International Statistical Genetics Workshop
IBG
Boulder, Colorado

Quality Control

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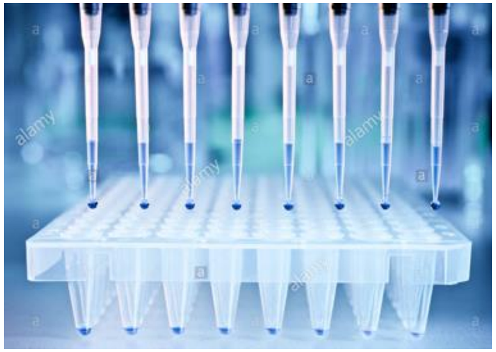
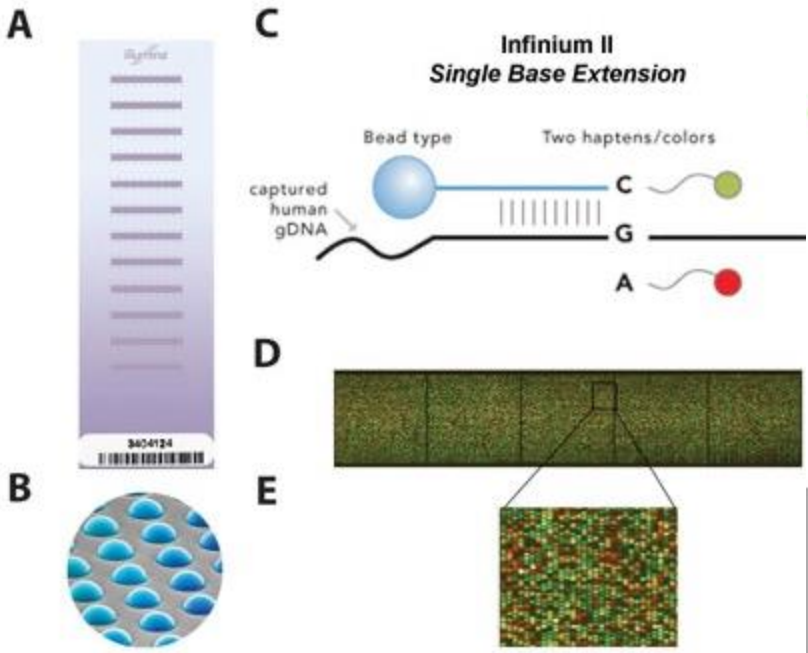
Why Do Quality Control?

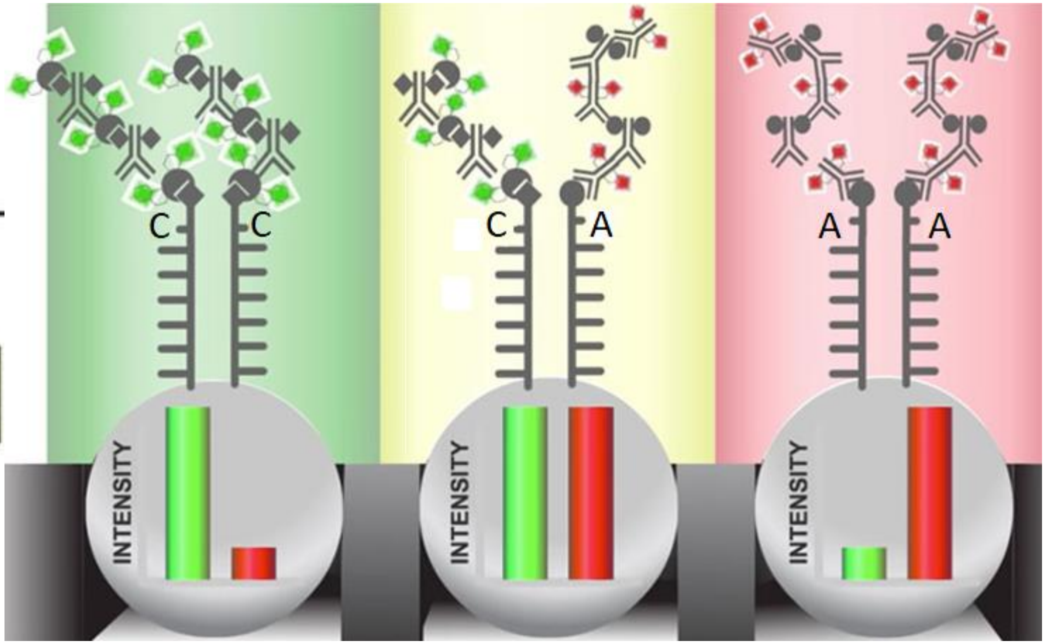
Poor quality data → false positives / negatives

- To remove genotyping errors
    - Low quality or quantity of DNA
    - Contaminated DNA
    - Chemical or machinery failure
    - Human error
- To ensure data suitable for the analyses
    - Relatedness

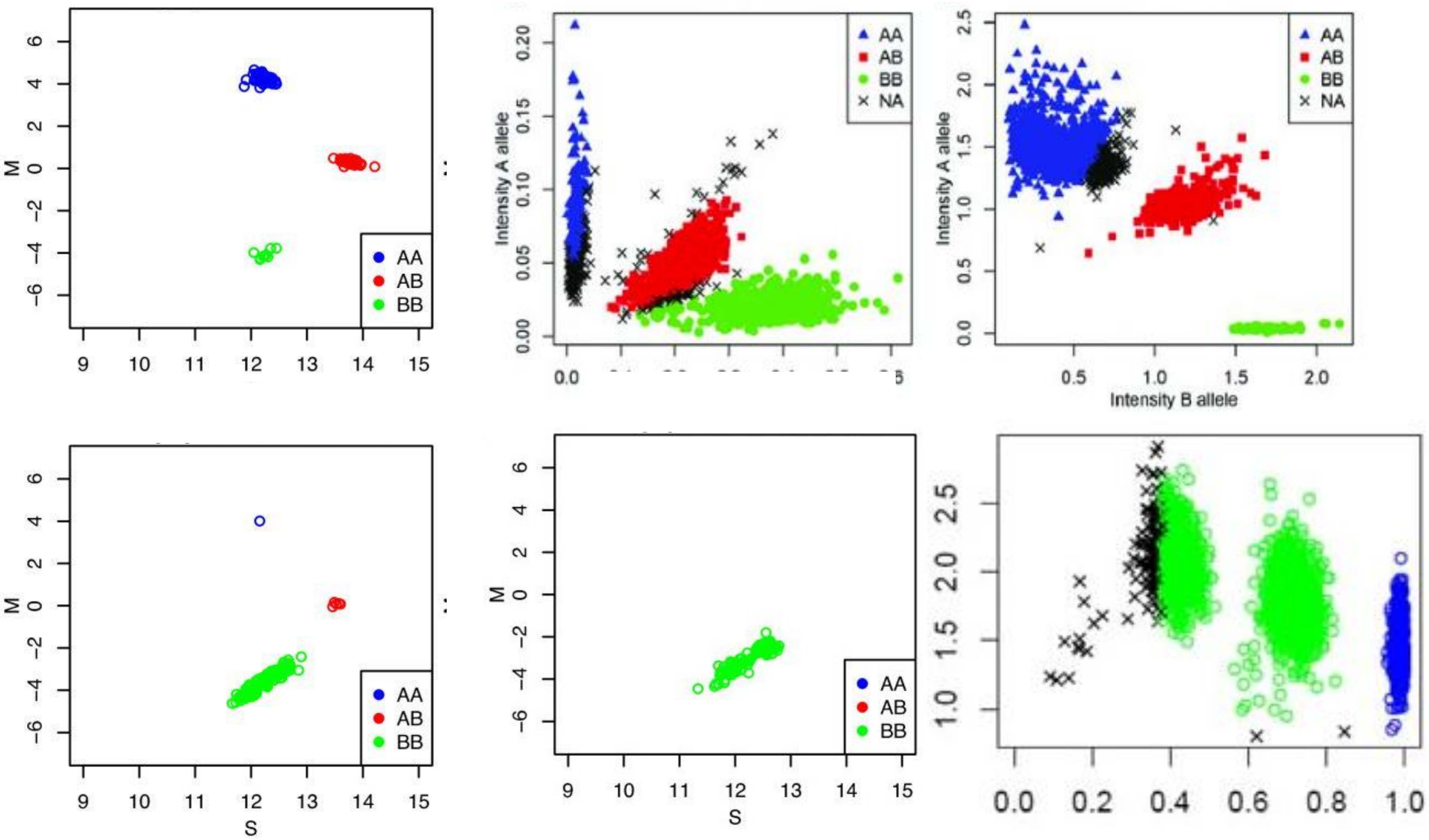
From DNA to data







Genotyping Intensities



Key Steps in QC

1. Check Data (file format, data coding, missing, build)

Check the build

https://genome.ucsc.edu

Human Assembly

- ✓ Dec. 2013 (GRCh38/hg38)
- Feb. 2009 (GRCh37/hg19)
- Mar. 2006 (NCBI36/hg18)
- May 2004 (NCBI35/hg17)

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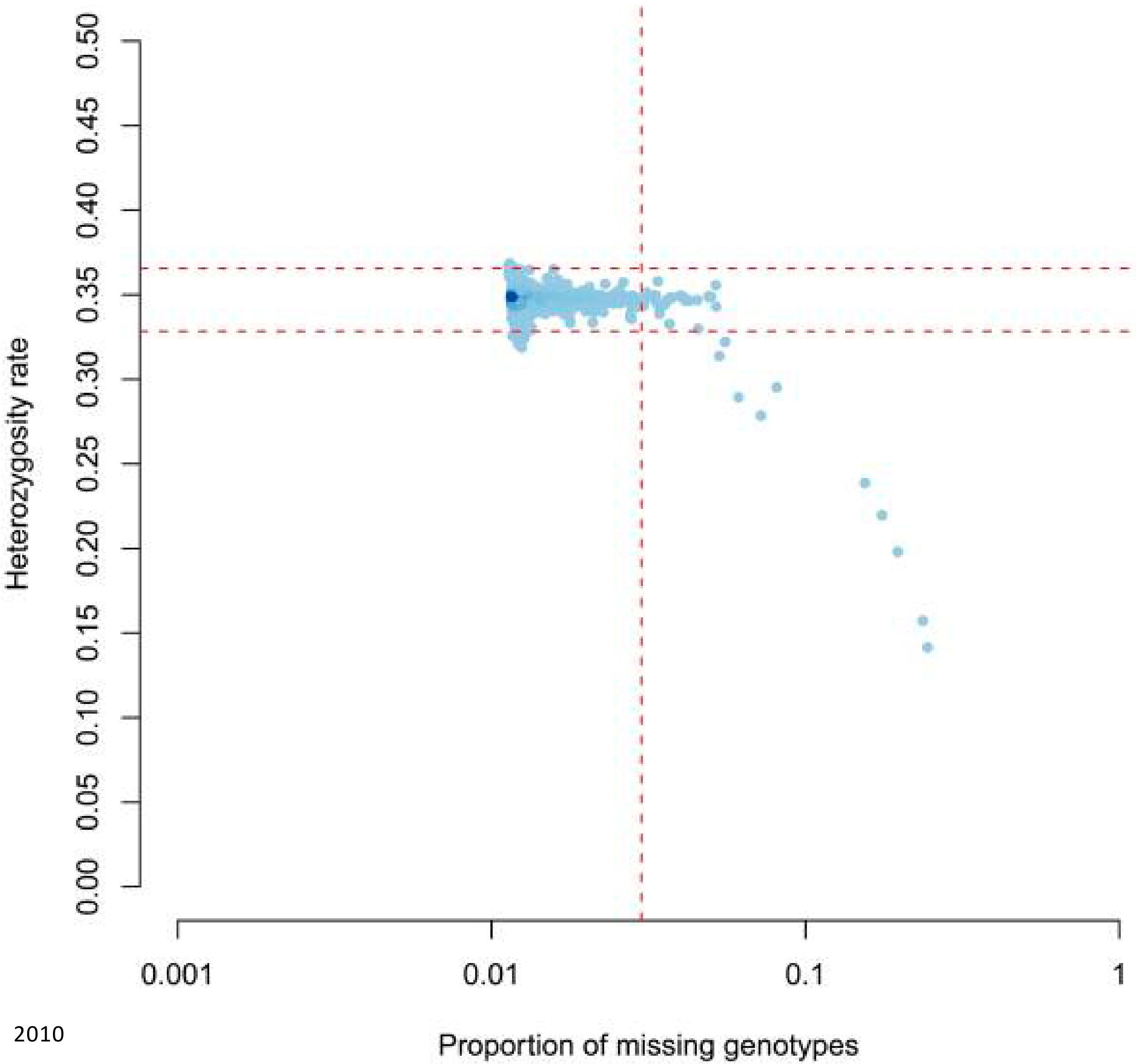
Heterozygosity vs. Missing



Anderson et al. *Nat Proc.* 2010

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