

main

November 24, 2021

## 1 Venn diagram comparing female and male SZ differential expression results

```
[1]: import pandas as pd
import matplotlib.pyplot as plt
from matplotlib_venn import venn2

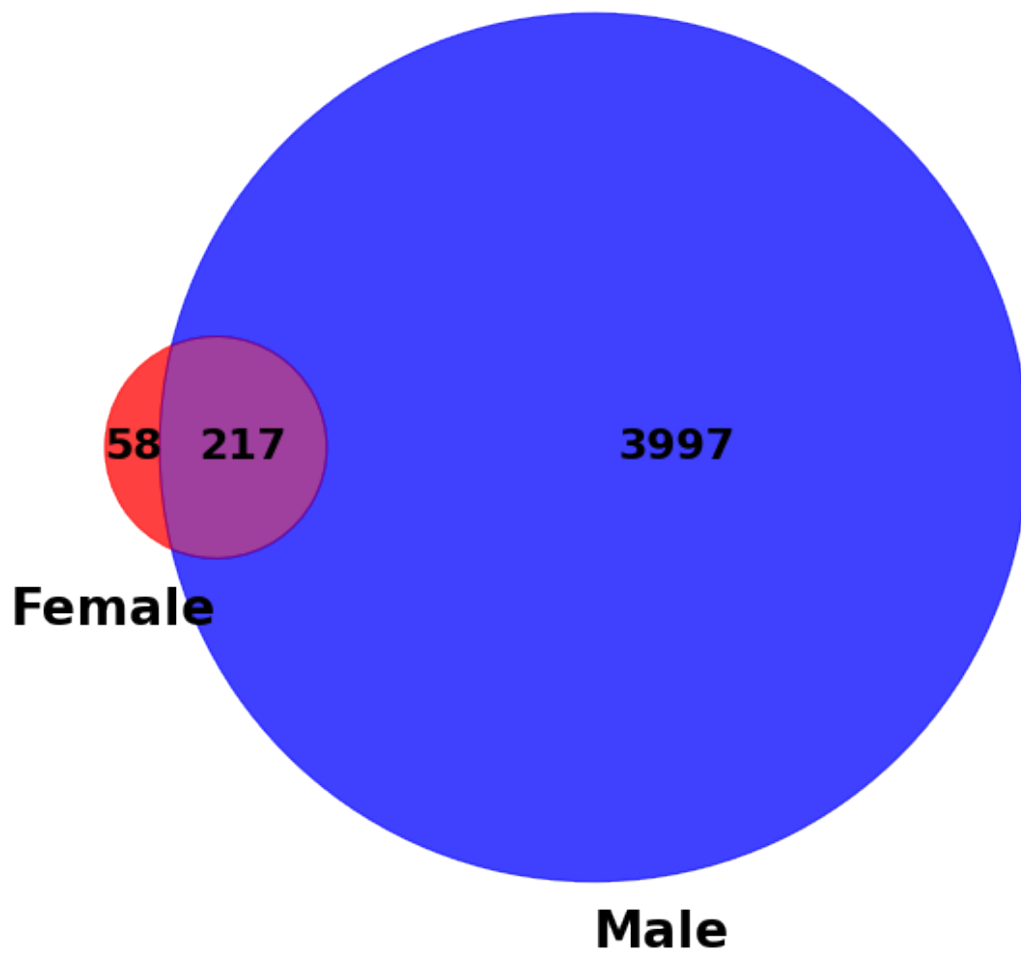
[2]: plt.rcParams.update({'font.size': 22, 'font.weight': 'bold'})

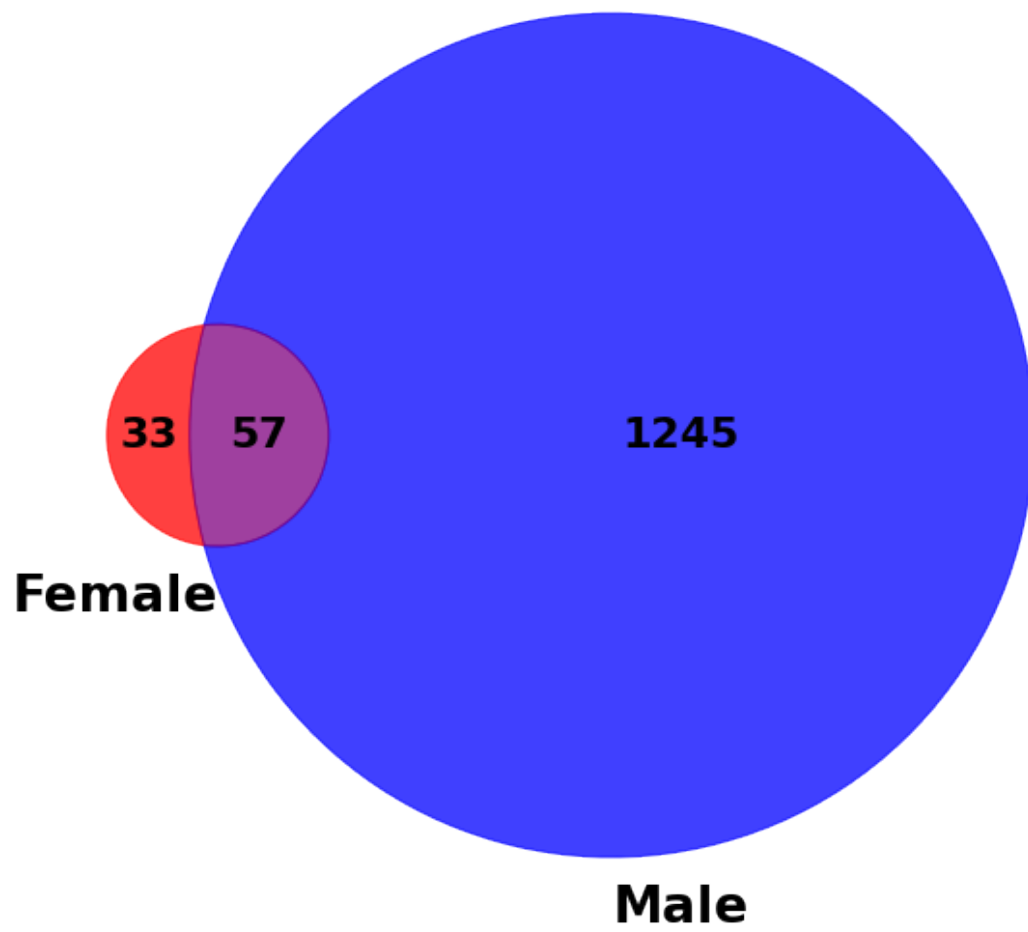
[3]: def get_deg_df(tissue, feature):
    fn1 = "../../../%s/female_analysis/_m/%s/diffExpr_szVctl_full.txt" % \
    ↪(tissue.lower(), feature)
    fn2 = "../../../%s/male_analysis/_m/%s/diffExpr_szVctl_full.txt" % (tissue.
    ↪lower(), feature)
    female = pd.read_csv(fn1, sep='\t', index_col=0)
    male = pd.read_csv(fn2, sep='\t', index_col=0)
    return female[(female['adj.P.Val'] <= 0.05)], male[(male['adj.P.Val'] <= 0.
    ↪05)]

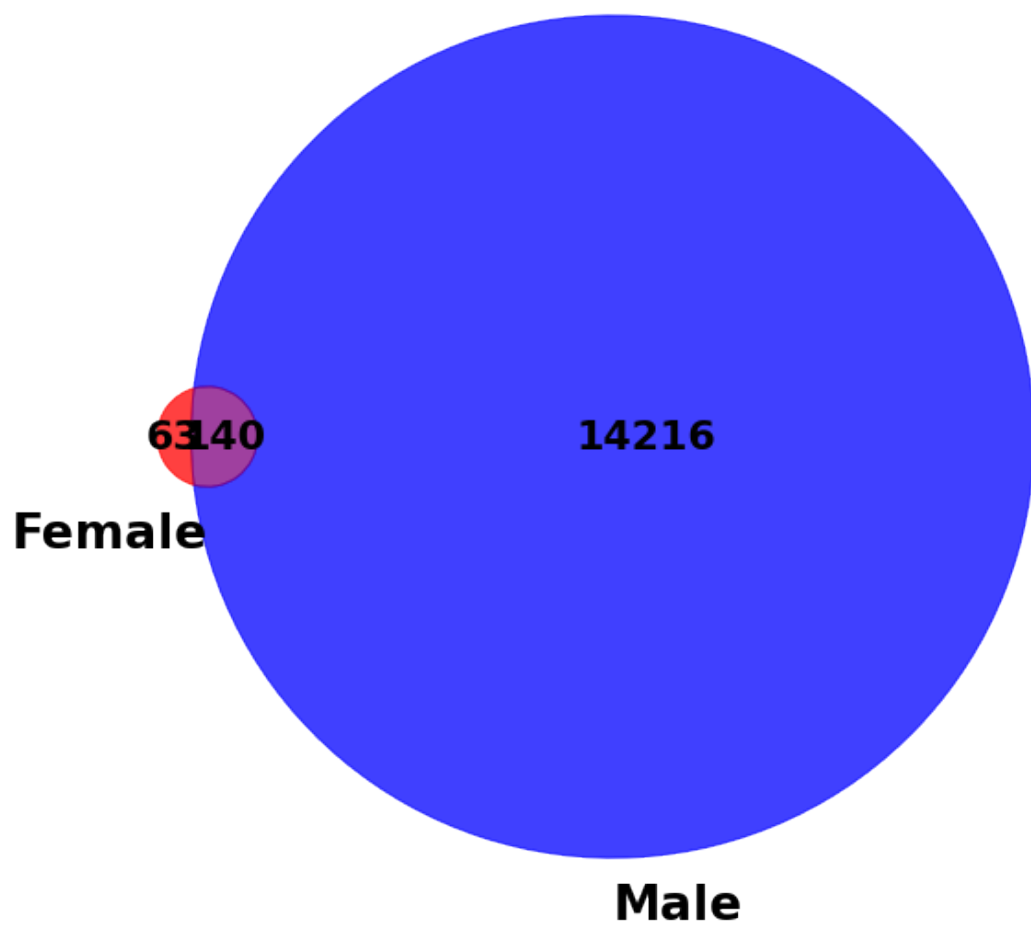
def plot_venn(tissue, feature):
    ff, mm = get_deg_df(tissue, feature)
    plt.figure(figsize=(10,10))
    v = venn2([set(ff.index), set(mm.index)], set_labels = ('Female', 'Male'))
    v.get_patch_by_id('10').set_color('red')
    v.get_patch_by_id('10').set_alpha(0.75)
    v.get_patch_by_id('01').set_color('blue')
    v.get_patch_by_id('01').set_alpha(0.75)
    try:
        v.get_patch_by_id('11').set_color('purple')
        v.get_patch_by_id('11').set_alpha(0.75)
    except AttributeError:
        print("There is no overlap!")
    plt.savefig('venn_%s_%s.png' % (tissue.lower(), feature))
    plt.savefig('venn_%s_%s.pdf' % (tissue.lower(), feature))
```

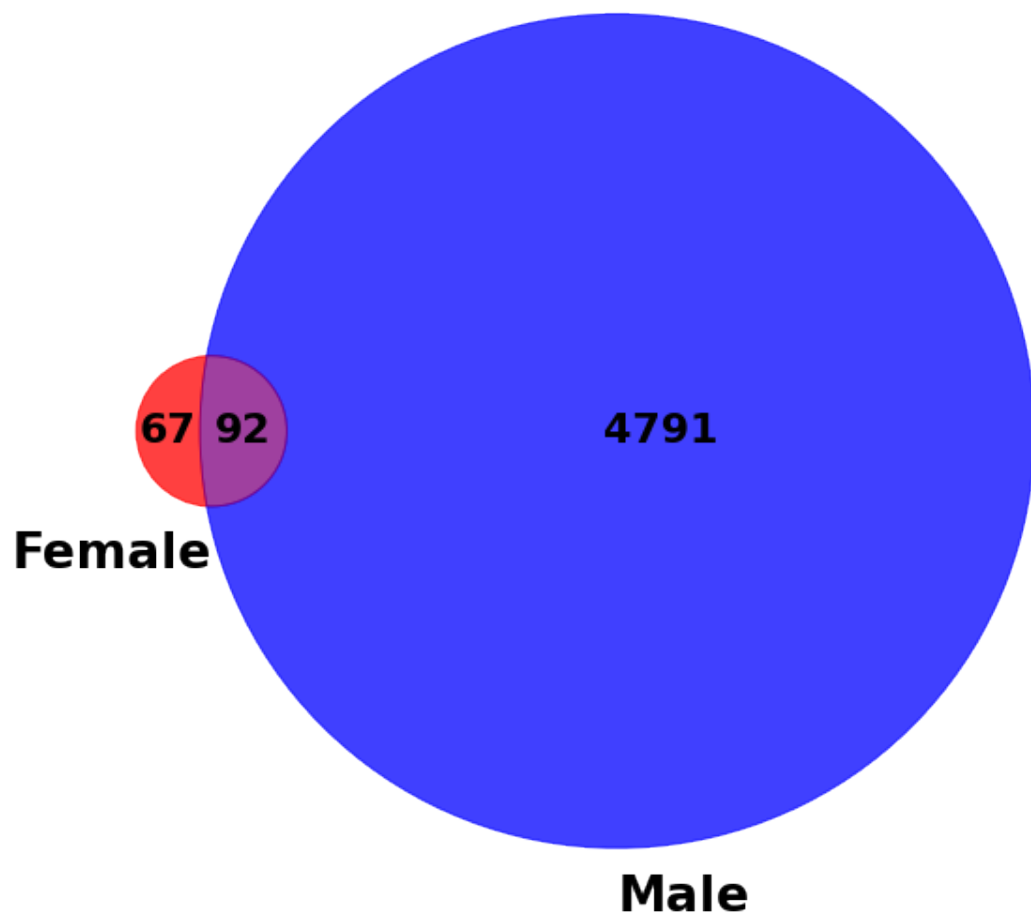
```
[4]: for tissue in ['Caudate', 'DLPFC', 'Hippocampus']:
      for feature in ['genes', 'transcripts', 'exons', 'junctions']:
          plot_venn(tissue, feature)
```

There is no overlap!  
There is no overlap!  
There is no overlap!  
There is no overlap!  
There is no overlap!  
There is no overlap!  
There is no overlap!  
There is no overlap!

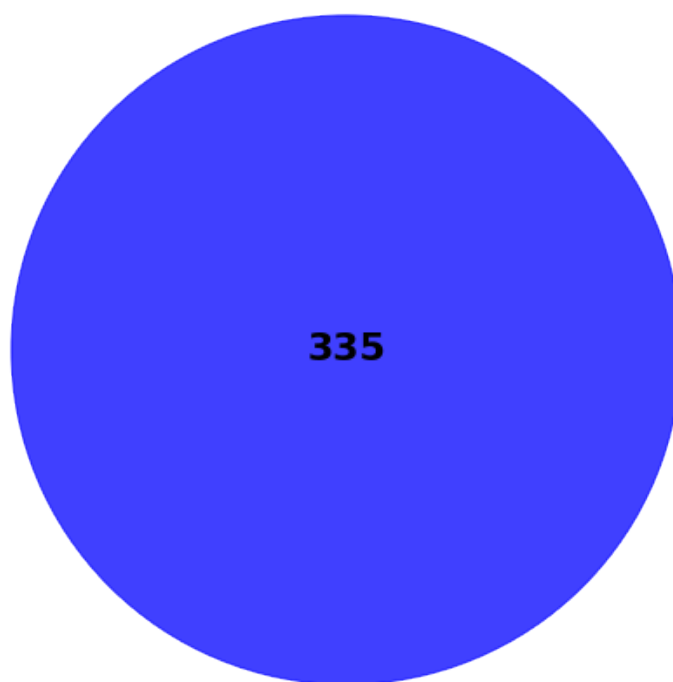








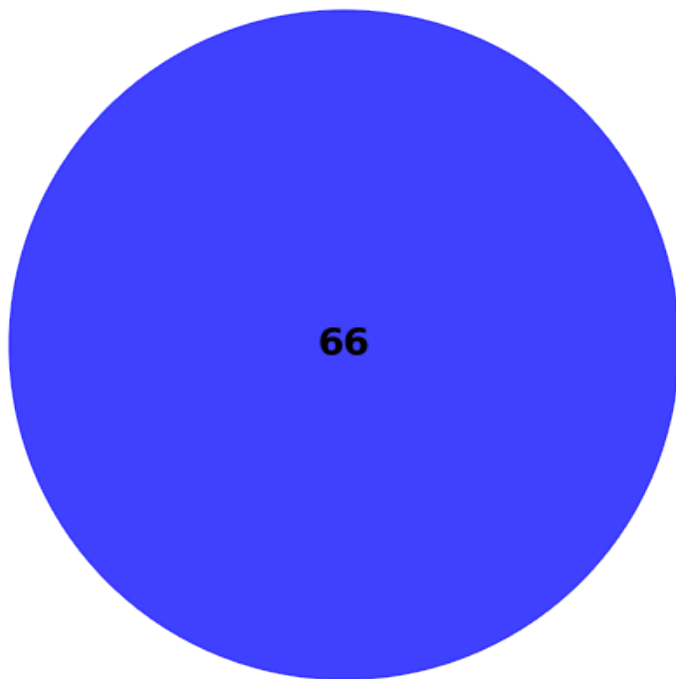
**Female<sup>0</sup>**



**335**

**Male**

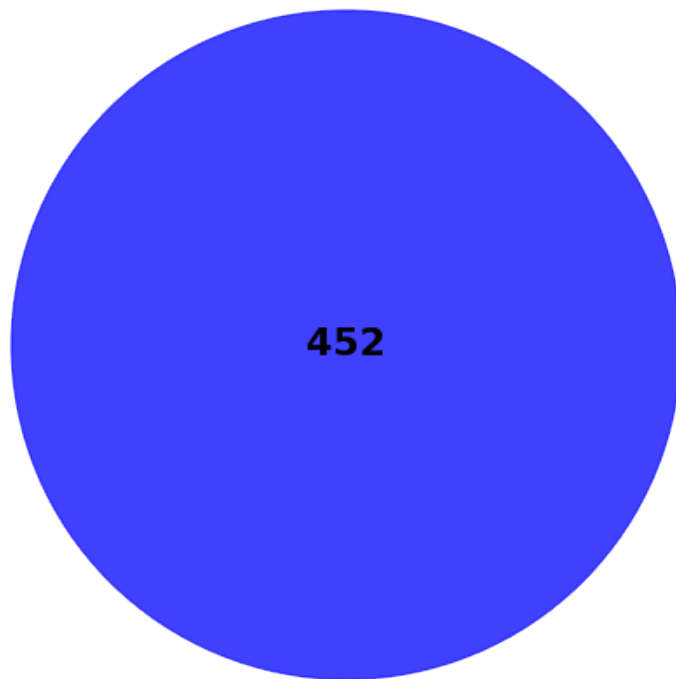
**Female<sup>0</sup>**



**66**

**Male**

**Female<sup>0</sup>**

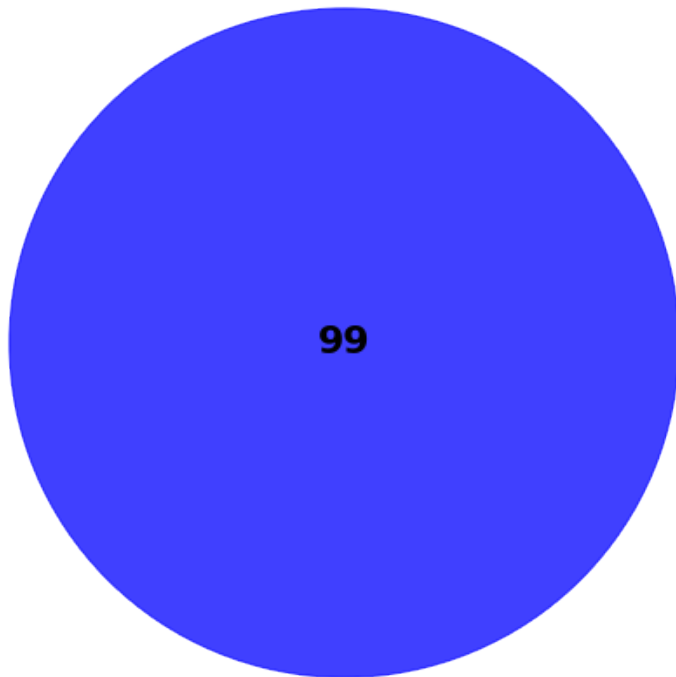


**452**

**Male**



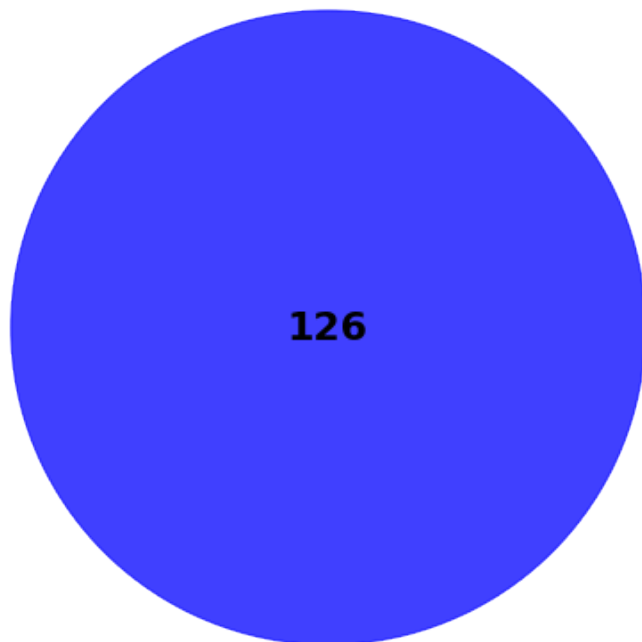
**Female**<sup>0</sup>



**99**

**Male**

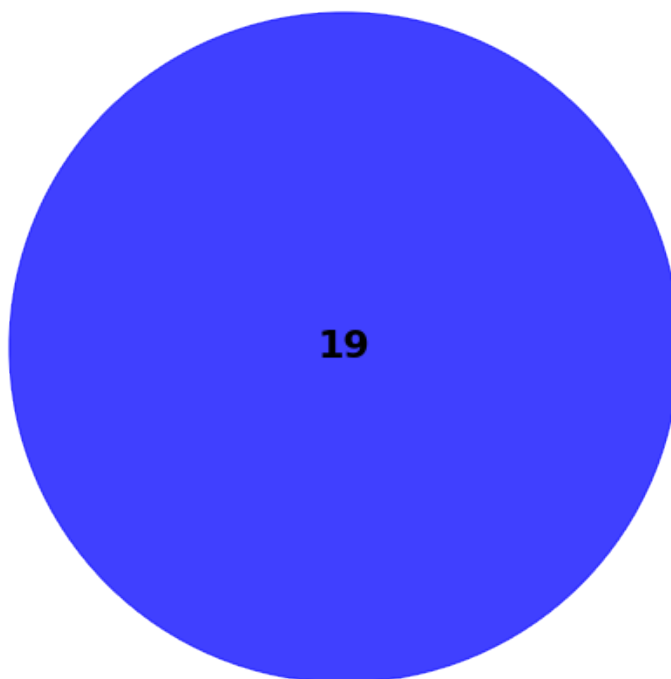
**Female**<sup>**1**</sup>



**126**

**Male**

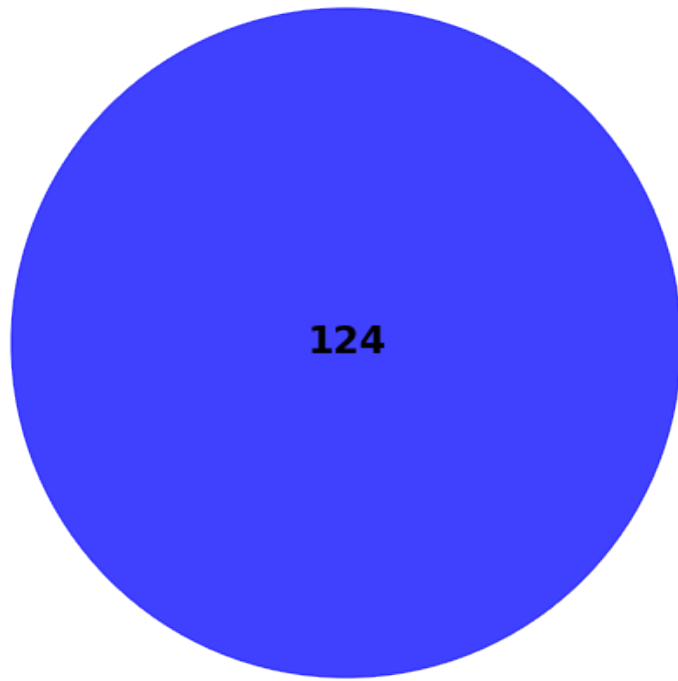
**Female<sup>0</sup>**



**19**

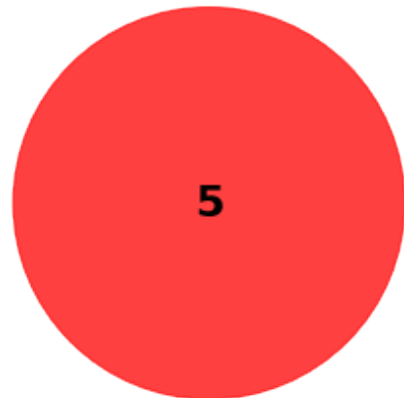
**Male**

**Female<sup>0</sup>**



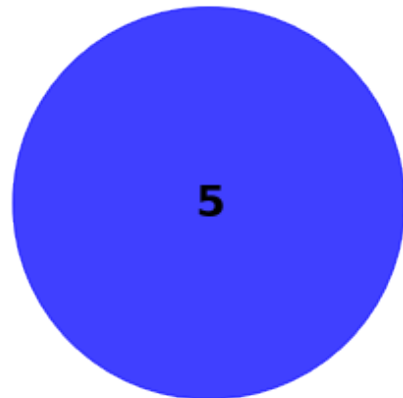
**124**

**Male**



**5**

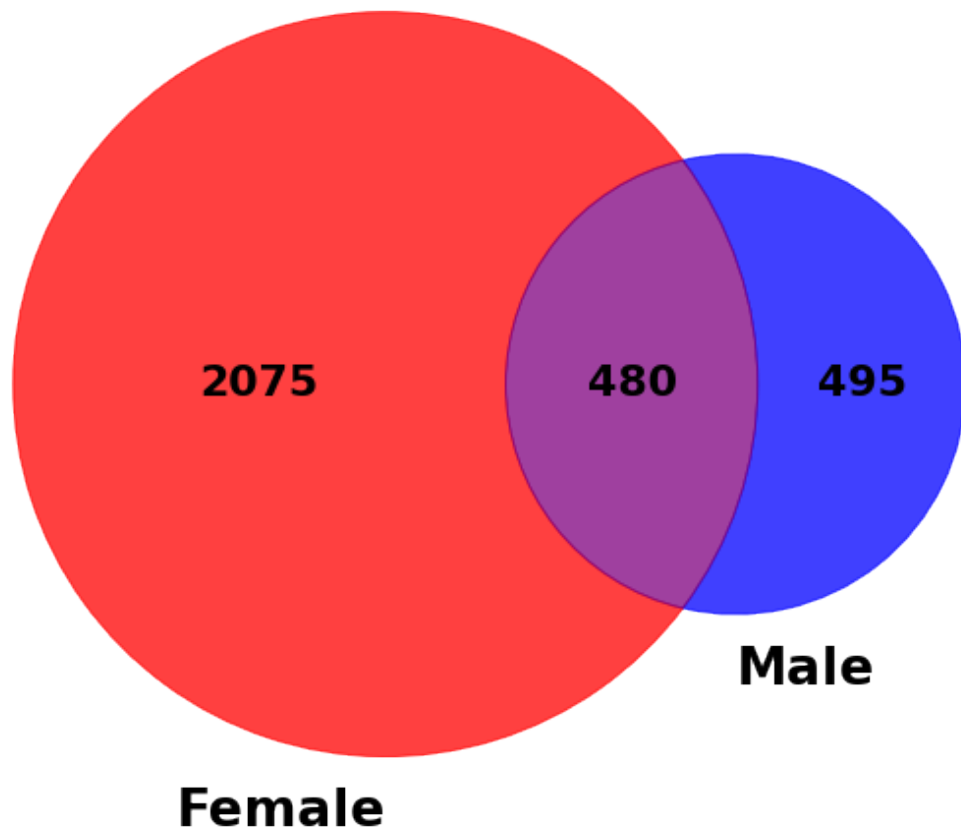
**Female**



**5**

**Male**

```
[5]: plot_venn('cmc_dlpfc', 'genes')
```



[ ]: