Virus Hunters

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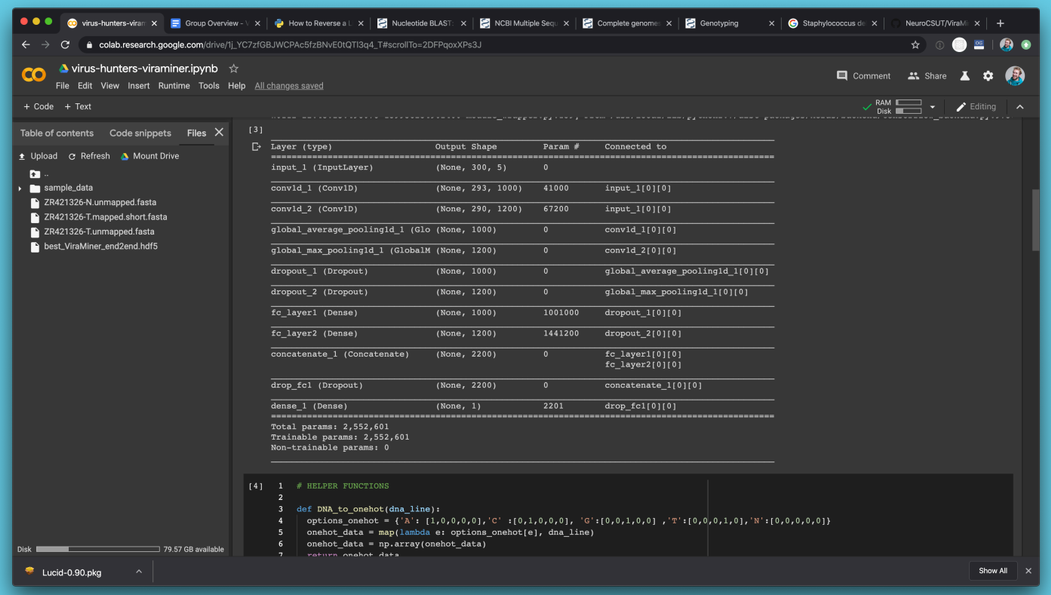
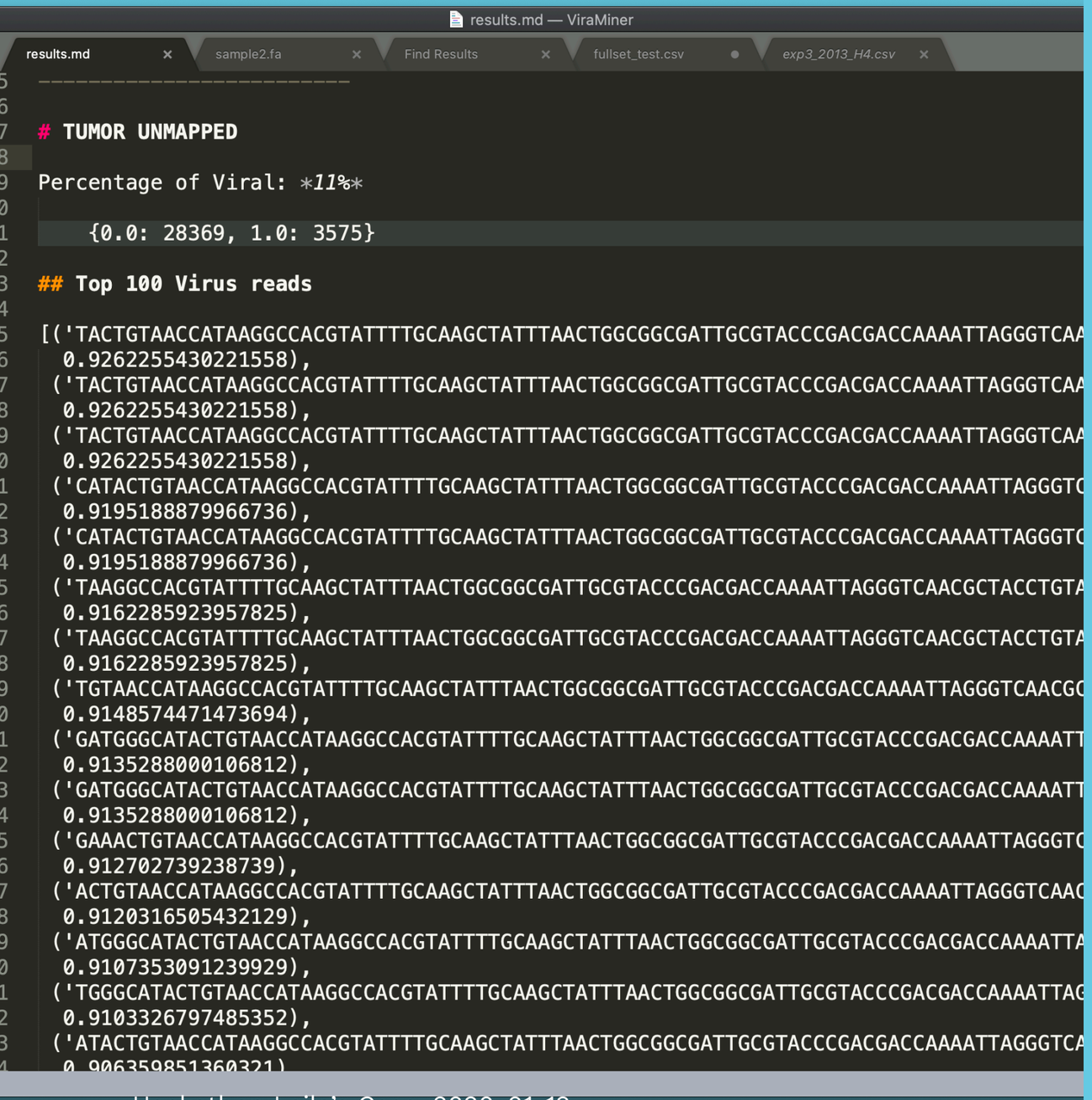
Finding Virus data in Tumor and Normal WES/WGS/RNA

- How much viral data is there in both tissue types
- Using unmapped data from the BAM files as well as mapped data as a control
- Using a pre-trained model from ViraMiner called bestViraMinerend2end.hdf5

Tools

— Google Colab notebook, importing relevant fasta files and models

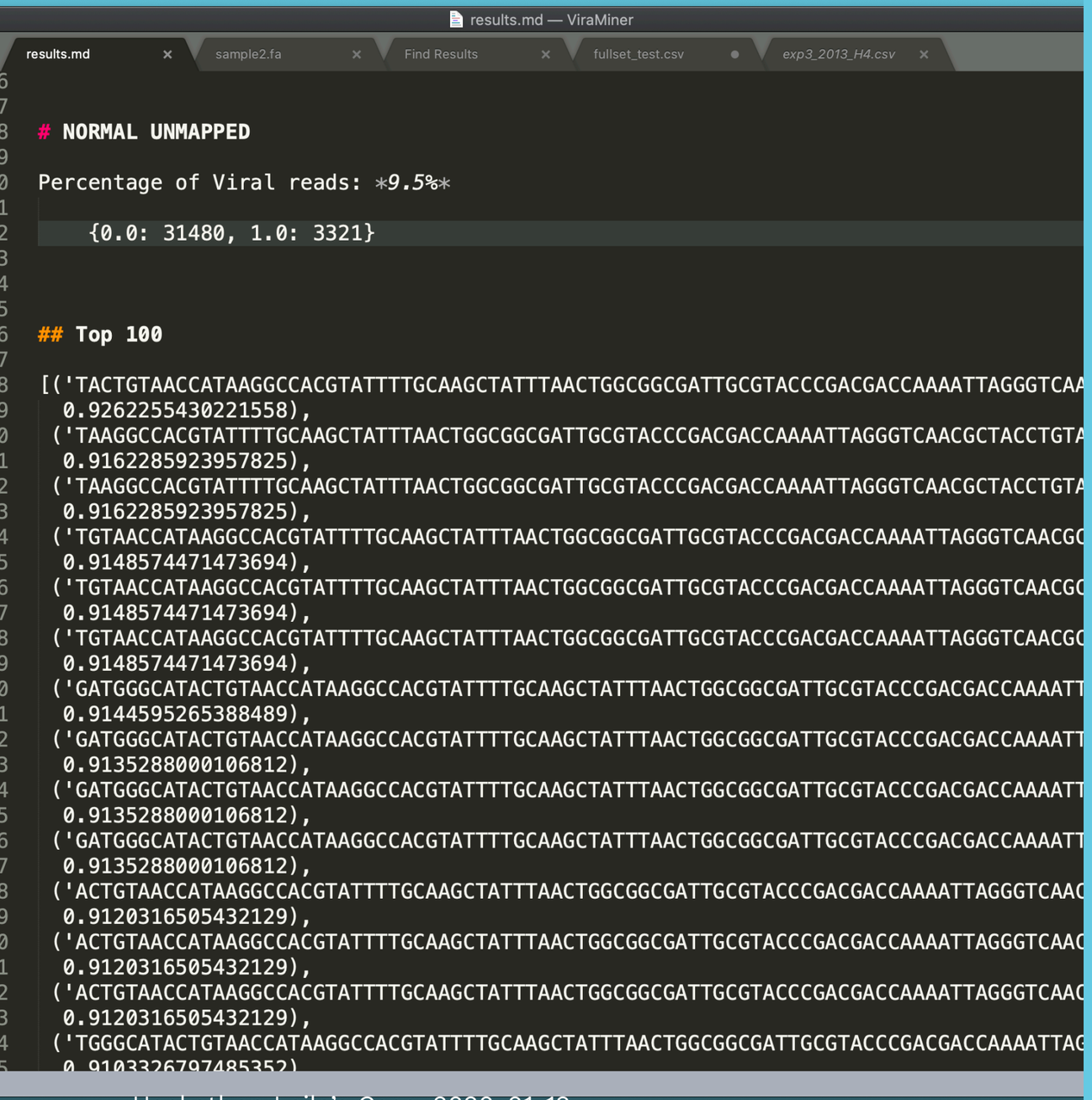




Tumor Tissue Unmapped

Percentage of Viral: 11%

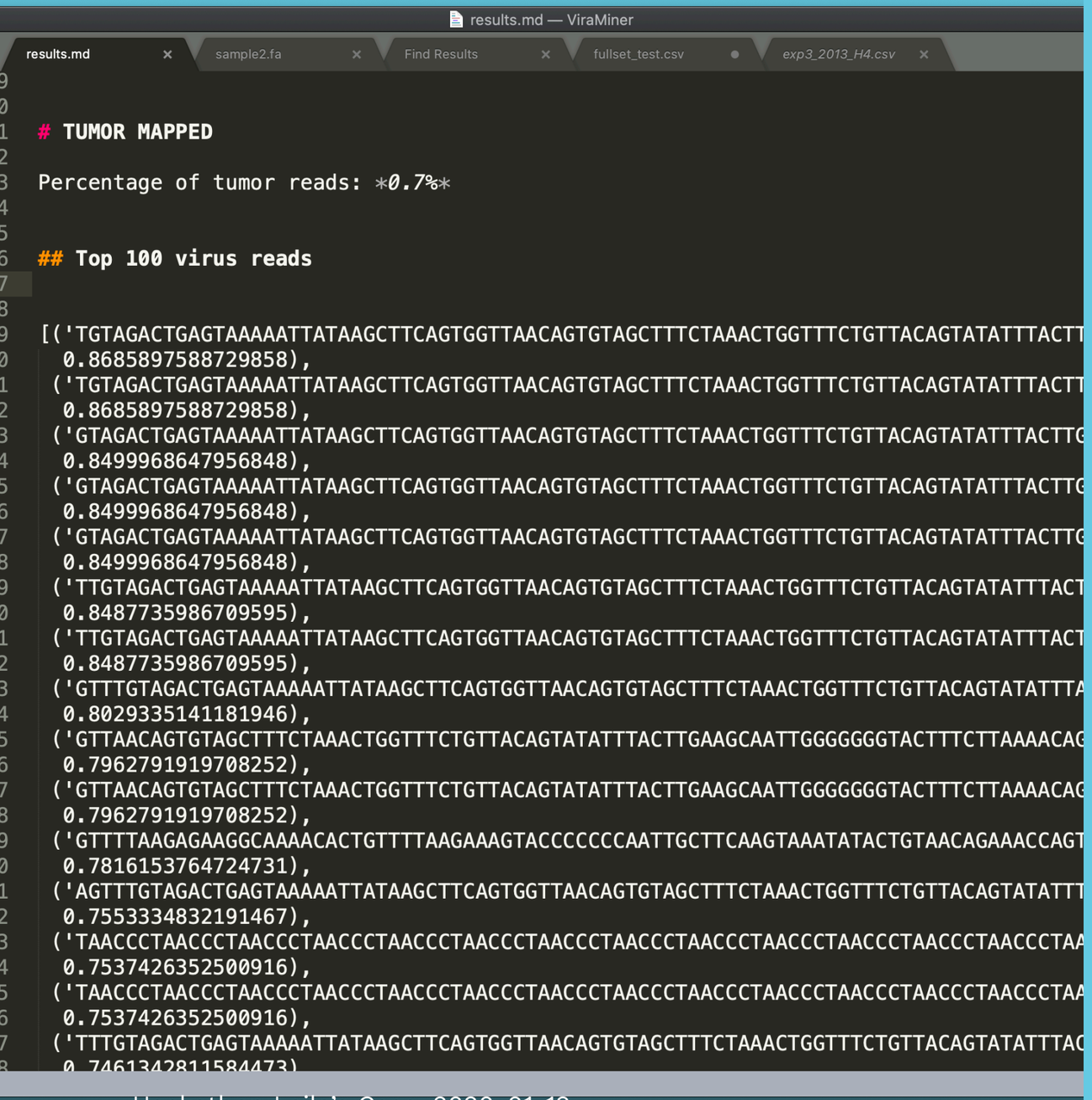
{0.0: 28369, 1.0: 3575}



Normal Tissue Unmapped

Percentage of Viral: 9.5%

{0.0: 31480, 1.0: 3321}



Tumor Tissue Mapped

We took out reads from the BAM file that have been mapped to the human reference genome.

Percentage of Viral: 0.7%

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{0.0: 43072, 1.0: 293}
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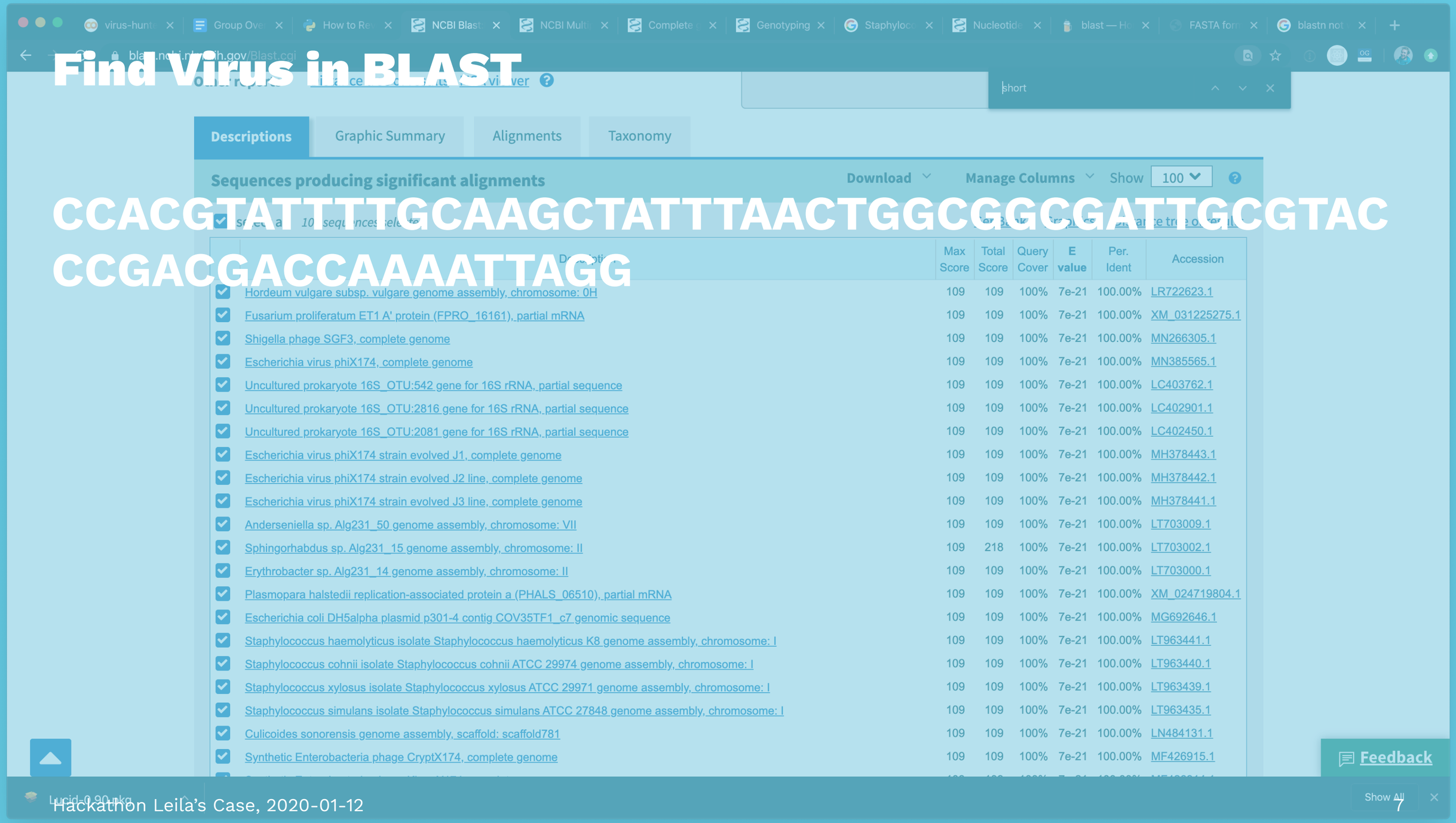
Find Virus in BLAST

CCACGTATTTTGCAAGCTATTTAACTGGCGGCGATTGCGTAC
CCGACGACCAAAATTAGGG



Next Steps

1. Map reads of suggested viruses to actual virus
2. Frequency of the viruses
3. Run it on other data (RNA, WGS)