Quality Control (FastQC)

FastQC Metrics

- Per base sequence quality - quality drops at read ends

- Per sequence quality scores - overall read quality distribution

- Per base sequence content - nucleotide balance

- Sequence duplication levels - PCR duplicates

- Adapter content - leftover adapter sequences

- Overrepresented sequences - contamination check

Good Quality

- Phred score >30
- Balanced GC content
- Low duplication
- No adapter contamination

Poor Quality

- Phred score <20
- GC bias
- High duplication (>50%)
- Adapter sequences present

Common Tools: FastQC, MultiQC, Trimmomatic, Cutadapt