Age-Associated Biomarker Study TCGA Lung Cancer Females Fisher's Exact Tests

Derek Chiu July 23, 2018

Table 1: ER binding and age associated gene counts for TCGA Lung cancer data, Females, FDR 0.05

ER binding	Age association Age associated	Not age associated	Total
ER binding			
N	52	1626	1678
Row(%)	3.10%	96.90%	8.85%
$\operatorname{Column}(\%)$	9.76%	8.83%	
Not ER binding			
N	481	16791	17272
Row(%)	2.78%	97.22%	91.15%
$\widehat{\text{Column}}(\%)$	90.24%	91.17%	
Total	533	18417	18950
	2.81%	97.19%	

```
##
## Fisher's Exact Test for Count Data
##
## data: tab
## p-value = 0.4396
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
## 0.8181683 1.4959110
## sample estimates:
## odds ratio
## 1.116356
```

Table 2: ER binding and age associated gene counts for TCGA Lung cancer data, Females, FDR 0.01

ER binding	Age association Age associated	Not age associated	Total
ER binding			
N	0	1678	1678
Row(%)	0.00%	100.00%	8.85%
$\widehat{\text{Column}}(\%)$	0.00%	8.86%	
Not ER binding			
N	11	17261	17272
Row(%)	0.06%	99.94%	91.15%
$\operatorname{Column}(\%)$	100.00%	91.14%	
Total	11	18939	18950
	0.06%	99.94%	

```
##
## Fisher's Exact Test for Count Data
##
## data: tab
## p-value = 0.6145
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
## 0.000000 4.102642
## sample estimates:
## odds ratio
## 0
```

Table 3: NKI ER binding and age associated gene counts for TCGA Lung cancer data, Females, FDR $0.05\,$

ER binding	Age associated	Not age associated	Total
Tier 1			
N	85	2790	2875
Row(%)	2.96%	97.04%	15.17%
$\operatorname{Column}(\%)$	15.95%	15.15%	
Tier 2 Only			
N	88	3117	3205
Row(%)	2.75%	97.25%	16.91%
$\operatorname{Column}(\%)$	16.51%	16.92%	
Not ER binding			
N	360	12510	12870
Row(%)	2.80%	97.20%	67.92%
$\operatorname{Column}(\%)$	67.54%	67.93%	
Total	533	18417	18950
	2.81%	97.19%	

##
Fisher's Exact Test for Count Data
##
data: tab
p-value = 0.8577
alternative hypothesis: two.sided

Table 4: NKI ER binding and age associated gene counts for TCGA Lung cancer data, Females, FDR $0.01\,$

Age association			
ER binding	Age associated	Not age associated	Total
Tier 1			
N	3	2872	2875
Row(%)	0.10%	99.90%	15.17%
$\operatorname{Column}(\%)$	27.27%	15.16%	
Tier 2 Only			
N	1	3204	3205
Row(%)	0.03%	99.97%	16.91%
$\operatorname{Column}(\%)$	9.09%	16.92%	

ER binding	Age association Age associated	Not age associated	Total
Not ER binding			
N	7	12863	12870
Row(%)	0.05%	99.95%	67.92%
$\operatorname{Column}(\%)$	63.64%	67.92%	
Total	11	18939	18950
	0.06%	99.94%	

##

Fisher's Exact Test for Count Data

##

data: tab

p-value = 0.5772

alternative hypothesis: two.sided