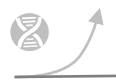


~281 trillion
24bp kmers



- kmers excluded if
- not in genome
 - not in repeat regions
 - in multiple repeat types



~1.2 billion kmers in 6 families and
1280 distinct repeat element types

KMER REPEAT LANDSCAPE

Transposable
Elements



SINE



Satellite



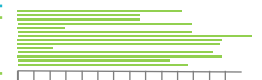
LTR



LINE

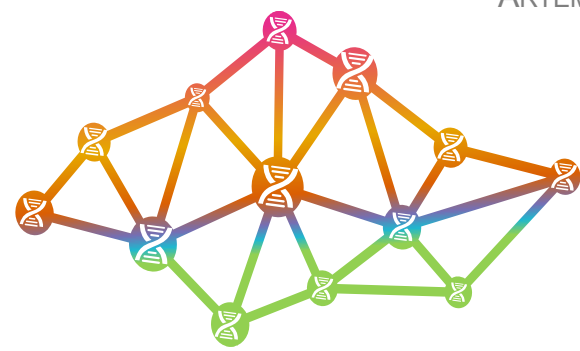


RNA Elements

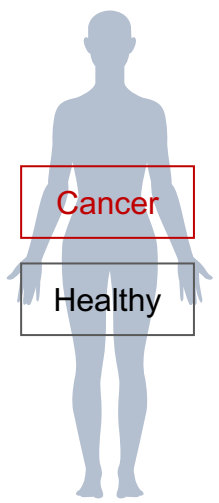


kmer count per type

Machine learning of kmer repeat landscape



ARTEMIS SCORE



DISCOVERY OF
NOVEL CANCER-
SPECIFIC
CHANGES

EARLY DETECTION

CANCER TISSUE
OF ORIGIN

MONITORING
DURING THERAPY