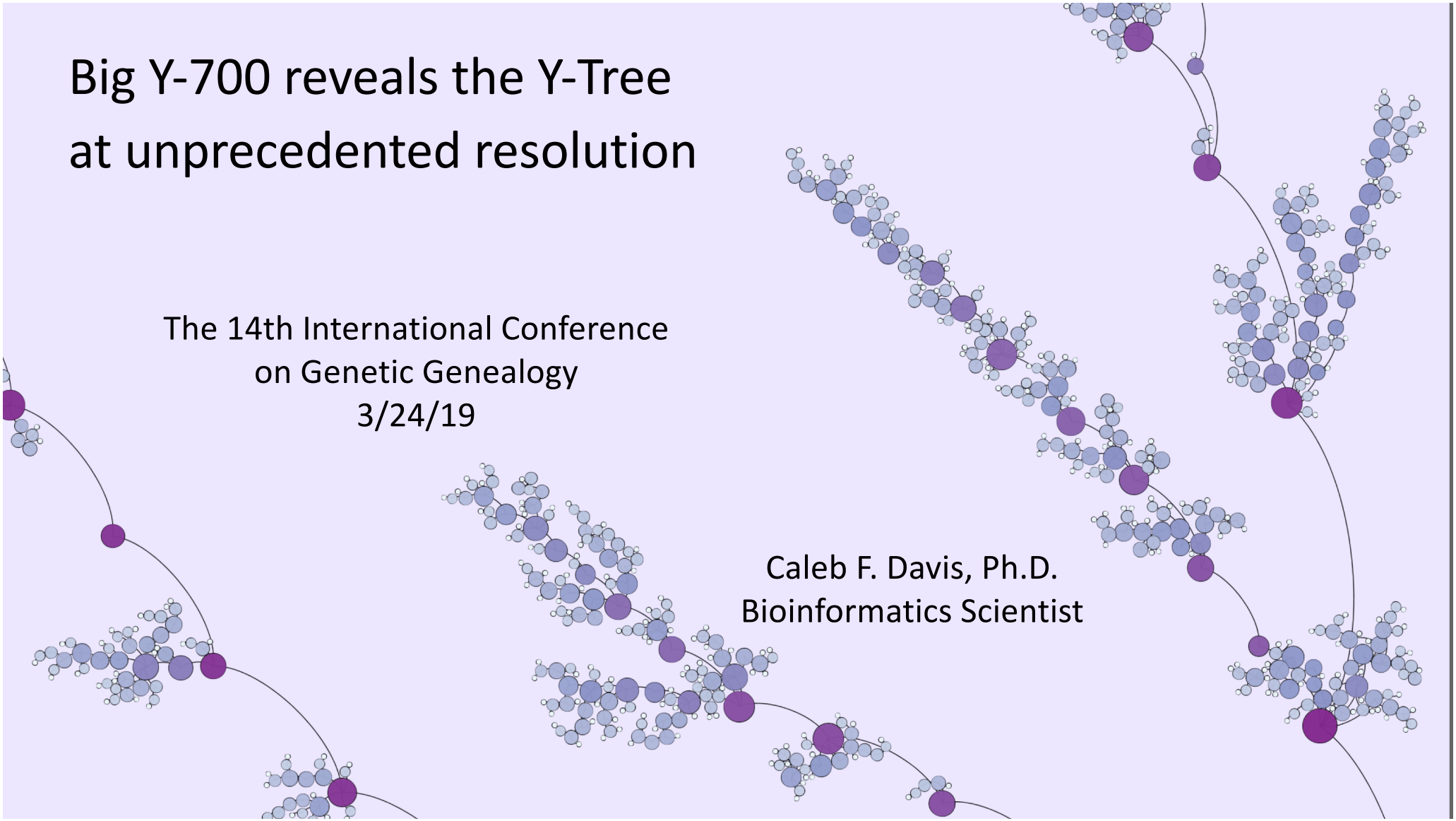
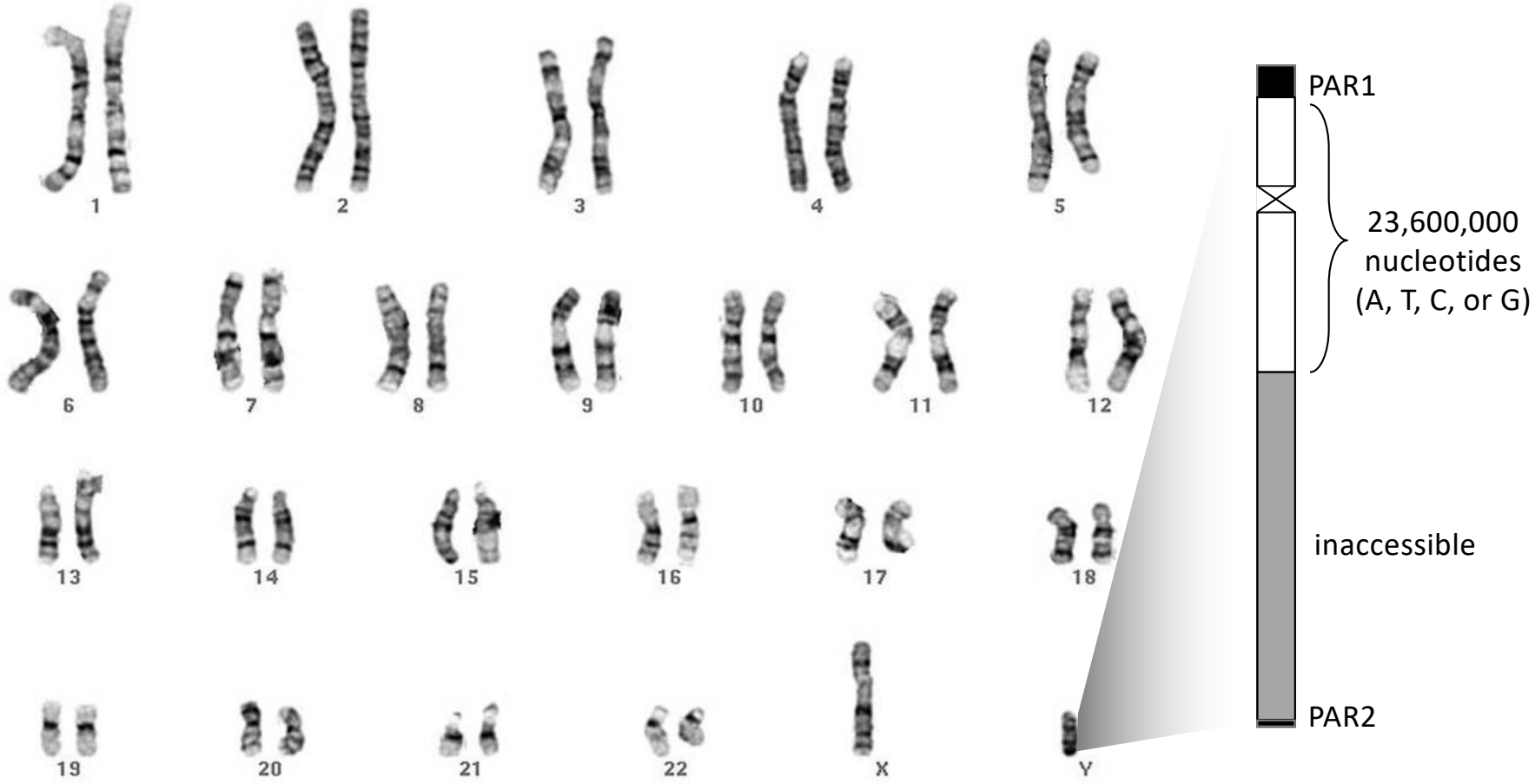
Big Y-700 reveals the Y-Tree at unprecedented resolution

The 14th International Conference
on Genetic Genealogy
3/24/19

Caleb F. Davis, Ph.D.
Bioinformatics Scientist

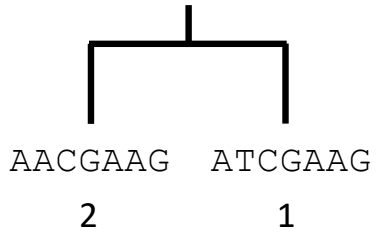


A typical male genome karyotype: chromosomes 1-22 + X & Y



How to build a tree out of the differences (SNPs)

- Start with the DNA letters at each position that differs between a man and any other man.
- Men
  - 1: ATCGAAG
  - 2: AACGAAG
  - 3: ATCGTAG
- What is the most likely family tree given these differences among the three men?



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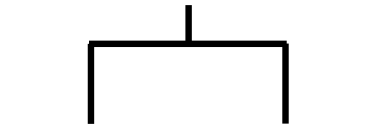

AACGAAG ATCGAAG

2 1

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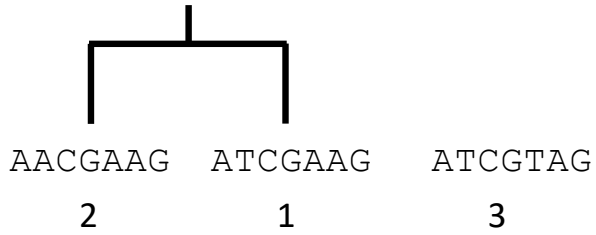

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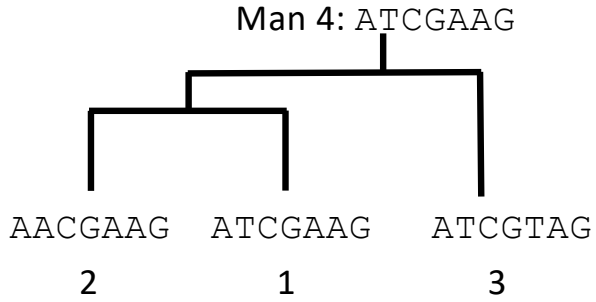
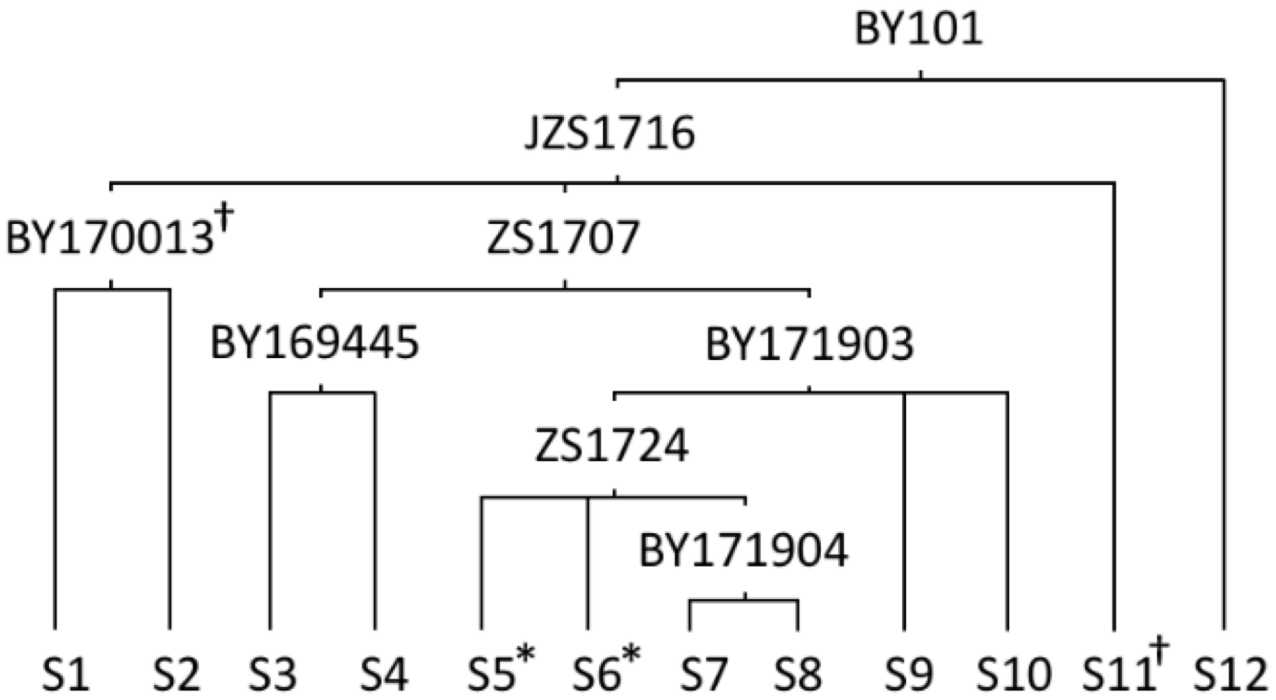
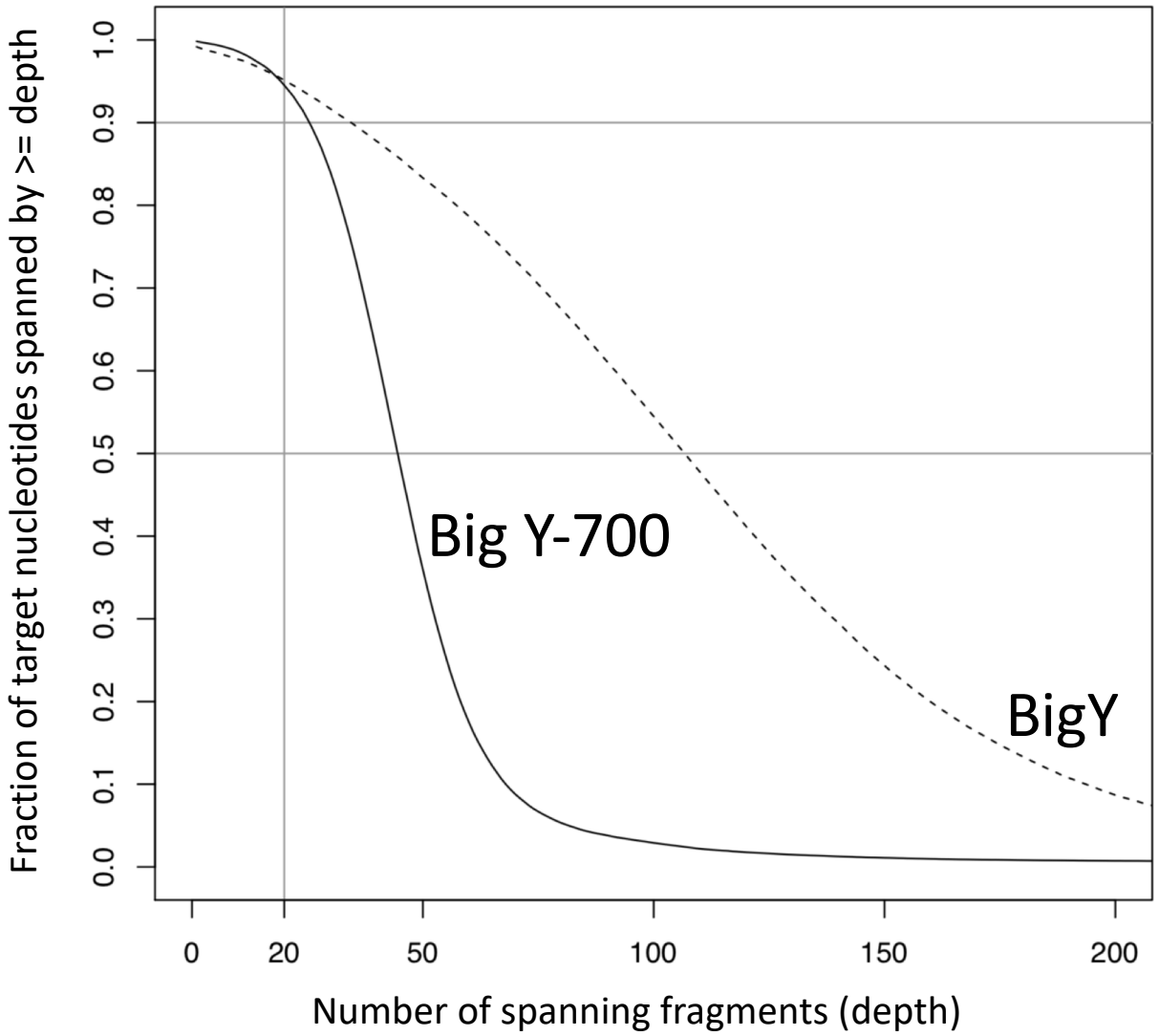


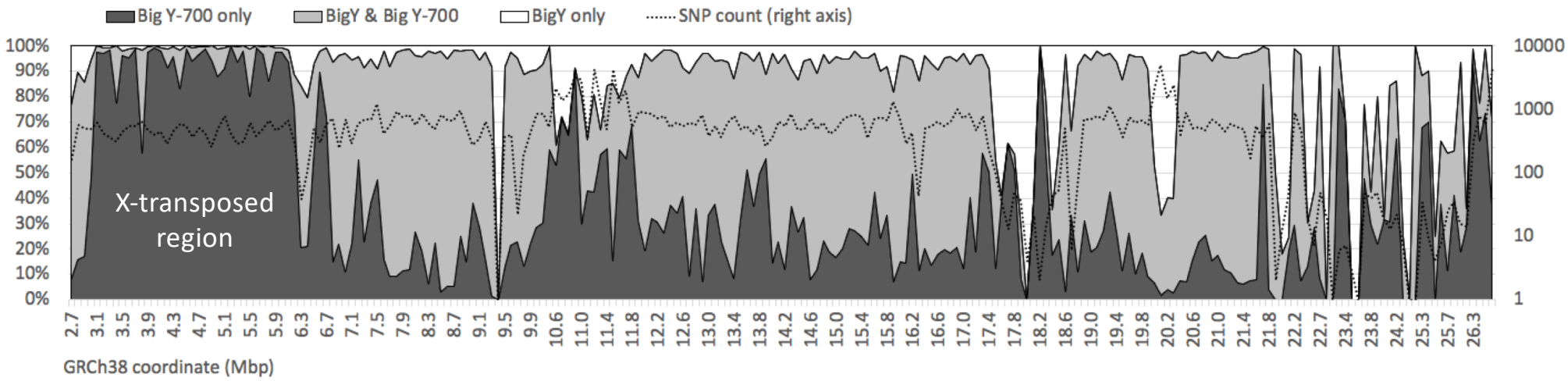
Real family tree example



Not all nucleotides are created equal



Big Y-700 has 50% increase in high quality SNPs over Big Y-500



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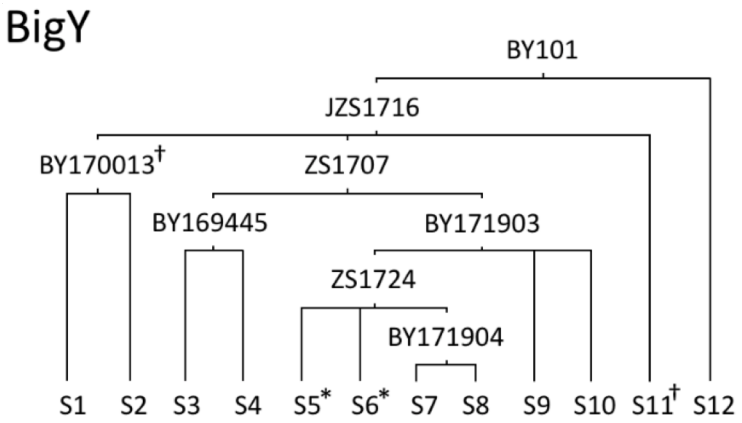

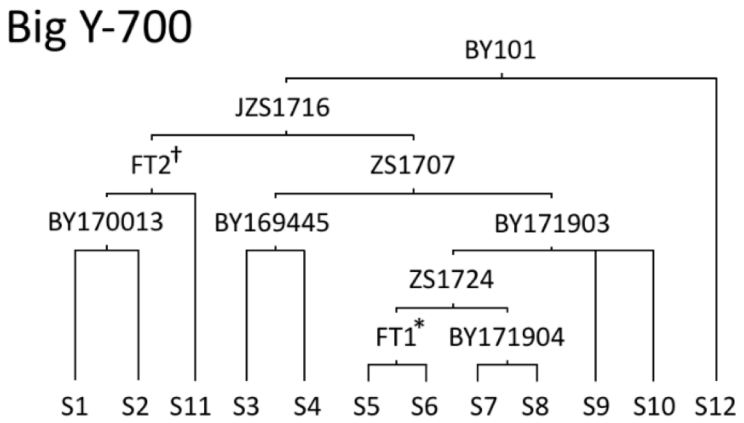

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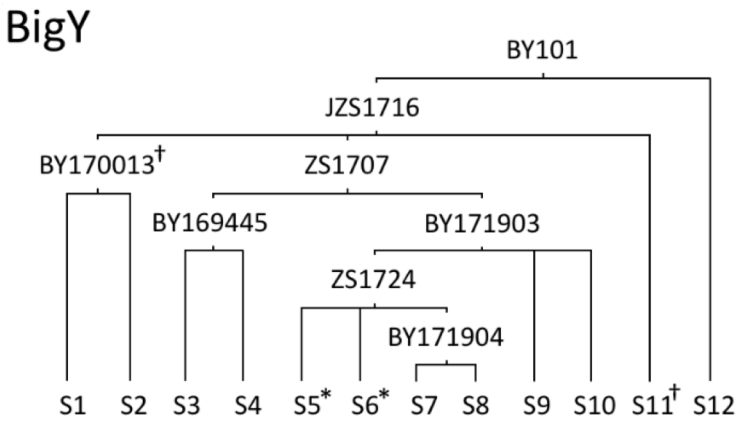
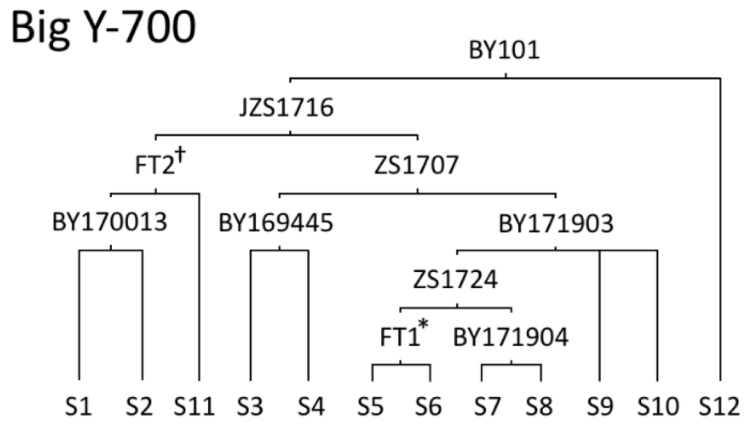
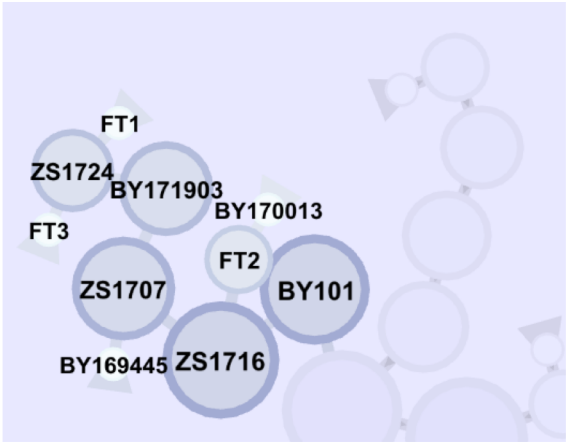
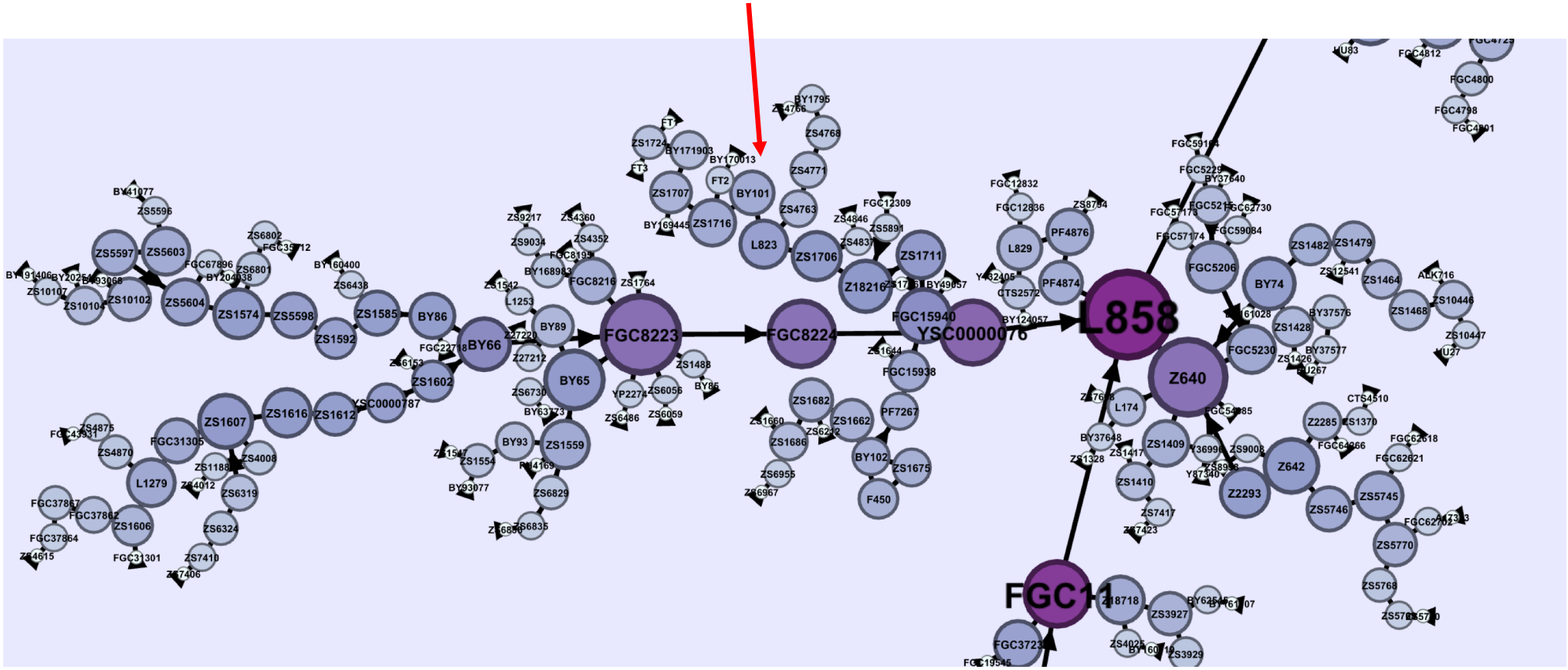






Y-Tree visualized



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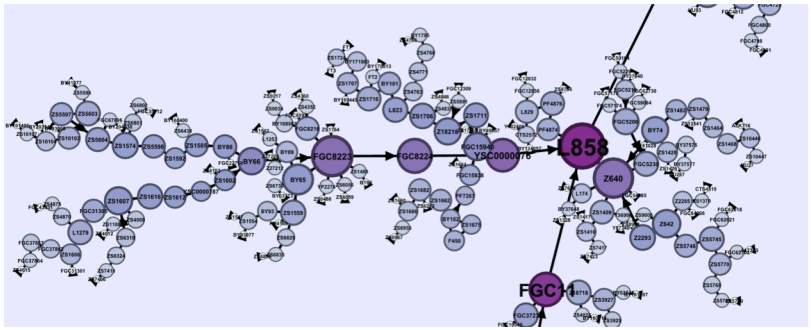

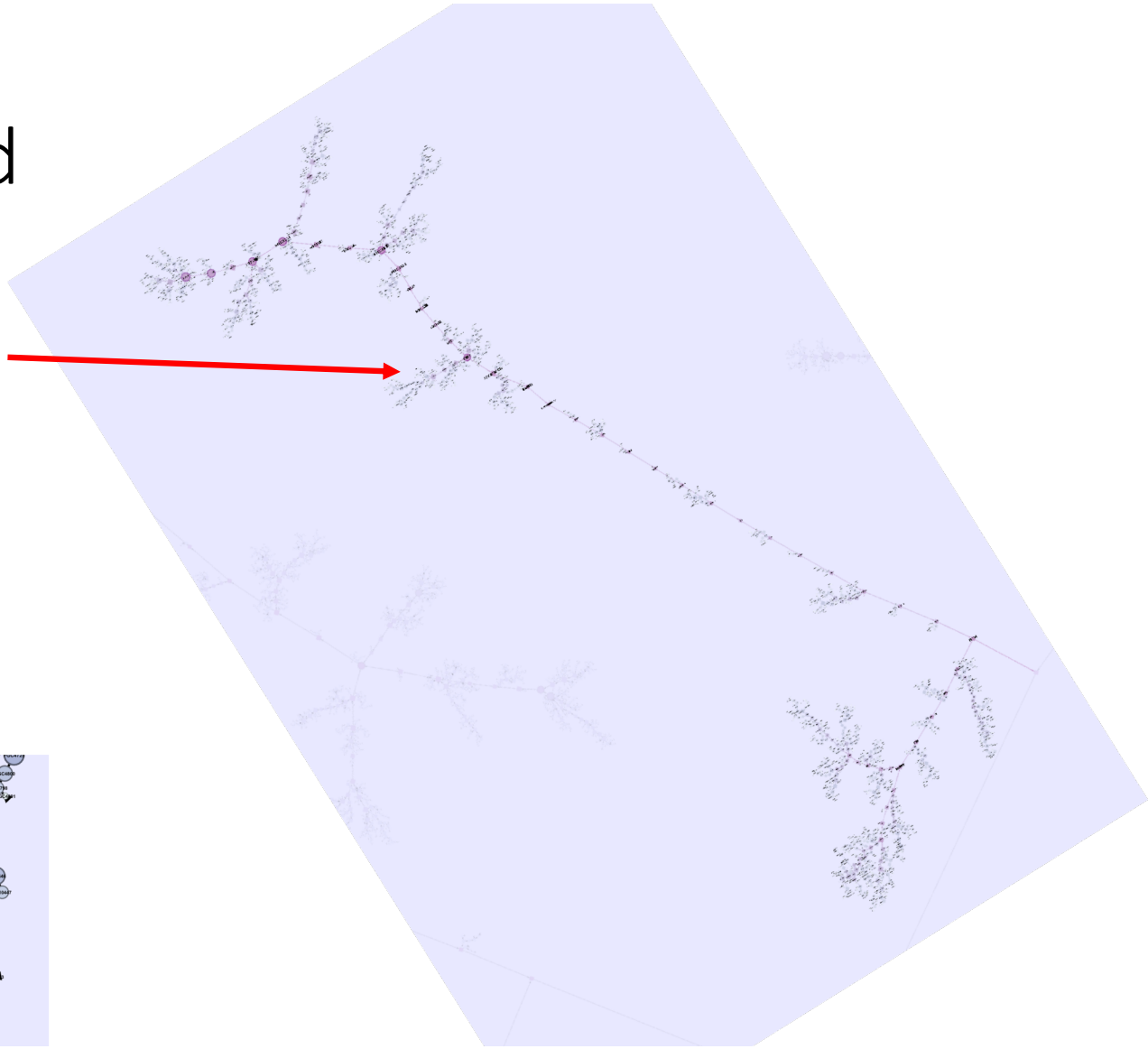

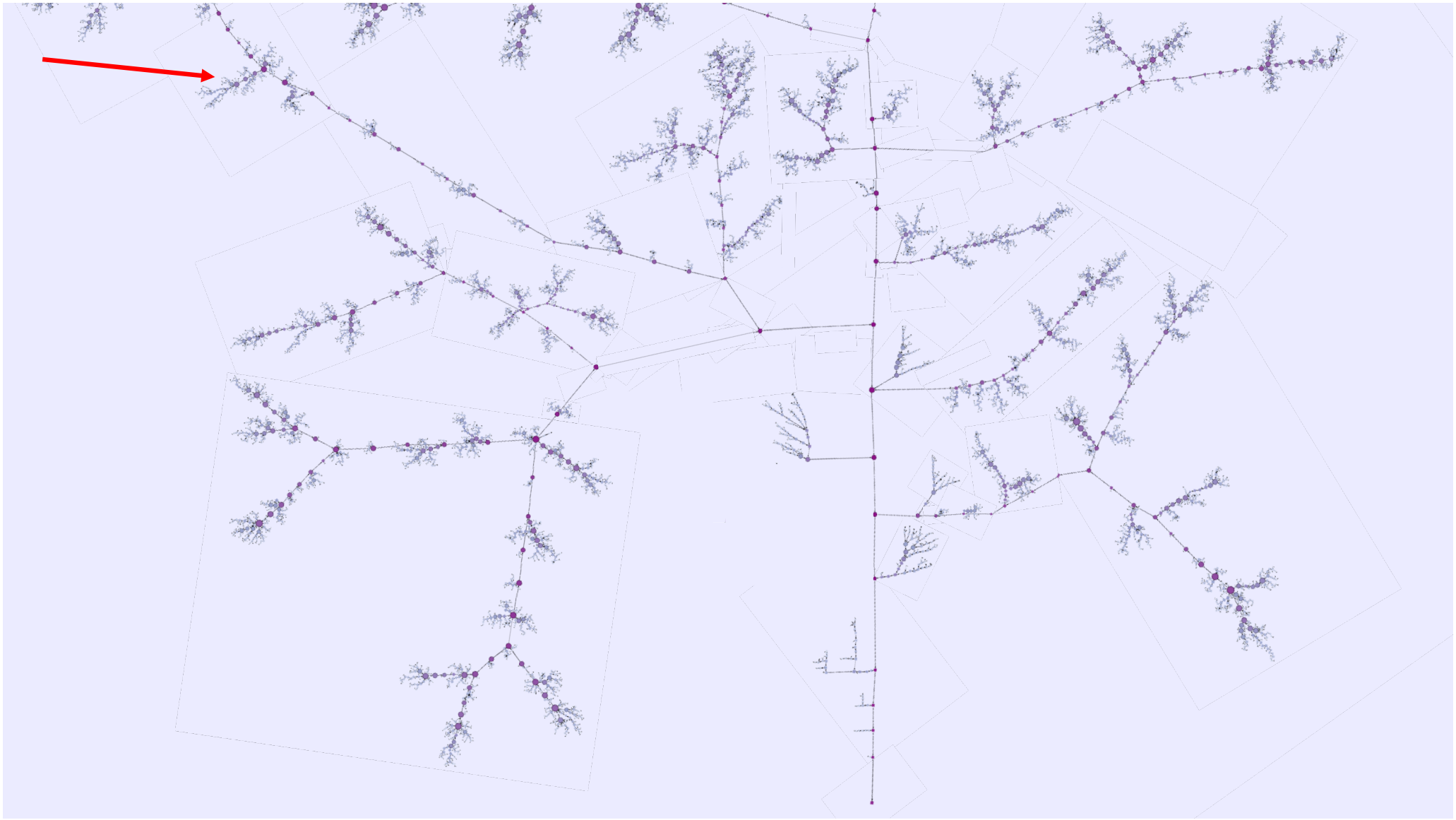

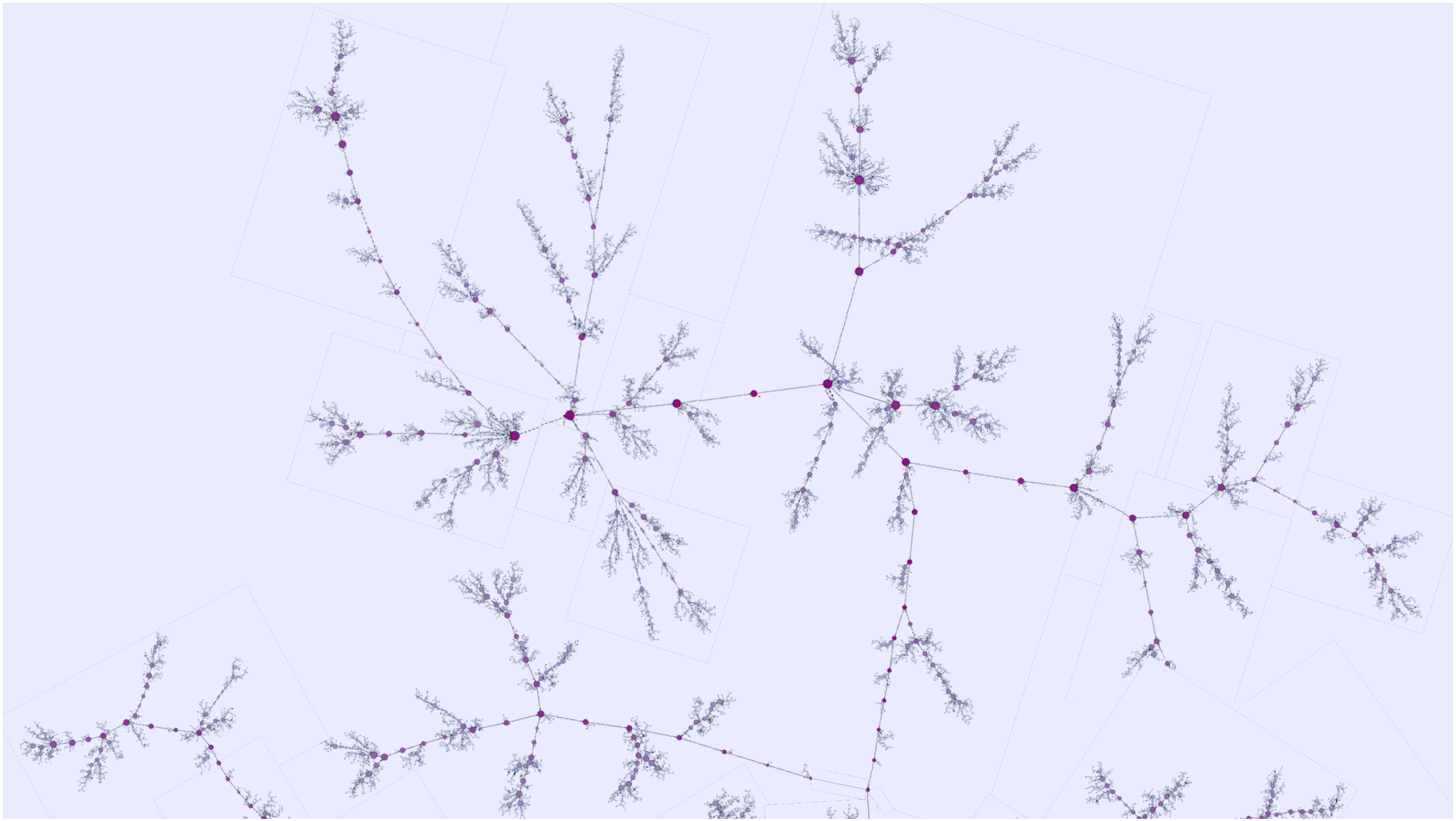

Thank you!

- Questions?