



μ_d := Proportion of fusions in females

D_d := Diploid # in females

D_s := Diploid # in males

D_a := Diploid autosome #

Y := # Y chromosomes in males

X_s := # X chromosomes in males

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

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