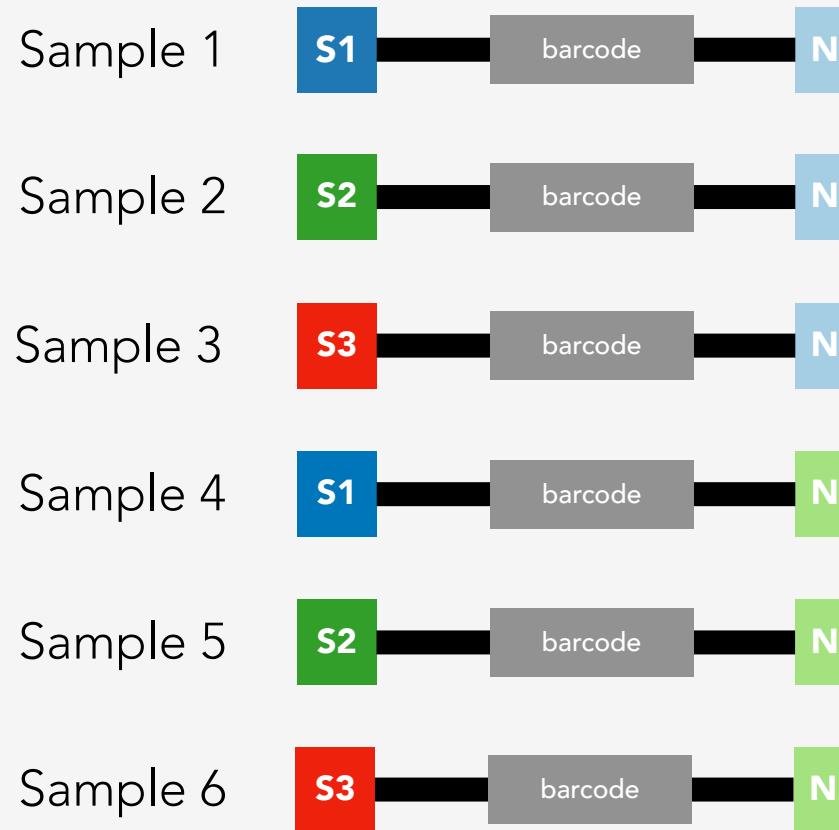
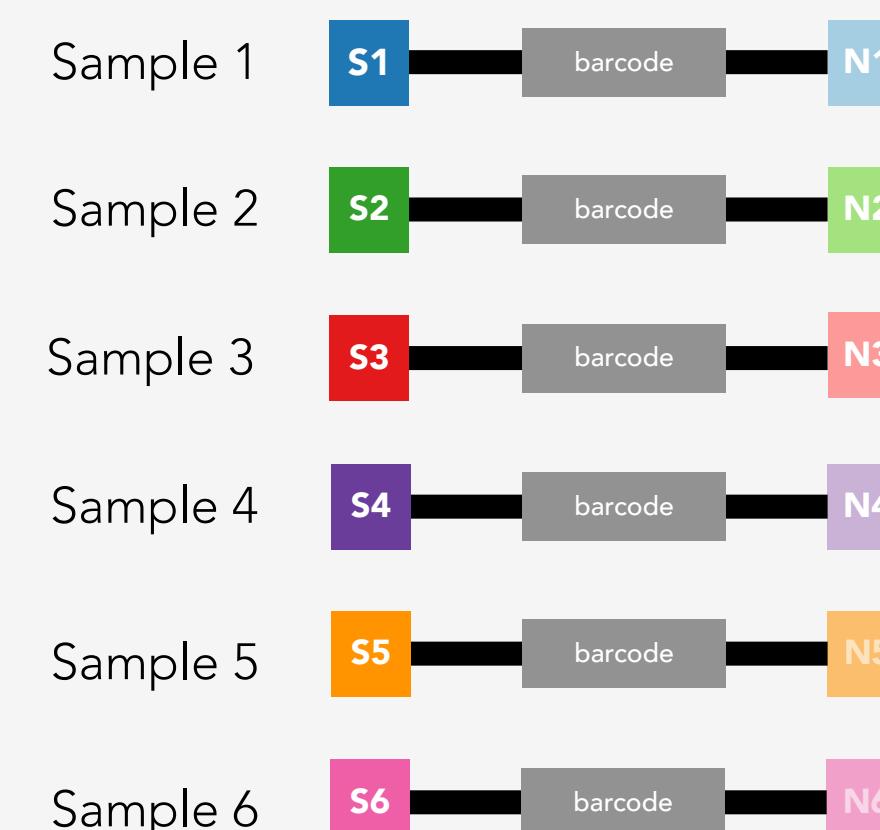


Combinatorial indexing (prone to index hopping)



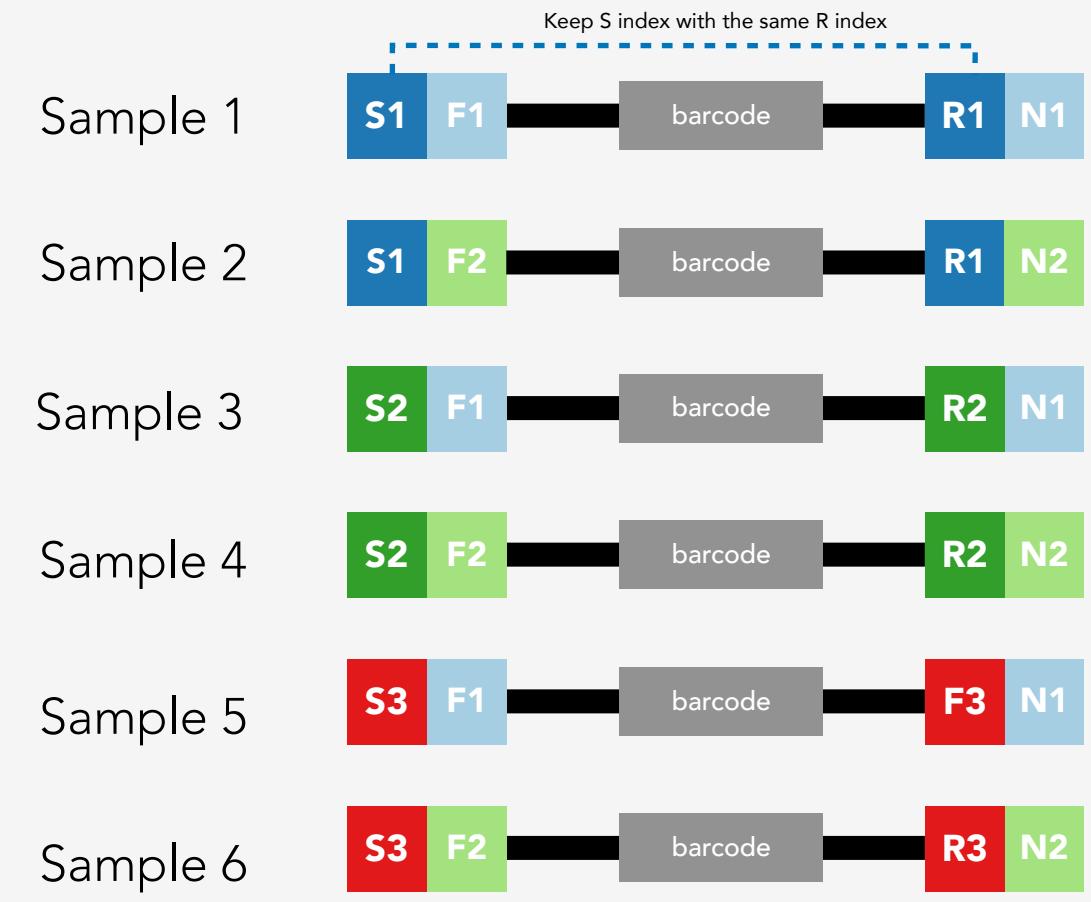
For 96 samples, need
12 forward + 8 reverse = 20 primers

Unique Dual Indexing



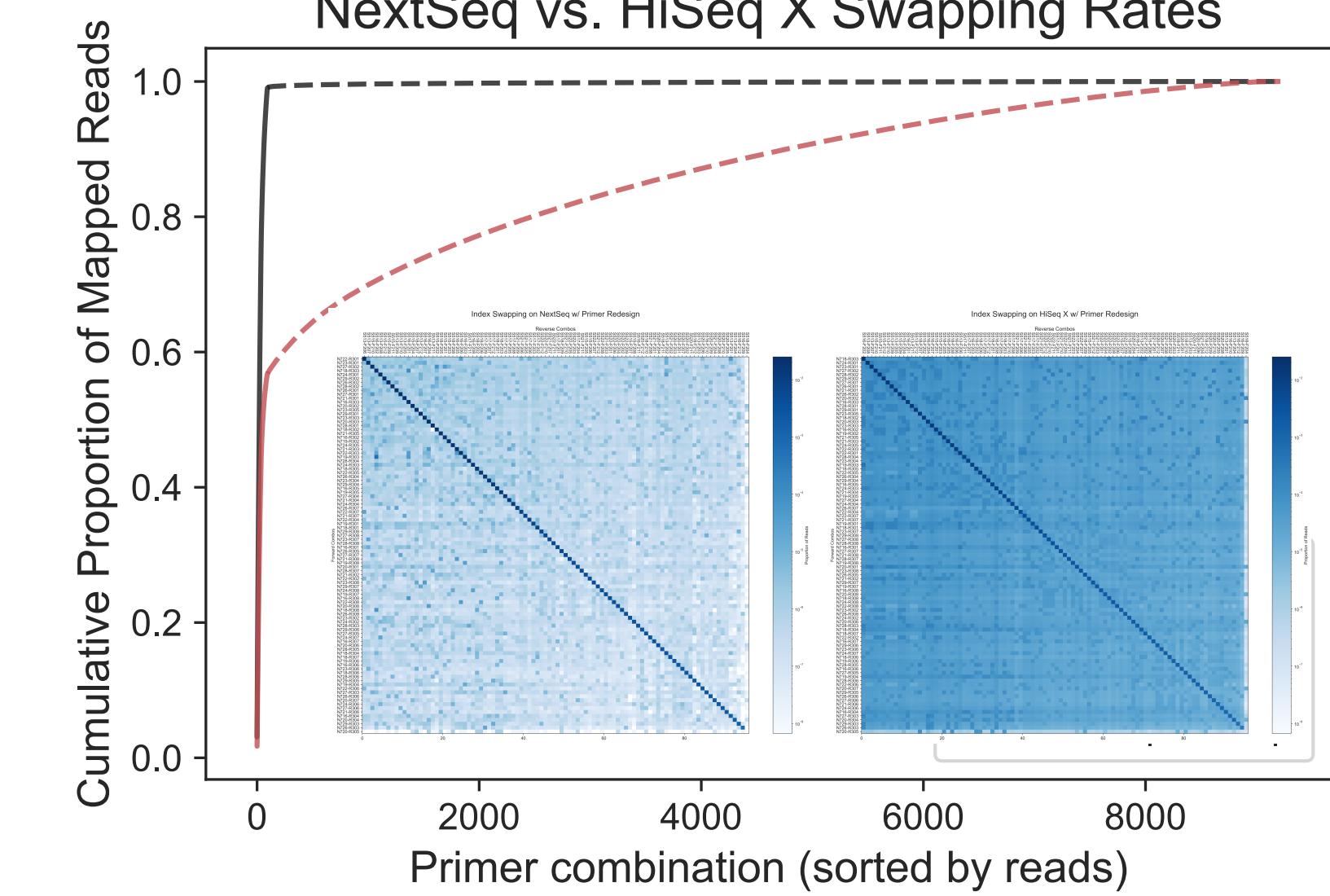
For 96 samples, need
96 forward + 96 reverse = 196 primers

Nested unique dual indexing



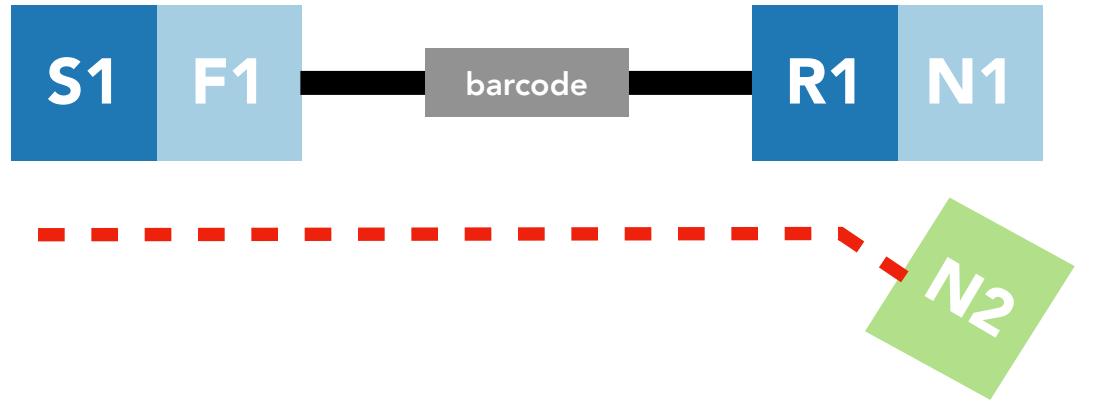
For 96 samples, need
12 F +12 N + 8 R + 8 S= 40 primers

NextSeq vs. HiSeq X Swapping Rates



Mechanisms for index hopping

"Index Hopping"

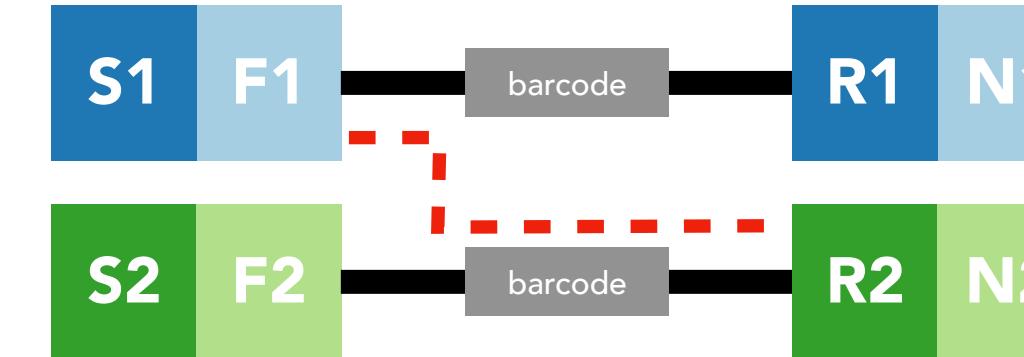


Free-floating indices get incorporated

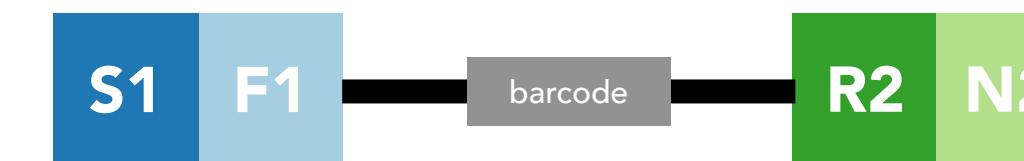


Read out: single-index swaps

"Template Swapping"



Homology across amplicons creates chimeric reads



Read out: combinations of otherwise correct pairs

