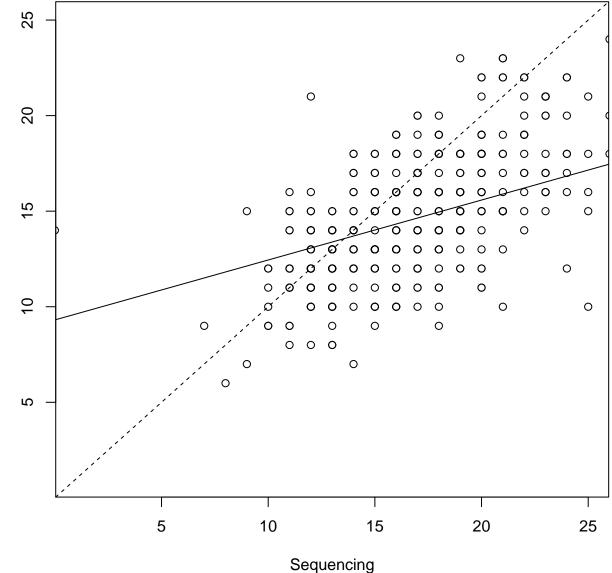**Predicted recombinations**