WHAT IS...
Genetic Association Studies (GWAS)

DNA STRUCTURE
✓ DNA contains the genetic instructions for the development and function of living things
✓ It is a polymer that contains two strands coiled together to form a double helix
✓ The strands are made of nucleotides, each of which consists of sugar and phosphate group linked to one of four bases: thymine (T), adenine (A), guanine (G) and cytosine (C)

Many Physical Traits (say, skin color, facial features) are not determined by single Genes, but a combination of many GENES

New GENES
Already Explored GENES
Other Covariates such as Age, Sex etc

GWAS Statistical Model

BUT HOW DO RESEARCHERS KNOW WHICH GENE CONTRIBUTE TO A TRAITE MOST???

GWAS information may be used to predict someone's risk of developing a certain condition based on his or her GENE structure.

The points which lies above the blue diagonal line and the horizontal red lines indicates newly detected GENES.