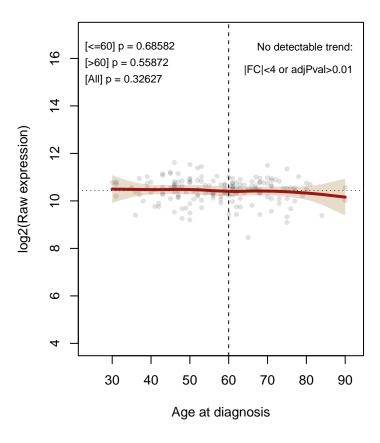




# SMAD3 (ER binding)

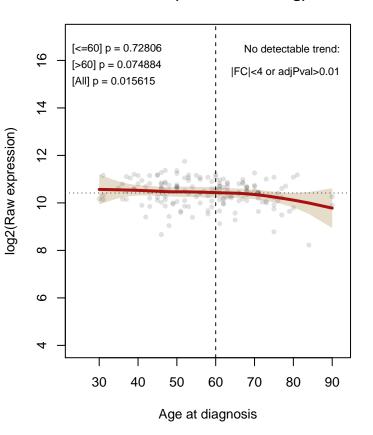
## SMAD4 (non-ER binding)

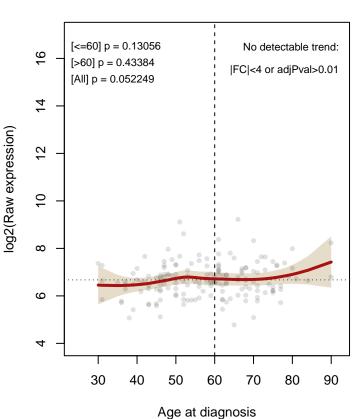




## **SMAD5** (non-ER binding)

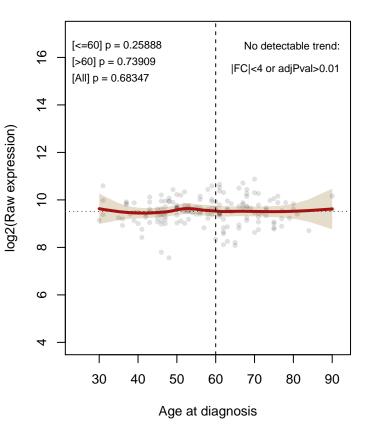
SMAD6 (non-ER binding)

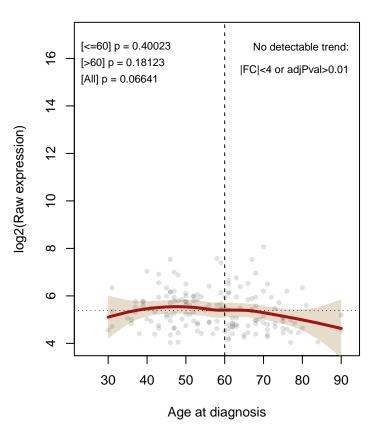






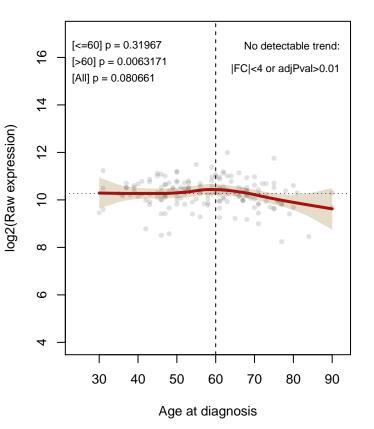
## SMAD9 (non-ER binding)

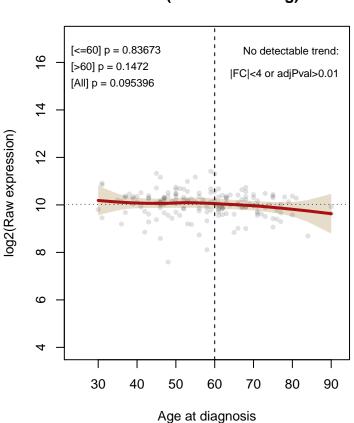


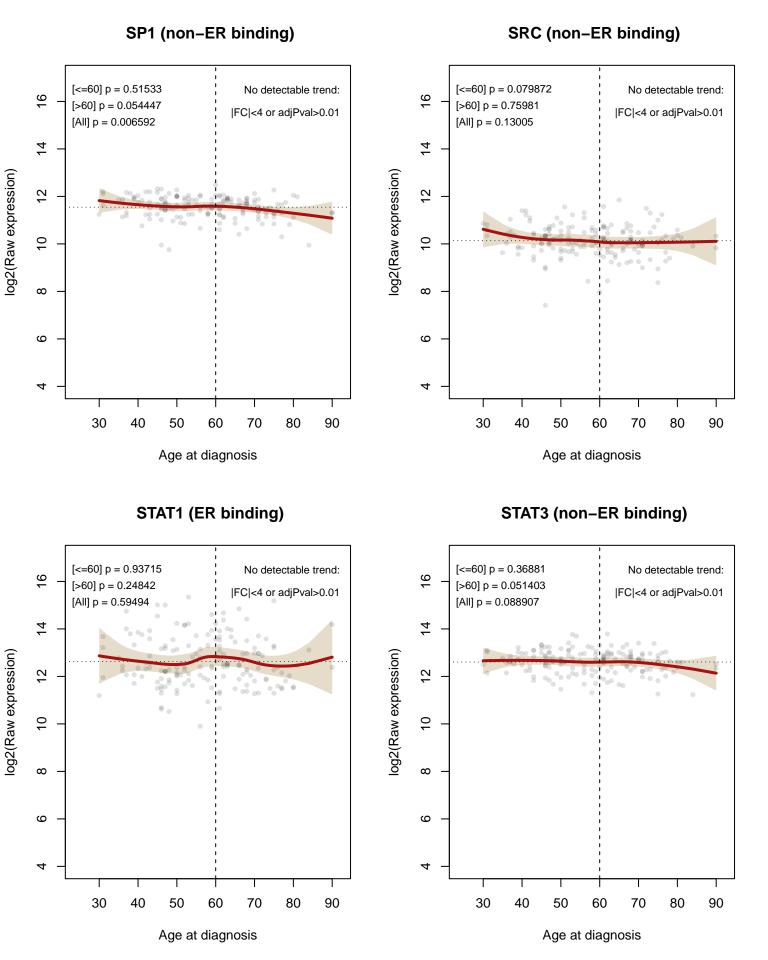


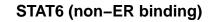
## SOS1 (non-ER binding)

SOS2 (non-ER binding)

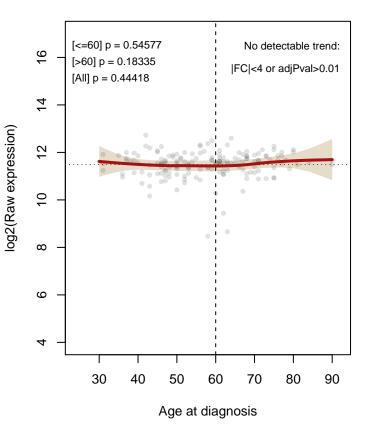


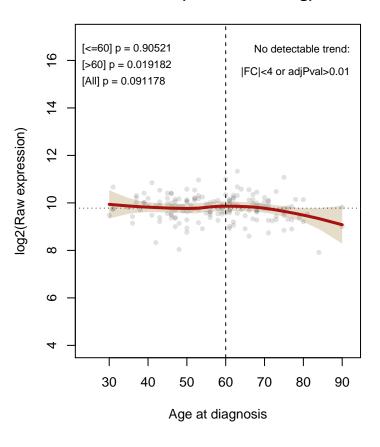






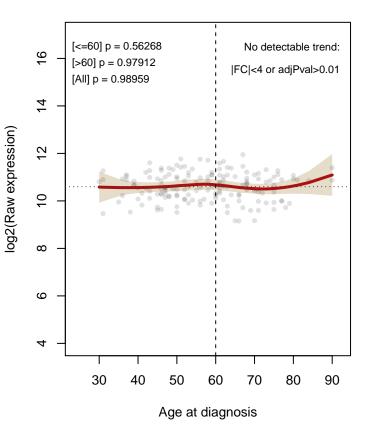
## SUZ12 (non-ER binding)

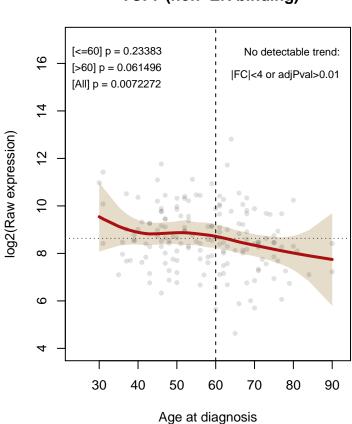




## TCF3 (non-ER binding)

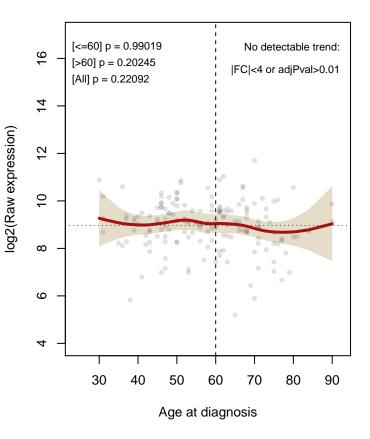
TCF7 (non-ER binding)

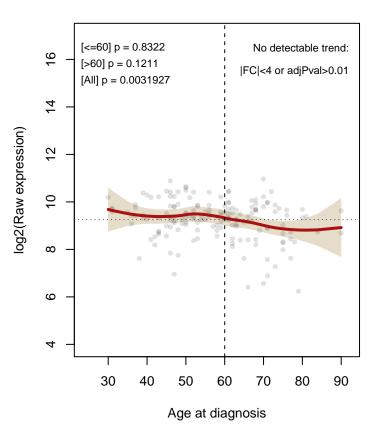






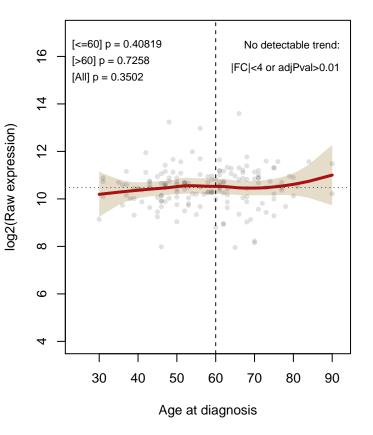
## TCF7L2 (non-ER binding)

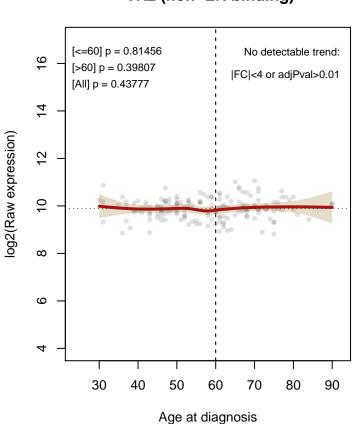


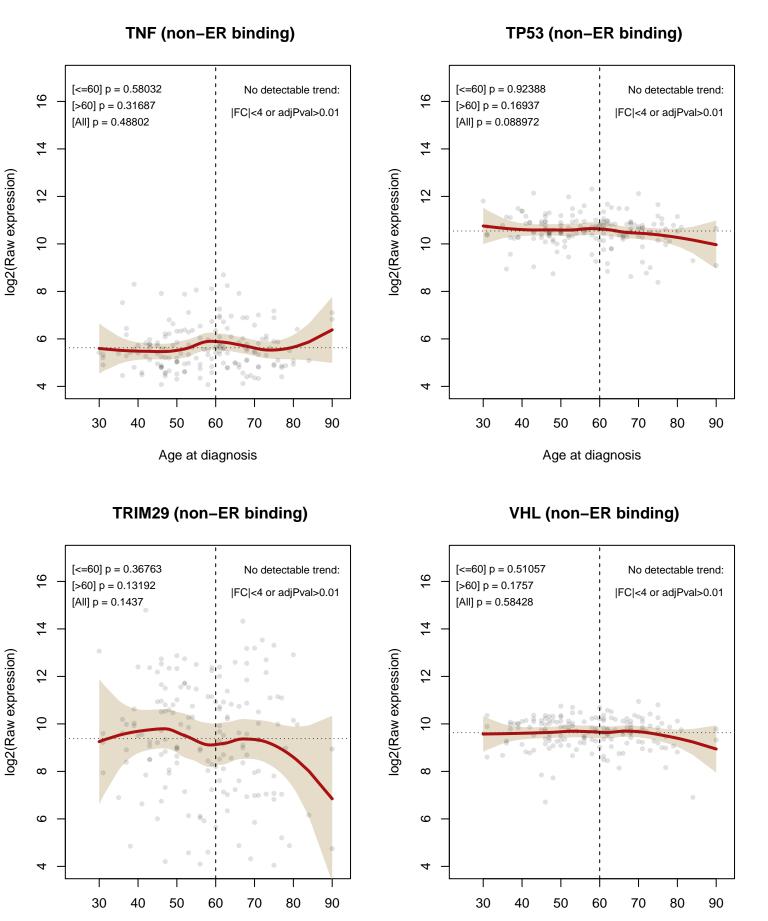


## TGFB1 (non-ER binding)

TK2 (non-ER binding)







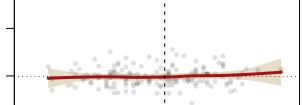
Age at diagnosis

Age at diagnosis



## [<=60] p = 0.85951No detectable trend:





# $\infty$ 9

log2(Raw expression)

12

19

30

40

Age at diagnosis

60

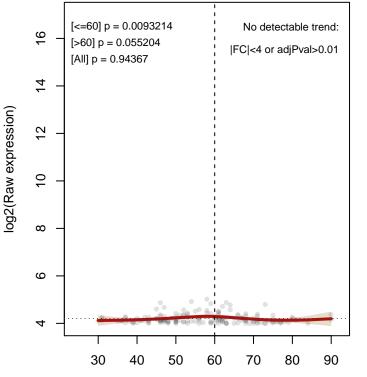
70

80

90

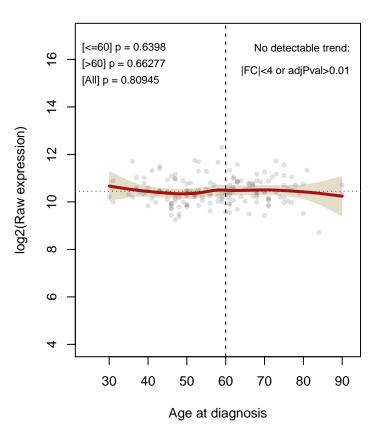
50

## WNT1 (non-ER binding)

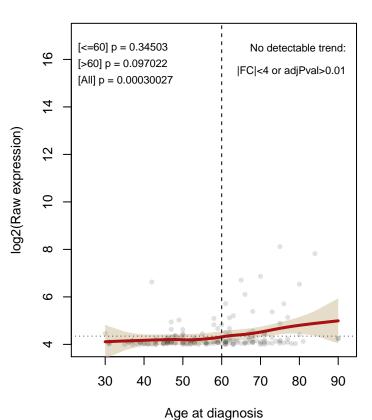


Age at diagnosis

## WHSC1 (non-ER binding)

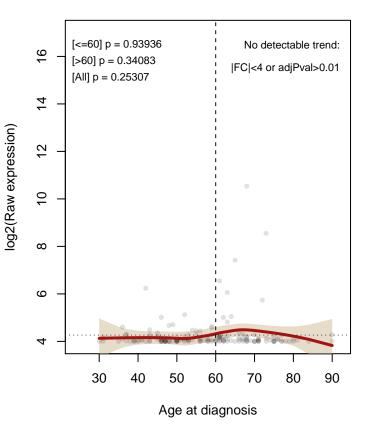


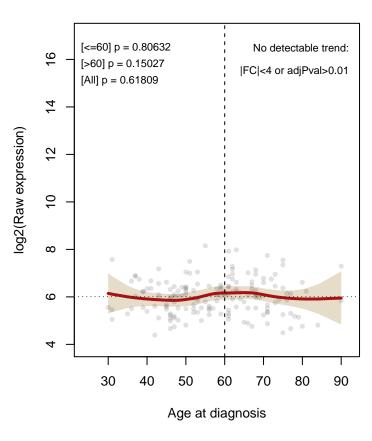
## WNT3A (non-ER binding)





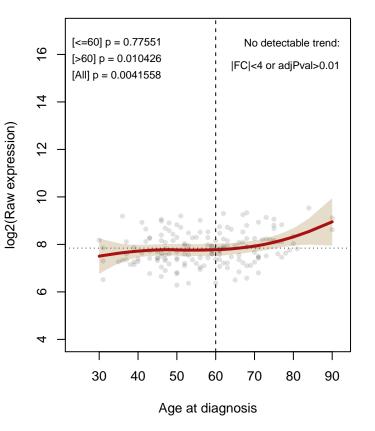
## XRCC2 (non-ER binding)

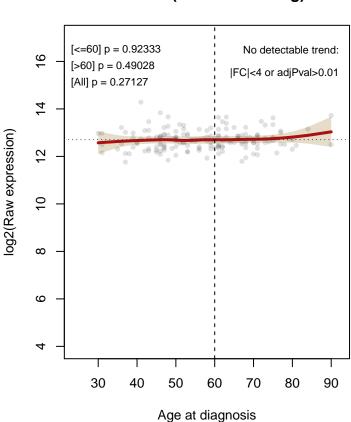




## XRCC3 (non-ER binding)

XRCC6 (non-ER binding)





## YAF2 (non-ER binding)

## 

log2(Raw expression)

 $\infty$ 

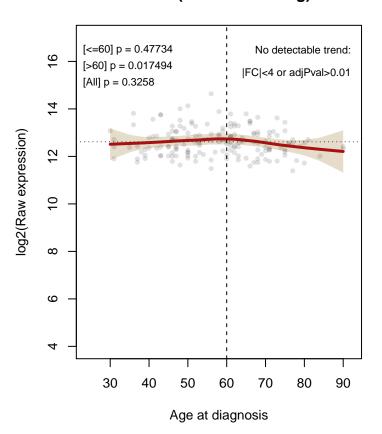
9

30

40

50

## YBX1 (non-ER binding)



YY1 (non-ER binding)

Age at diagnosis

60

70

80

