**PAM50 LumA: N = 721 PAM50 LumB: N = 492** CA9|ILMN\_1725139 CA9|ILMN\_1725139 NKI Tier 1: non-ER binding; Tier 2: ER binding NKI Tier 1: non-ER binding; Tier 2: ER binding [<=60] p = 0.45889 [<=60] p = 0.15893No detectable trend: No detectable trend: 16 16 [>60] p = 0.39188 [>60] p = 0.09501 |FC|<1.25 or adjPval>0.01 |FC|<1.25 or adjPval>0.01 [AII] p = 0.11777[AII] p = 0.114744 4 Raw Expression (4, 16) Raw Expression (4, 16) 12 12 10 10 ω ω 9 9 20 40 60 80 100 20 40 60 80 100 Age at diagnosis Age at diagnosis PAM50 Her2: N = 240**PAM50** Basal: **N** = 331 CA9|ILMN\_1725139 CA9|ILMN\_1725139 NKI Tier 1: non-ER binding; Tier 2: ER binding NKI Tier 1: non-ER binding; Tier 2: ER binding [<=60] p = 0.95471No detectable trend: [<=60] p = 0.87597No detectable trend: 16 16 [>60] p = 0.64779[>60] p = 0.81795 |FC|<1.25 or adjPval>0.01 |FC|<1.25 or adjPval>0.01 [AII] p = 0.70949[All] p = 0.531974 4 Raw Expression (4, 16) Raw Expression (4, 16) 12 12 10 10 ω ω

9

20

40

60

Age at diagnosis

80

100

9

20

40

60

Age at diagnosis

80

100

PAM50 Normal: N = 202 CA9|ILMN\_1725139

NKI Tier 1: non-ER binding; Tier 2: ER binding

