

main

August 6, 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

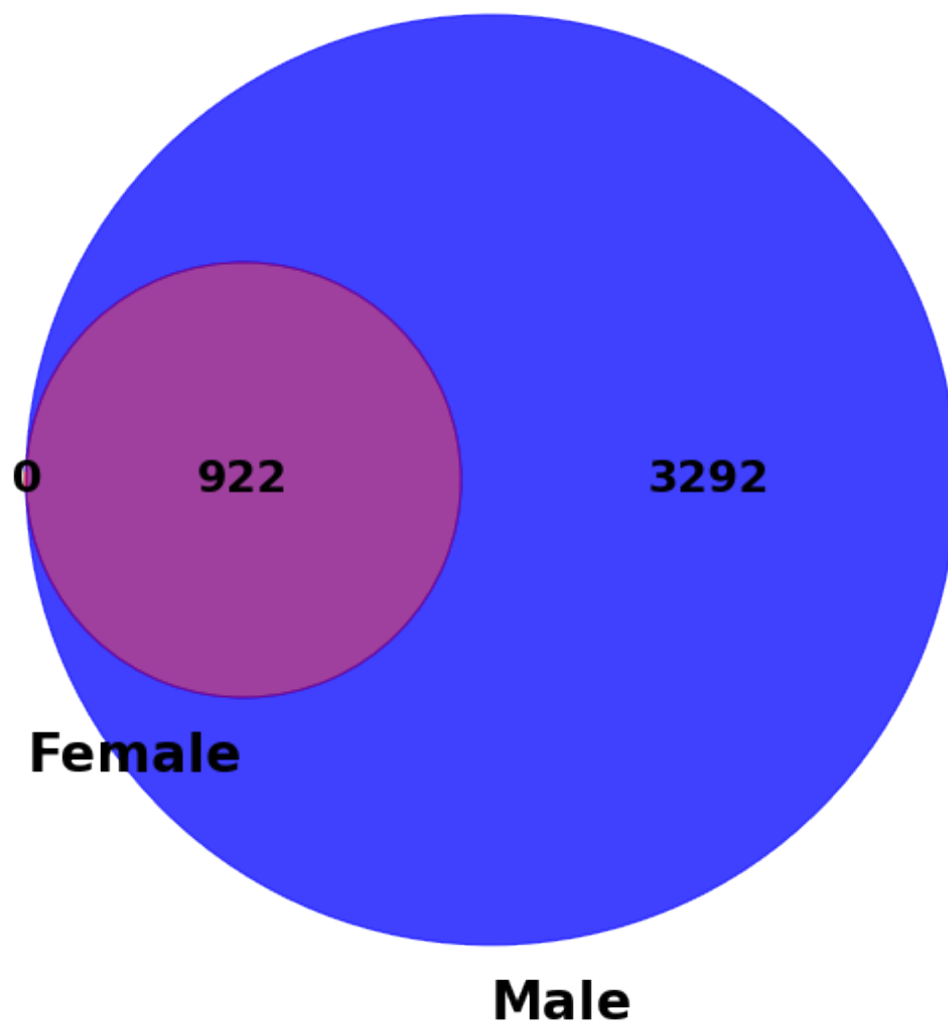
[2]: plt.rcParams.update({'font.size': 22, 'font.weight': 'bold'})

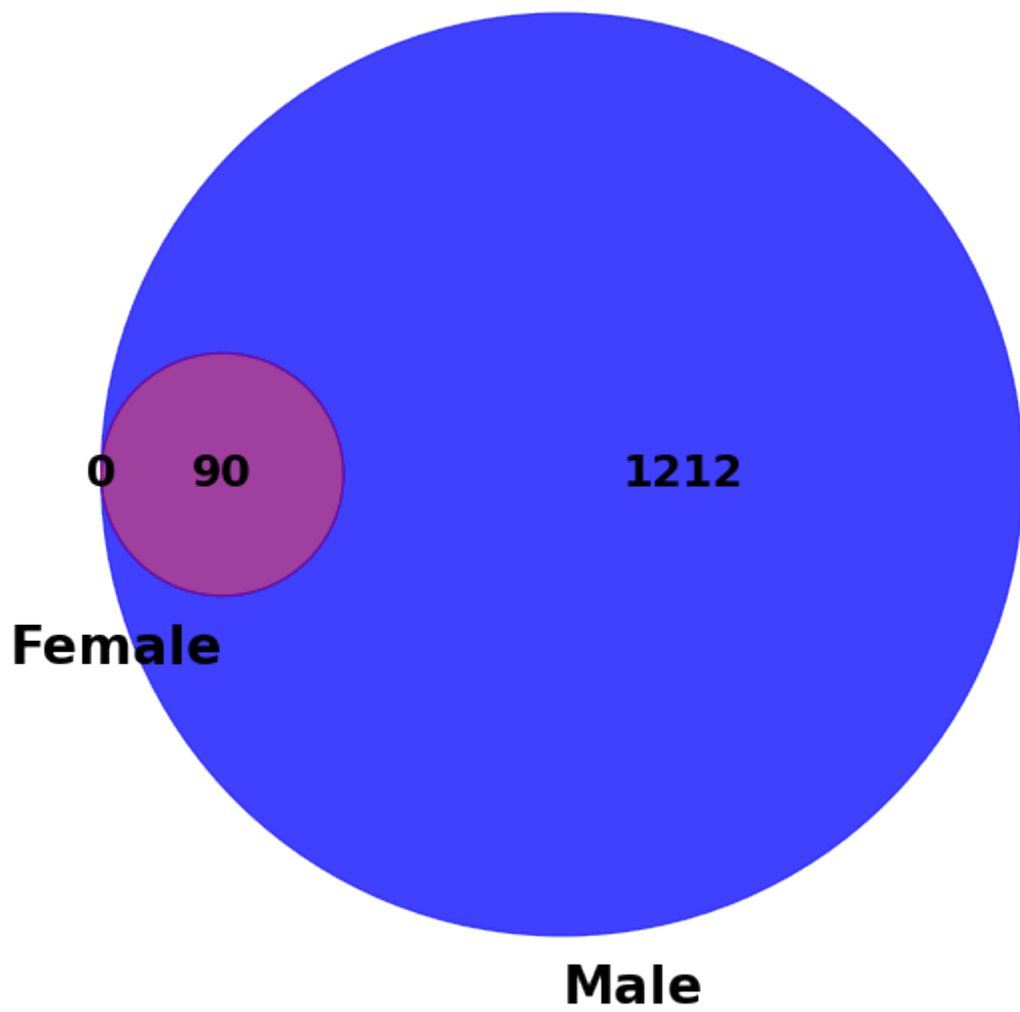
[3]: def get_deg_df(tissue, feature):
    fn1 = "../../../%s/female_analysis/_m/%s/diffExpr_szVctl_full.txt" % \
    ↪(tissue.lower(), feature)
    fn2 = "../../../%s/male_analysis/_m/%s/diffExpr_szVctl_full.txt" % (tissue.
    ↪lower(), feature)
    female = pd.read_csv(fn1, sep='\t')
    male = pd.read_csv(fn2,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

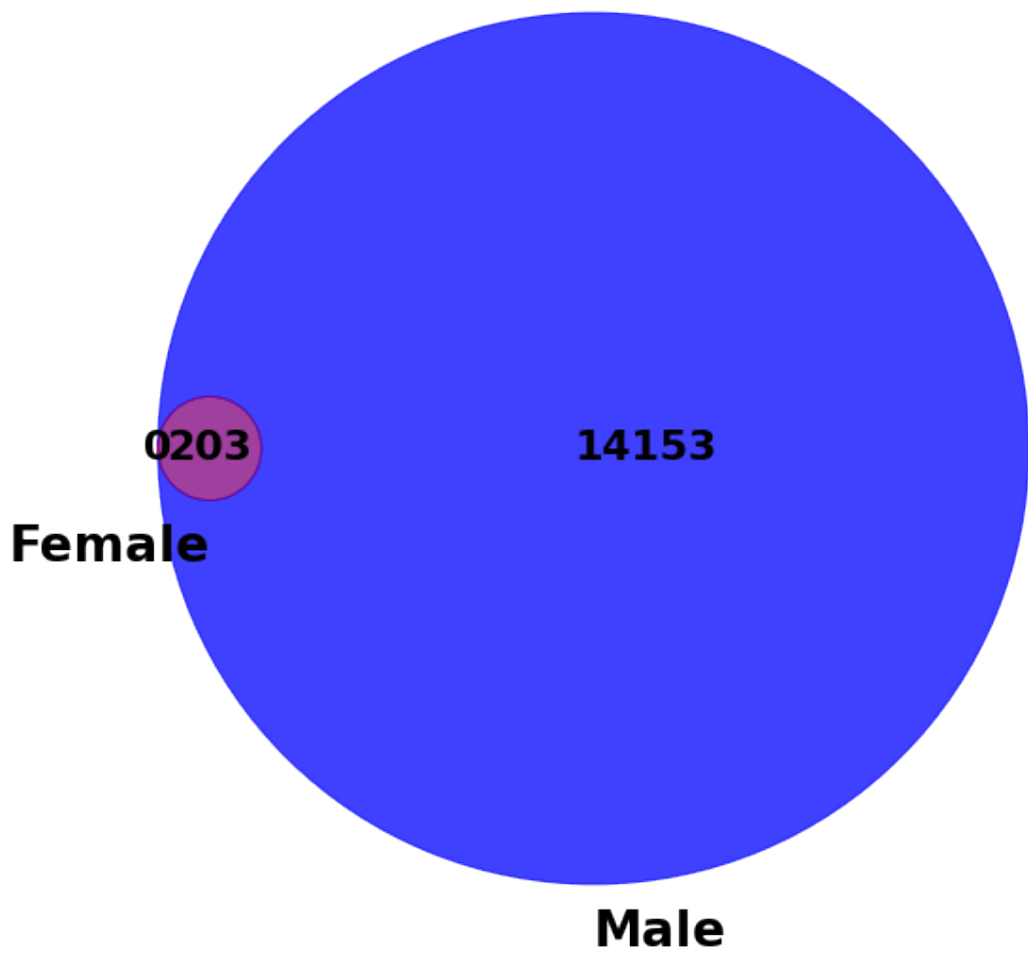
def plot_venn(tissue, feature):
    ff, mm = get_deg_df(tissue, feature)
    plt.figure(figsize=(10,10))
    v = venn2([set(ff.index), set(mm.index)], set_labels = ('Female', 'Male'))
    v.get_patch_by_id('10').set_color('red')
    v.get_patch_by_id('10').set_alpha(0.75)
    v.get_patch_by_id('01').set_color('blue')
    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, feature))
    plt.savefig('venn_%s_%s.pdf' % (tissue, feature))
```

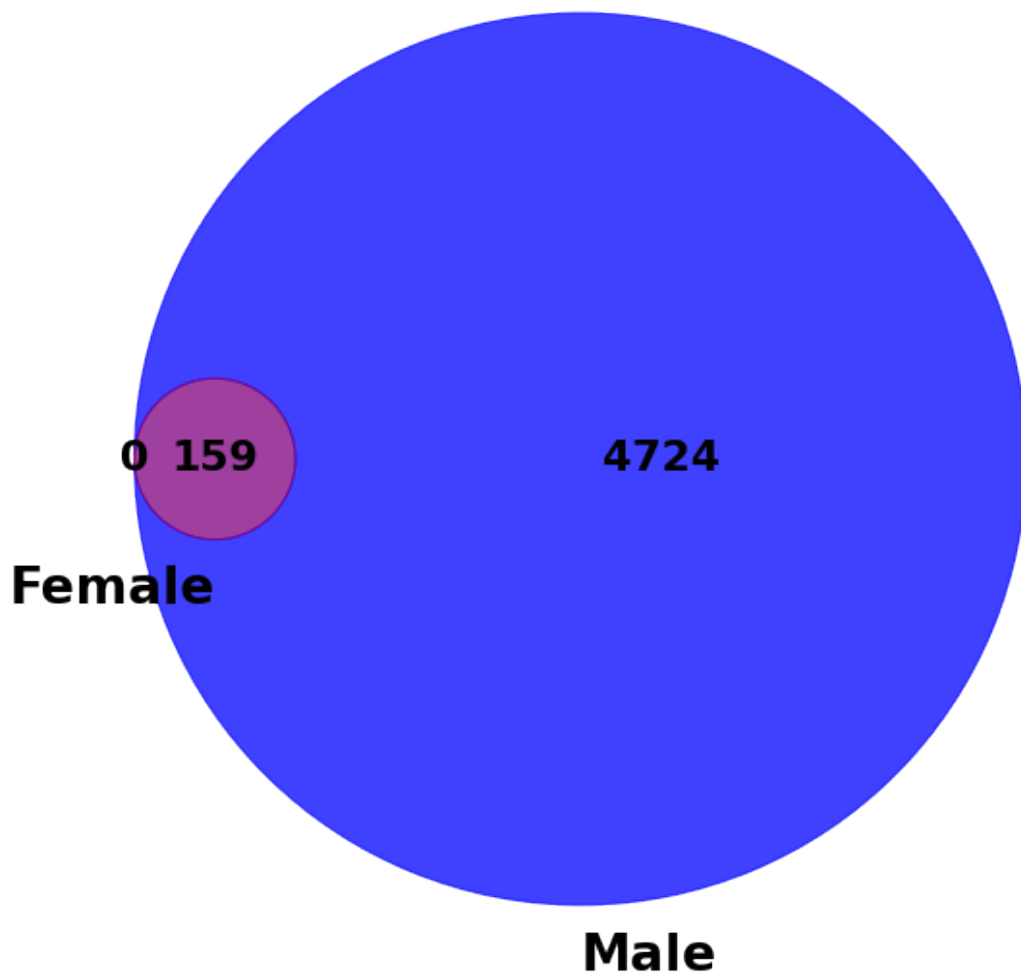
```
[4]: for tissue in ['caudate', 'dlpfc', 'hippocampus']:
      for feature in ['genes', 'transcripts', 'exons', 'junctions']:
          plot_venn(tissue, feature)
```

There is no overlap!
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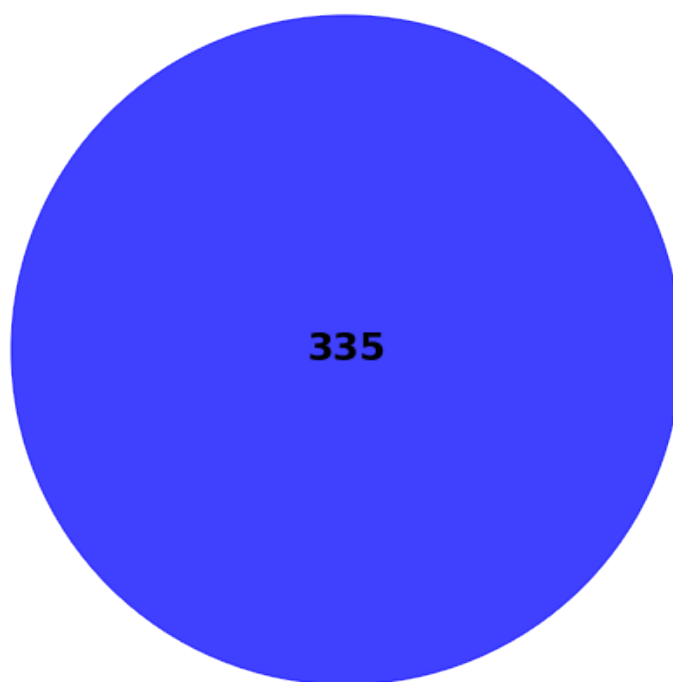








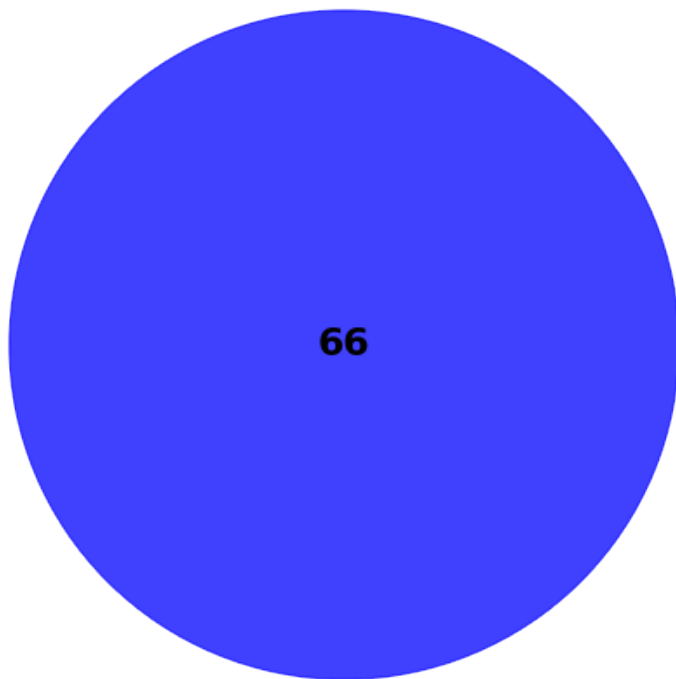
Female⁰



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Male

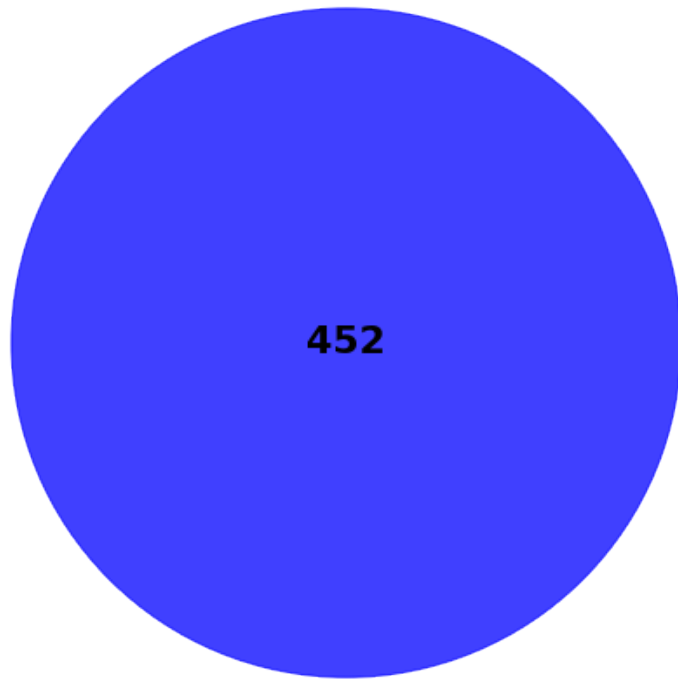
Female⁰



66

Male

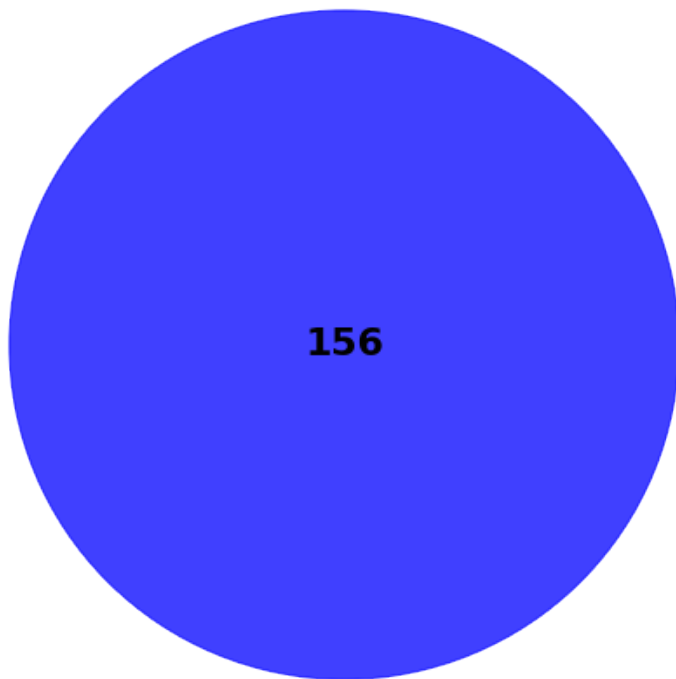
Female⁰



452

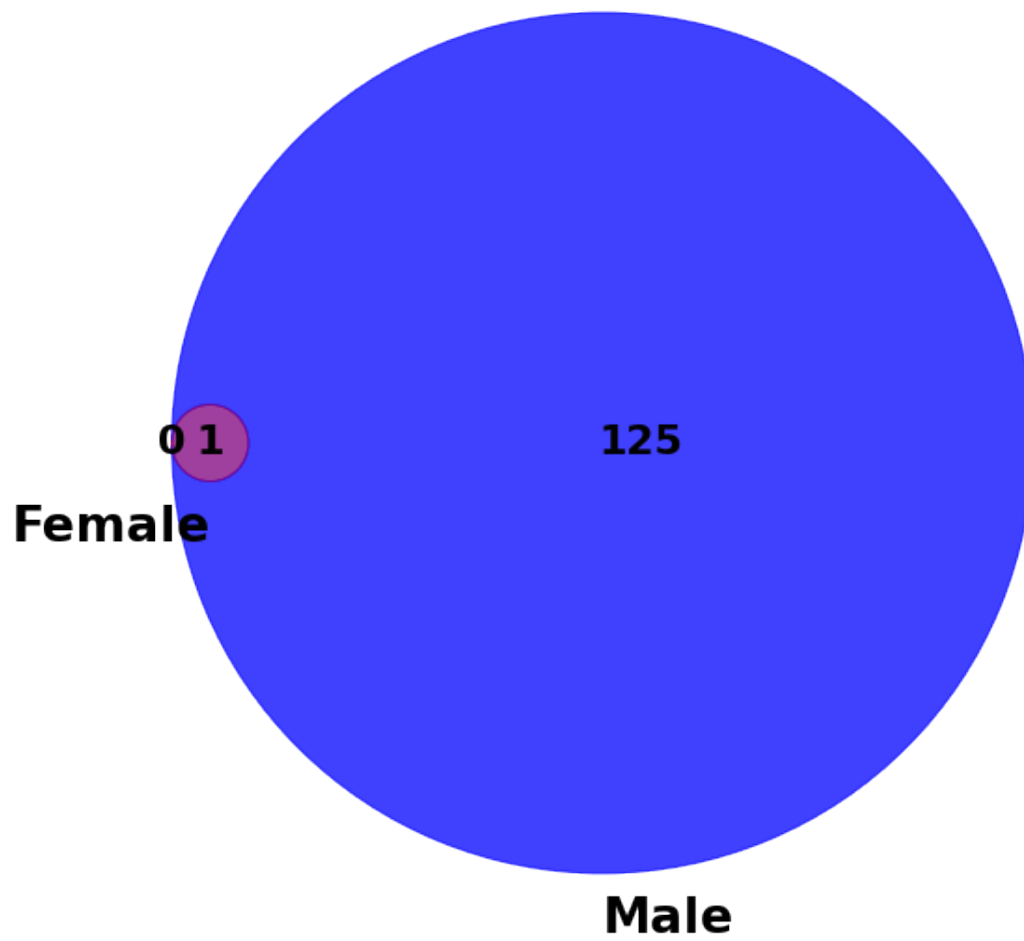
Male

Female⁰

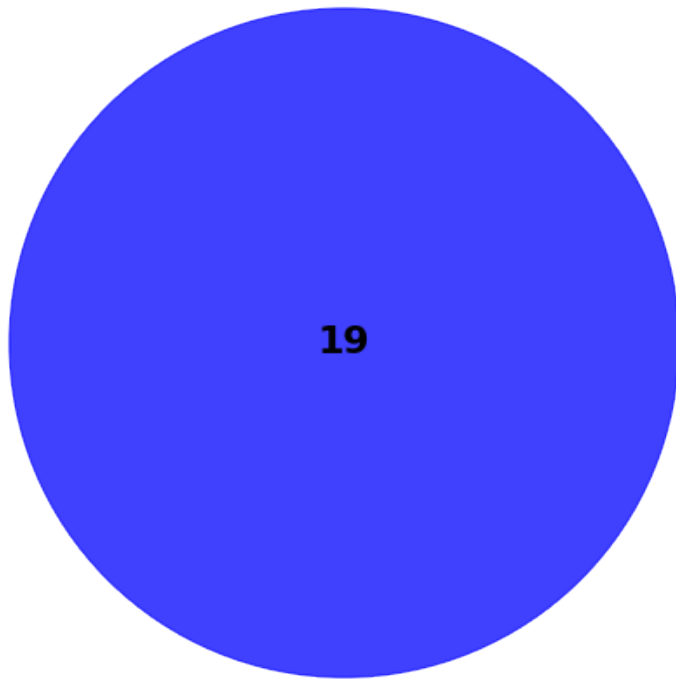


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Male



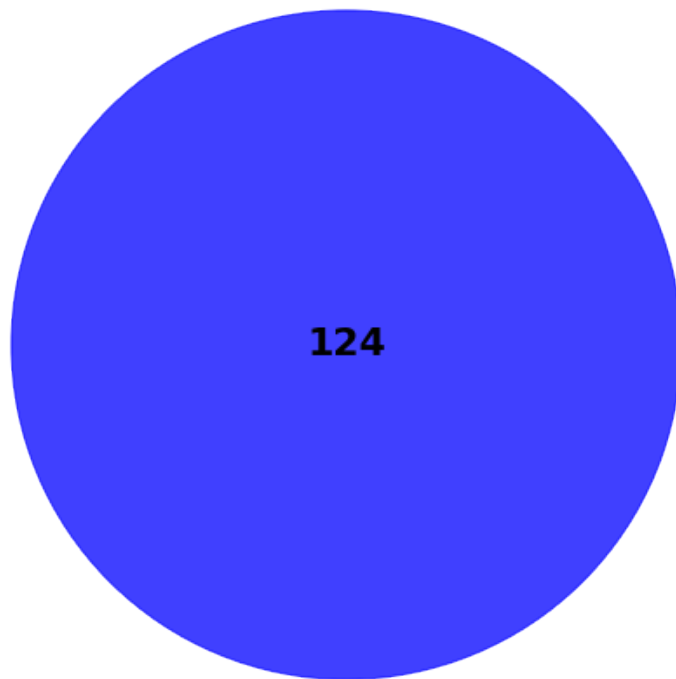
Female⁰



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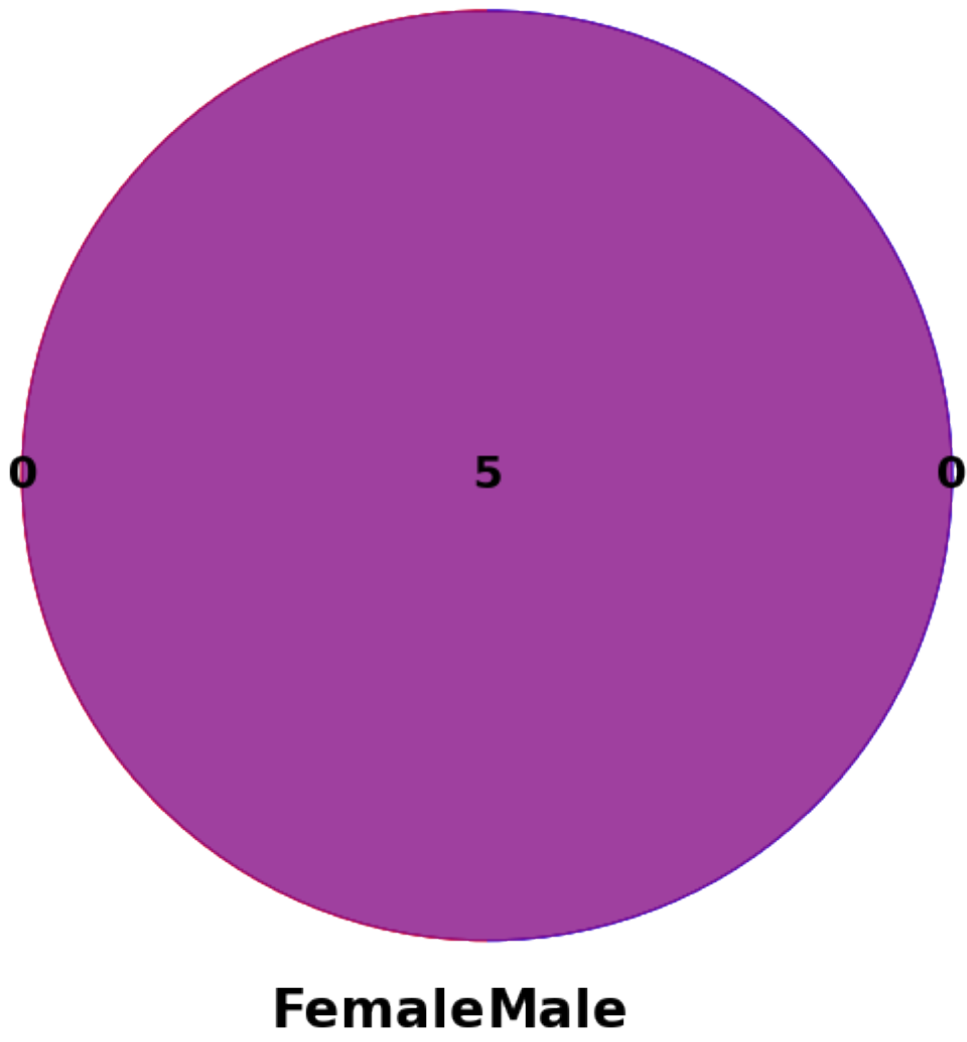
Male

Female⁰

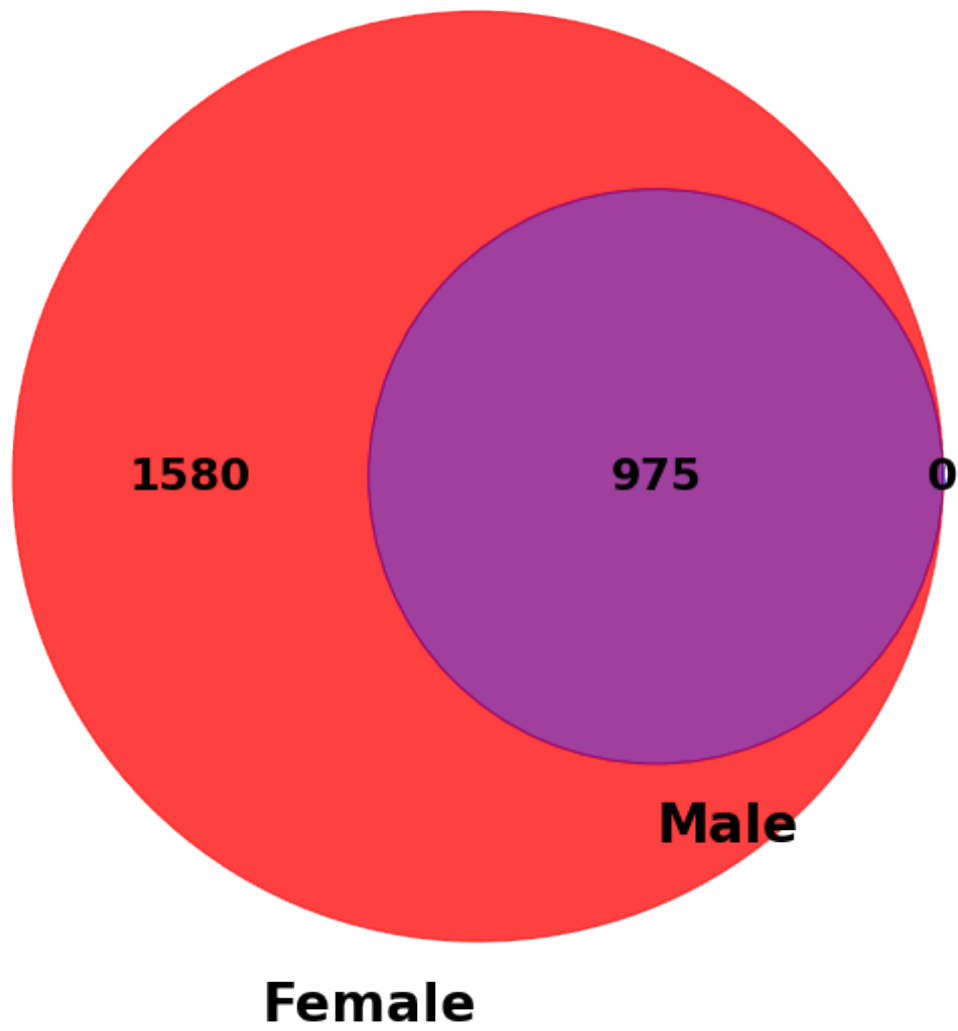


124

Male



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



[]: