TCGA BrCa Female Cases Age Dependent Fisher Exact Tests on NKI ER binding

July 23, 2018

FET Tables by ER/HER2 status

All Female Cases, n = 1079, FDR = 0.05

Table 1: FET Table All Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	518	2357	2875
Row(%)	18.02%	81.98%	15.17%
Column(%)	12.83%	15.81%	
Tier 2 Only			
N	826	2379	3205
Row(%)	25.77%	74.23%	16.91%
Column(%)	20.46%	15.95%	
Not ER binding			
N	2693	10177	12870
Row(%)	20.92%	79.08%	67.92%
Column(%)	66.71%	68.24%	
Total	4037	14913	18950
	21.3%	78.7%	

Table 2: FET Statistics All Female Cases, FDR = 0.05

Statistics	Value
p.value	4.6e-13
alternative	two.sided

ER+/HER2- Female Cases, n = 538, FDR = 0.05

Table 3: FET Table ER+/HER2- Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	466	2409	2875
Row(%)	16.21%	83.79%	15.17%
Column(%)	14.73%	15.26%	
Tier 2 Only			
N	620	2585	3205
Row(%)	19.34%	80.66%	16.91%
Column(%)	19.60%	16.37%	
Not ER binding			
N	2077	10793	12870
Row(%)	16.14%	83.86%	67.92%
Column(%)	65.67%	68.37%	
Total	3163	15787	18950
	16.69%	83.31%	

Table 4: FET Statistics ER+/HER2- Female Cases, FDR = 0.05

Statistics	Value
p.value	7.5e-05
alternative	two.sided

ER+/HER2+ Female Cases, n = 134, FDR = 0.05

Table 5: FET Table ER+/HER2+ Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	14	2861	2875
Row(%)	0.49%	99.51%	15.17%
Column(%)	10.14%	15.21%	
Tier 2 Only			
N	35	3170	3205
Row(%)	1.09%	98.91%	16.91%
Column(%)	25.36%	16.85%	
Not ER binding			
N	89	12781	12870
Row(%)	0.69%	99.31%	67.92%
Column(%)	64.49%	67.94%	
Total	138	18812	18950
	0.73%	99.27%	

Table 6: FET Statistics ER+/HER2+ Female Cases, FDR = 0.05

Statistics	Value
p.value	0.018
alternative	two.sided

ER-/HER2+ Female Cases, n = 43, FDR = 0.05

Table 7: FET Table ER-/HER2+ Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 8: FET Statistics ER-/HER2+ Female Cases, FDR = 0.05

Statistics	Value
p.value	1
alternative	two.sided

ER-/HER2- Female Cases, n = 155, FDR = 0.05

Table 9: FET Table ER-/HER2- Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 10: FET Statistics ER-/HER2- Female Cases, FDR = 0.05

Statistics	Value
p.value	1
alternative	two.sided

All Female Cases, n = 1079, FDR = 0.01

Table 11: FET Table All Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	420	2455	2875
Row(%)	14.61%	85.39%	15.17%
Column(%)	13.19%	15.57%	
Tier 2 Only			
N	626	2579	3205
Row(%)	19.53%	80.47%	16.91%
Column(%)	19.66%	16.36%	
Not ER binding			
N	2138	10732	12870
Row(%)	16.61%	83.39%	67.92%
Column(%)	67.15%	68.07%	
Total	3184	15766	18950
	16.8%	83.2%	

Table 12: FET Statistics All Female Cases, FDR = 0.01

Statistics	Value
p.value	1.4e-06
alternative	two.sided

ER+/HER2- Female Cases, n = 538, FDR = 0.01

Table 13: FET Table ER+/HER2- Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	279	2596	2875
Row(%)	9.70%	90.30%	15.17%
Column(%)	14.37%	15.26%	
Tier 2 Only			
N	374	2831	3205
Row(%)	11.67%	88.33%	16.91%
Column(%)	19.27%	16.64%	
Not ER binding			
N	1288	11582	12870
Row(%)	10.01%	89.99%	67.92%
Column(%)	66.36%	68.09%	
Total	1941	17009	18950
	10.24%	89.76%	

Table 14: FET Statistics ER+/HER2- Female Cases, FDR = 0.01

Statistics	Value
p.value	0.014
alternative	two.sided

ER+/HER2+ Female Cases, n = 134, FDR = 0.01

Table 15: FET Table ER+/HER2+ Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	1	2874	2875
Row(%)	0.03%	99.97%	15.17%
Column(%)	9.09%	15.18%	
Tier 2 Only			
N	3	3202	3205
Row(%)	0.09%	99.91%	16.91%
Column(%)	27.27%	16.91%	
Not ER binding			
N	7	12863	12870
Row(%)	0.05%	99.95%	67.92%
Column(%)	63.64%	67.92%	
Total	11	18939	18950
	0.06%	99.94%	

Table 16: FET Statistics ER+/HER2+ Female Cases, FDR = 0.01

Statistics	Value
p.value	0.64
alternative	two.sided

ER-/HER2+ Female Cases, n = 43, FDR = 0.01

Table 17: FET Table ER-/HER2+ Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 18: FET Statistics ER-/HER2+ Female Cases, FDR = 0.01

Statistics	Value
p.value	1
alternative	two.sided

ER-/HER2- Female Cases, n = 155, FDR = 0.01

Table 19: FET Table ER-/HER2- Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 20: FET Statistics ER-/HER2- Female Cases, FDR = 0.01

Statistics	Value
p.value	1
alternative	two.sided

FET Tables by IntClust subgroups

IntClust1 Female Cases, n = 75, FDR = 0.05

Table 21: FET Table IntClust1 Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	1	2874	2875
Row(%)	0.03%	99.97%	15.17%
Column(%)	9.09%	15.18%	
Tier 2 Only			
N	2	3203	3205
Row(%)	0.06%	99.94%	16.91%
Column(%)	18.18%	16.91%	
Not ER binding			
N	8	12862	12870
Row(%)	0.06%	99.94%	67.92%
Column(%)	72.73%	67.91%	
Total	11	18939	18950
	0.06%	99.94%	

Table 22: FET Statistics IntClust1 Female Cases, FDR = 0.05

Statistics	Value
p.value	1
alternative	two.sided

IntClust2 Female Cases, n = 38, FDR = 0.05

Table 23: FET Table IntClust2 Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 24: FET Statistics IntClust2 Female Cases, FDR = 0.05

Statistics	Value
p.value	1
alternative	two.sided

IntClust3 Female Cases, n = 181, FDR = 0.05

Table 25: FET Table IntClust3 Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	73	2802	2875
Row(%)	2.54%	97.46%	15.17%
Column(%)	11.15%	15.32%	
Tier 2 Only			
N	124	3081	3205
Row(%)	3.87%	96.13%	16.91%
Column(%)	18.93%	16.84%	
Not ER binding			
N	458	12412	12870
Row(%)	3.56%	96.44%	67.92%
Column(%)	69.92%	67.84%	
Total	655	18295	18950
	3.46%	96.54%	

Table 26: FET Statistics IntClust3 Female Cases, FDR = 0.05

Statistics	Value
p.value	0.0075
alternative	two.sided

IntClust4 Female Cases, n = 165, FDR = 0.05

Table 27: FET Table IntClust4 Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	10	2865	2875
Row(%)	0.35%	99.65%	15.17%
Column(%)	14.29%	15.17%	
Tier 2 Only			
N	18	3187	3205
Row(%)	0.56%	99.44%	16.91%
Column(%)	25.71%	16.88%	
Not ER binding			
N	42	12828	12870
Row(%)	0.33%	99.67%	67.92%
Column(%)	60.00%	67.94%	
Total	70	18880	18950
	0.37%	99.63%	

Table 28: FET Statistics IntClust4 Female Cases, FDR = 0.05

Statistics	Value
p.value	0.15
alternative	two.sided

IntClust5 Female Cases, n = 84, FDR = 0.05

Table 29: FET Table IntClust5 Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Column(%)	0.00%	15.17%	
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Column(%)	0.00%	16.91%	
Not ER binding			
N	2	12868	12870
Row(%)	0.02%	99.98%	67.92%
Column(%)	100.00%	67.91%	
Total	2	18948	18950
	0.01%	99.99%	

Table 30: FET Statistics IntClust5 Female Cases, FDR = 0.05

Statistics	Value
p.value	1
alternative	two.sided

IntClust6 Female Cases, n = 60, FDR = 0.05

Table 31: FET Table IntClust6 Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 32: FET Statistics IntClust6 Female Cases, FDR = 0.05

Statistics	Value
p.value	1
alternative	two.sided

IntClust7 Female Cases, n = 100, FDR = 0.05

Table 33: FET Table IntClust7 Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Column(%)	0.00%	15.17%	
Tier 2 Only			
N	1	3204	3205
Row(%)	0.03%	99.97%	16.91%
Column(%)	25.00%	16.91%	
Not ER binding			
N	3	12867	12870
Row(%)	0.02%	99.98%	67.92%
Column(%)	75.00%	67.91%	
Total	4	18946	18950
	0.02%	99.98%	

Table 34: FET Statistics IntClust7 Female Cases, FDR = 0.05

Statistics	Value
p.value	0.79
alternative	two.sided

IntClust8 Female Cases, n = 145, FDR = 0.05

Table 35: FET Table IntClust8 Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	157	2718	2875
Row(%)	5.46%	94.54%	15.17%
Column(%)	15.32%	15.16%	
Tier 2 Only			
N	215	2990	3205
Row(%)	6.71%	93.29%	16.91%
Column(%)	20.98%	16.68%	
Not ER binding			
N	653	12217	12870
Row(%)	5.07%	94.93%	67.92%
Column(%)	63.71%	68.16%	
Total	1025	17925	18950
	5.41%	94.59%	

Table 36: FET Statistics IntClust8 Female Cases, FDR = 0.05

Statistics	Value
p.value	0.0015
alternative	two.sided

IntClust9 Female Cases, n = 74, FDR = 0.05

Table 37: FET Table IntClust9 Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 38: FET Statistics IntClust9 Female Cases, FDR = 0.05

Statistics	Value
p.value	1
alternative	two.sided

IntClust10 Female Cases, n = 157, FDR = 0.05

Table 39: FET Table IntClust10 Female Cases, FDR = 0.05

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 40: FET Statistics IntClust10 Female Cases, FDR = 0.05

Statistics	Value
p.value	1
alternative	two.sided

IntClust1 Female Cases, n = 75, FDR = 0.01

Table 41: FET Table IntClust1 Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 42: FET Statistics IntClust1 Female Cases, FDR = 0.01

Statistics	Value
p.value	1
alternative	two.sided

IntClust2 Female Cases, n = 38, FDR = 0.01

Table 43: FET Table IntClust2 Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 44: FET Statistics IntClust2 Female Cases, FDR = 0.01

Statistics	Value
p.value	1
alternative	two.sided

IntClust3 Female Cases, n = 181, FDR = 0.01

Table 45: FET Table IntClust3 Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	11	2864	2875
Row(%)	0.38%	99.62%	15.17%
Column(%)	6.21%	15.26%	
Tier 2 Only			
N	31	3174	3205
Row(%)	0.97%	99.03%	16.91%
Column(%)	17.51%	16.91%	
Not ER binding			
N	135	12735	12870
Row(%)	1.05%	98.95%	67.92%
Column(%)	76.27%	67.84%	
Total	177	18773	18950
	0.93%	99.07%	

Table 46: FET Statistics IntClust3 Female Cases, FDR = 0.01

Statistics	Value
p.value	0.0013
alternative	two.sided

IntClust4 Female Cases, n = 165, FDR = 0.01

Table 47: FET Table IntClust4 Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Column(%)	0.00%	15.17%	
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Column(%)	0.00%	16.91%	
Not ER binding			
N	1	12869	12870
Row(%)	0.01%	99.99%	67.92%
Column(%)	100.00%	67.91%	
Total	1	18949	18950
	0.01%	99.99%	

Table 48: FET Statistics IntClust4 Female Cases, FDR = 0.01

Statistics	Value
p.value	1
alternative	two.sided

IntClust5 Female Cases, n = 84, FDR = 0.01

Table 49: FET Table IntClust5 Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 50: FET Statistics IntClust5 Female Cases, FDR = 0.01

Statistics	Value
p.value	1
alternative	two.sided

IntClust6 Female Cases, n = 60, FDR = 0.01

Table 51: FET Table IntClust6 Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 52: FET Statistics IntClust6 Female Cases, FDR = 0.01

Statistics	Value
p.value	1
alternative	two.sided

IntClust7 Female Cases, n = 100, FDR = 0.01

Table 53: FET Table IntClust7 Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Column(%)	0.00%	15.17%	
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Column(%)	0.00%	16.91%	
Not ER binding			
N	1	12869	12870
Row(%)	0.01%	99.99%	67.92%
Column(%)	100.00%	67.91%	
Total	1	18949	18950
	0.01%	99.99%	

Table 54: FET Statistics IntClust7 Female Cases, FDR = 0.01

Statistics	Value
p.value	1
alternative	two.sided

IntClust8 Female Cases, n = 145, FDR = 0.01

Table 55: FET Table IntClust8 Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	30	2845	2875
Row(%)	1.04%	98.96%	15.17%
Column(%)	11.63%	15.22%	
Tier 2 Only			
N	67	3138	3205
Row(%)	2.09%	97.91%	16.91%
Column(%)	25.97%	16.79%	
Not ER binding			
N	161	12709	12870
Row(%)	1.25%	98.75%	67.92%
Column(%)	62.40%	67.99%	
Total	258	18692	18950
	1.36%	98.64%	

Table 56: FET Statistics IntClust8 Female Cases, FDR = 0.01

Statistics	Value
p.value	0.00067
alternative	two.sided

IntClust9 Female Cases, n = 74, FDR = 0.01

Table 57: FET Table IntClust9 Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 58: FET Statistics IntClust9 Female Cases, FDR = 0.01

Statistics	Value
p.value	1
alternative	two.sided

IntClust10 Female Cases, n = 157, FDR = 0.01

Table 59: FET Table IntClust10 Female Cases, FDR = 0.01

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	0	2875	2875
Row(%)	0.00%	100.00%	15.17%
Tier 2 Only			
N	0	3205	3205
Row(%)	0.00%	100.00%	16.91%
Not ER binding			
N	0	12870	12870
Row(%)	0.00%	100.00%	67.92%
Total	0	18950	18950

Table 60: FET Statistics IntClust10 Female Cases, FDR = 0.01

Statistics	Value
p.value	1
alternative	two.sided