## Age-Associated Biomarker Study TCGA Kidney Cancer All Cases Fisher's Exact Tests

Derek Chiu July 23, 2018

Table 1: ER binding and age associated gene counts for TCGA Kidney cancer data, All Cases, FDR 0.05

ER binding	Age association Age associated	Not age associated	Total
ER binding			
N	21	1657	1678
Row(%)	1.25%	98.75%	8.85%
$\operatorname{Column}(\%)$	11.86%	8.83%	
Not ER binding			
N	156	17116	17272
Row(%)	0.90%	99.10%	91.15%
$\operatorname{Column}(\%)$	88.14%	91.17%	
Total	177	18773	18950
	0.93%	99.07%	

```
##
## Fisher's Exact Test for Count Data
##
## data: tab
## p-value = 0.1814
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
## 0.8346811 2.2079649
## sample estimates:
## odds ratio
## 1.390476
```

Table 2: ER binding and age associated gene counts for TCGA Kidney cancer data, All Cases, FDR 0.01

ER binding	Age association Age associated	Not age associated	Total
ER binding			
${ m N}$	4	1674	1678
Row(%)	0.24%	99.76%	8.85%
$\operatorname{Column}(\%)$	17.39%	8.84%	
Not ER binding			
N	19	17253	17272
Row(%)	0.11%	99.89%	91.15%
$\widehat{\text{Column}}(\%)$	82.61%	91.16%	
Total	23	18927	18950
	0.12%	99.88%	

```
##
## Fisher's Exact Test for Count Data
##
## data: tab
## p-value = 0.1409
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
## 0.5361687 6.5390925
## sample estimates:
## odds ratio
## 2.169658
```

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

ER binding	Age association Age associated	Not age associated	Total
Tier 1			
N	33	2842	2875
Row(%)	1.15%	98.85%	15.17%
$\operatorname{Column}(\%)$	18.64%	15.14%	
Tier 2 Only			
N	37	3168	3205
Row(%)	1.15%	98.85%	16.91%
$\operatorname{Column}(\%)$	20.90%	16.88%	
Not ER binding			
N	107	12763	12870
Row(%)	0.83%	99.17%	67.92%
$\operatorname{Column}(\%)$	60.45%	67.99%	
Total	177	18773	18950
	0.93%	99.07%	

##
## Fisher's Exact Test for Count Data
##
## data: tab
## p-value = 0.09499

## alternative hypothesis: two.sided

Table 4: NKI ER binding and age associated gene counts for TCGA Kidney cancer data, All Cases, FDR 0.01

	Age association		
ER binding	Age associated	Not age associated	Total
Tier 1			
N	5	2870	2875
Row(%)	0.17%	99.83%	15.17%
$\operatorname{Column}(\%)$	21.74%	15.16%	
Tier 2 Only			
N	5	3200	3205
Row(%)	0.16%	99.84%	16.91%
$\operatorname{Column}(\%)$	21.74%	16.91%	

ER binding	Age associated	Not age associated	Total
Not ER binding			
N	13	12857	12870
Row(%)	0.10%	99.90%	67.92%
$\operatorname{Column}(\%)$	56.52%	67.93%	
Total	23	18927	18950
	0.12%	99.88%	

##

## Fisher's Exact Test for Count Data

##

## data: tab

## p-value = 0.4098

## alternative hypothesis: two.sided