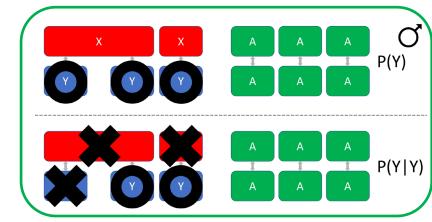


$$P(SS) = \mu_d \frac{4X_S(X_S - 1)}{D_d(D_d - 2)} + (1 - \mu_d) \left[\frac{X_S(X_S - 1)}{D_S(D_S + X_S - 1)} + \frac{Y(Y - 1)}{D_S(D_S + Y - 1)} \right]$$

$$P(AA) = \mu_d \frac{D_a(D_a - 2)}{D_d(D_d - 2)} + (1 - \mu_d) \frac{D_a(D_a - 2)}{D_s(D_s - 2)}$$



 $\mu_d \coloneqq \text{Proportion of fusions in females}$

 $D_d := \text{Diploid } \# \text{ in females}$

 $D_s := \text{Diploid } \# \text{ in males}$

 $D_a \coloneqq \text{Diploid autosome } \#$

Y := # Y chromosomes in males

 $X_S := \# X \text{ chromosomes in males}$