

cardiac analysis

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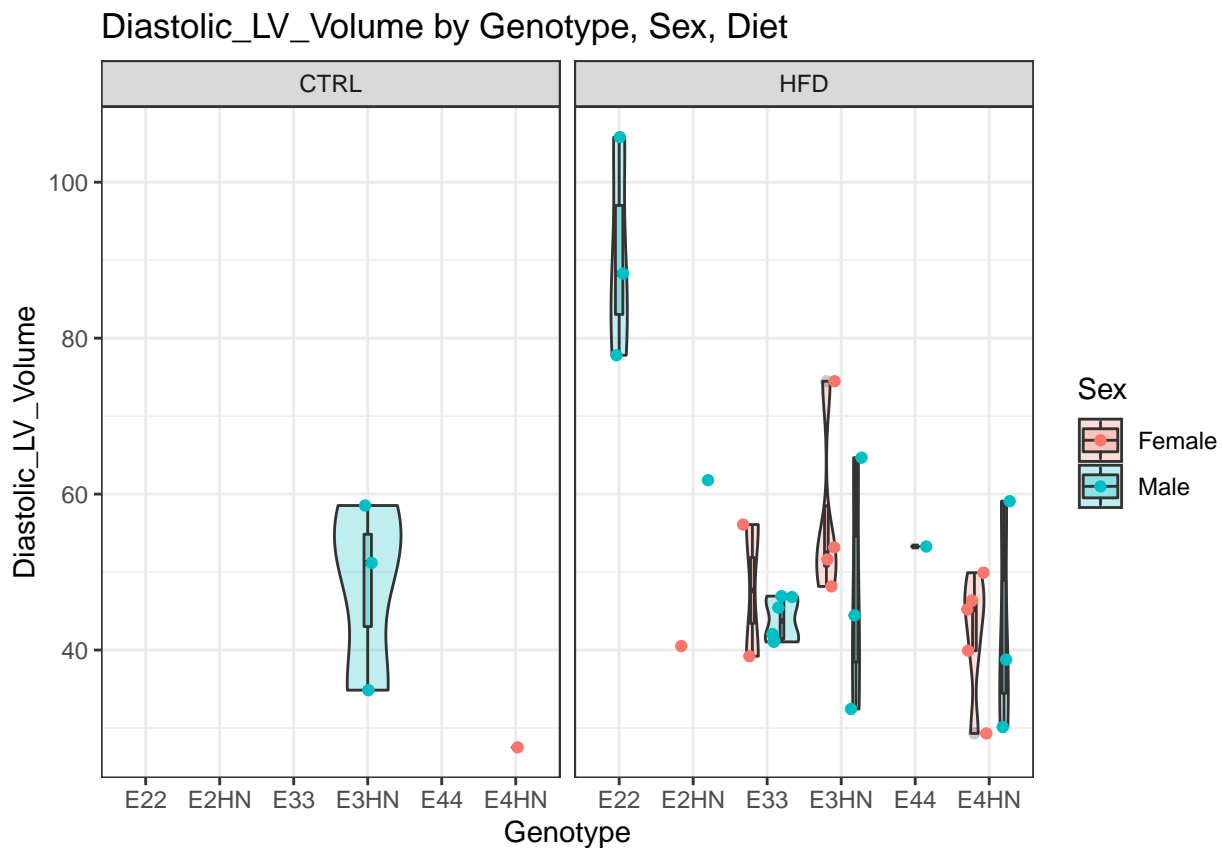
2022-07-26

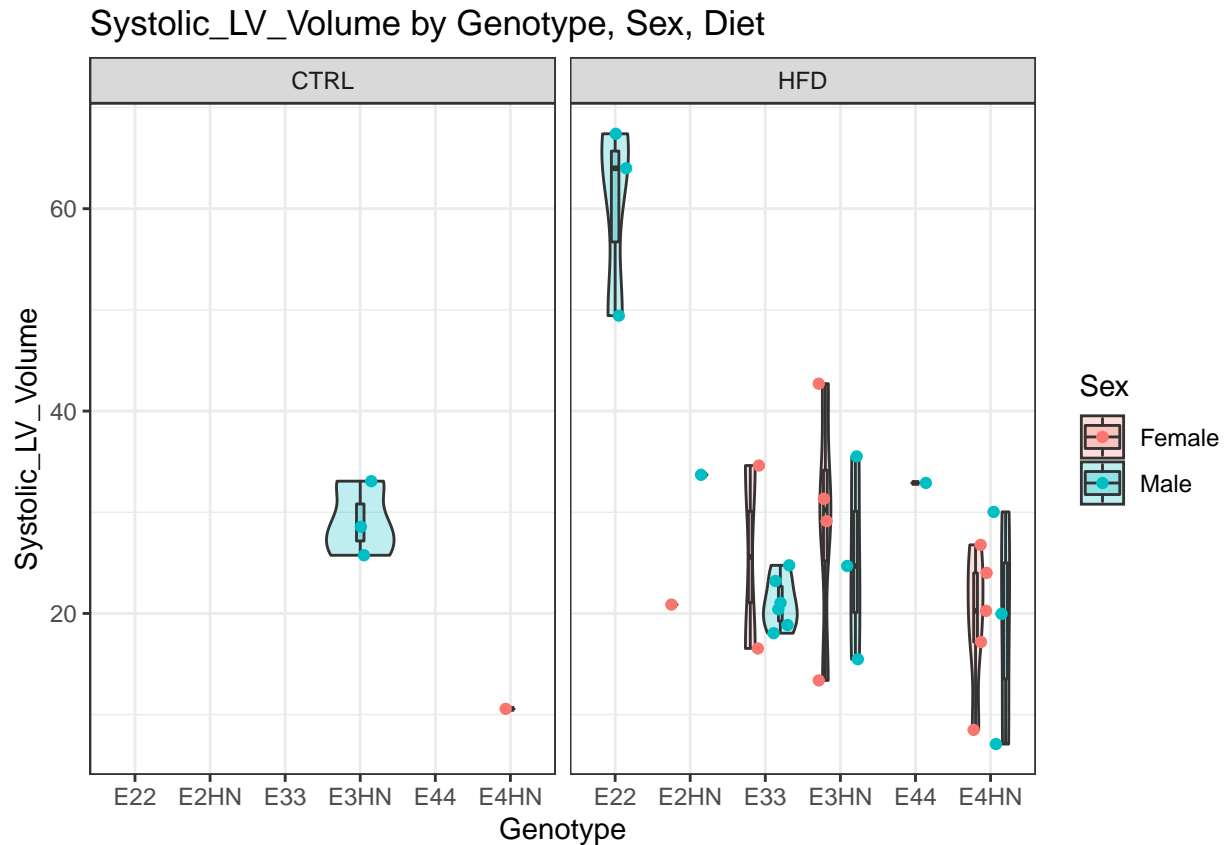
```
## [1] "Mice count"

## # A tibble: 12 x 4
## # Groups:   Diet, Genotype [8]
##   Diet Genotype Sex Count
##   <chr> <chr>   <chr> <int>
## 1 CTRL E3HN    Male     3
## 2 CTRL E4HN    Female   1
## 3 HFD  E22     Male     3
## 4 HFD  E2HN    Female   1
## 5 HFD  E2HN    Male     1
## 6 HFD  E33     Female   2
## 7 HFD  E33     Male     6
## 8 HFD  E3HN    Female   4
## 9 HFD  E3HN    Male     3
## 10 HFD E44     Male     1
## 11 HFD E4HN    Female   5
## 12 HFD E4HN    Male     3

## Analysis of Variance Table
##
## Response: Diastolic_LV_Volume
##
## Df Sum Sq Mean Sq F value Pr(>F)
## factor(Sex)      1  381.6   381.58   3.2530 0.13115
## Age              1  111.8   111.76   0.9528 0.37385
## Mass             1  178.2   178.16   1.5189 0.27258
## factor(Diet)      1  746.8   746.83   6.3669 0.05296 .
## factor(Genotype)  5 5483.3 1096.66   9.3493 0.01416 *
## factor(Sex):Age   1  131.6   131.58   1.1217 0.33801
## factor(Sex):Mass  1   28.5    28.50   0.2430 0.64295
## Age:Mass          1    0.1     0.09   0.0008 0.97905
## factor(Sex):factor(Diet) 1    5.9     5.93   0.0505 0.83105
## Mass:factor(Diet)  1  207.9   207.93   1.7726 0.24053
## factor(Sex):factor(Genotype) 3  496.6   165.54   1.4113 0.34274
## Age:factor(Genotype)  2   66.1    33.07   0.2819 0.76559
## Mass:factor(Genotype)  3  346.4   115.45   0.9843 0.47059
## factor(Sex):Age:Mass  1  246.5   246.45   2.1011 0.20688
## factor(Sex):Age:factor(Genotype) 2  126.9    63.45   0.5409 0.61284
## factor(Sex):Mass:factor(Genotype) 1    0.6     0.61   0.0052 0.94515
## Age:Mass:factor(Genotype)  1    0.0     0.00   0.0000 0.99842
## Residuals        5  586.5   117.30
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
## Analysis of Variance Table
##
## Response: Systolic_LV_Volume
##
##          Df Sum Sq Mean Sq F value    Pr(>F)
## factor(Sex)      1   379.3   379.27  11.2833 0.020128 *
## Age              1   164.3   164.32   4.8885 0.078008 .
## Mass             1    21.2    21.24   0.6319 0.462697
## factor(Diet)      1   402.4   402.44  11.9727 0.018039 *
## factor(Genotype)  5  3663.2   732.65  21.7963 0.002087 **
## factor(Sex):Age    1    76.3    76.26   2.2687 0.192363
## factor(Sex):Mass    1    97.0    97.01   2.8860 0.150104
## Age:Mass           1     0.2     0.15   0.0046 0.948569
## factor(Sex):factor(Diet) 1    13.3    13.33   0.3965 0.556532
## Mass:factor(Diet)    1    16.2    16.17   0.4811 0.518824
## factor(Sex):factor(Genotype) 3   106.7    35.55   1.0578 0.444584
## Age:factor(Genotype)  2    38.1    19.07   0.5673 0.599729
## Mass:factor(Genotype)  3   518.8   172.95   5.1452 0.054773 .
## factor(Sex):Age:Mass  1    27.2    27.15   0.8078 0.409957
## factor(Sex):Age:factor(Genotype) 2   141.9    70.96   2.1111 0.216442
## factor(Sex):Mass:factor(Genotype) 1     3.6     3.58   0.1066 0.757314
## Age:Mass:factor(Genotype)  1   120.4   120.39   3.5817 0.116979
## Residuals         5   168.1    33.61
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```





[1] "Significant pairwise differences of genotype, sex, and diet in Diastolic_LV_Volume"

##	comparison	estimate	SE	df	t.ratio	p.value
## 1	E4HN Female HFD - E22 Male HFD	-48.48047	8.018821	21	-6.045835	0.0008732874
## 2	E22 Male HFD - E33 Male HFD	46.70996	7.764190	21	6.016076	0.0009306971
## 3	E22 Male HFD - E4HN Male HFD	47.96224	8.965314	21	5.349755	0.0039031734
## 4	E4HN Female CTRL - E22 Male HFD	-63.10352	12.678869	21	-4.977062	0.0086984119
## 5	E22 Male HFD - E3HN Male HFD	43.43229	8.965314	21	4.844481	0.0115462921
## 6	E3HN Male CTRL - E22 Male HFD	-42.43359	8.965314	21	-4.733085	0.0146303278
## 7	E33 Female HFD - E22 Male HFD	-42.97363	10.023526	21	-4.287277	0.0370789473

[1] "Significant pairwise differences of genotype, sex, and diet in Systolic_LV_Volume"

##	comparison	estimate	SE	df	t.ratio	p.value
## 1	E4HN Female HFD - E22 Male HFD	-40.93138	6.189947	21	-6.612557	0.0002626373
## 2	E22 Male HFD - E33 Male HFD	39.21842	5.993391	21	6.543612	0.0003035833
## 3	E22 Male HFD - E4HN Male HFD	41.24349	6.920571	21	5.959550	0.0010504771
## 4	E4HN Female CTRL - E22 Male HFD	-49.70247	9.787166	21	-5.078332	0.0070004812
## 5	E22 Male HFD - E3HN Male HFD	35.04427	6.920571	21	5.063783	0.0072225864
## 6	E3HN Female HFD - E22 Male HFD	-31.13997	6.473602	21	-4.810301	0.0124178480
## 7	E3HN Male CTRL - E22 Male HFD	-31.14323	6.920571	21	-4.500095	0.0238855118
## 8	E33 Female HFD - E22 Male HFD	-34.69368	7.737434	21	-4.483875	0.0247071299