

Canadian Bioinformatics Workshops

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Module 8 Lab

Aaron Petkau

Infectious Disease Genomic Epidemiology

April 18-21, 2023



Public Health
Agency of Canada

Agence de la santé
publique du Canada

Scenario

A 41-year old man was admitted to a hospital 6 days after onset of disease.

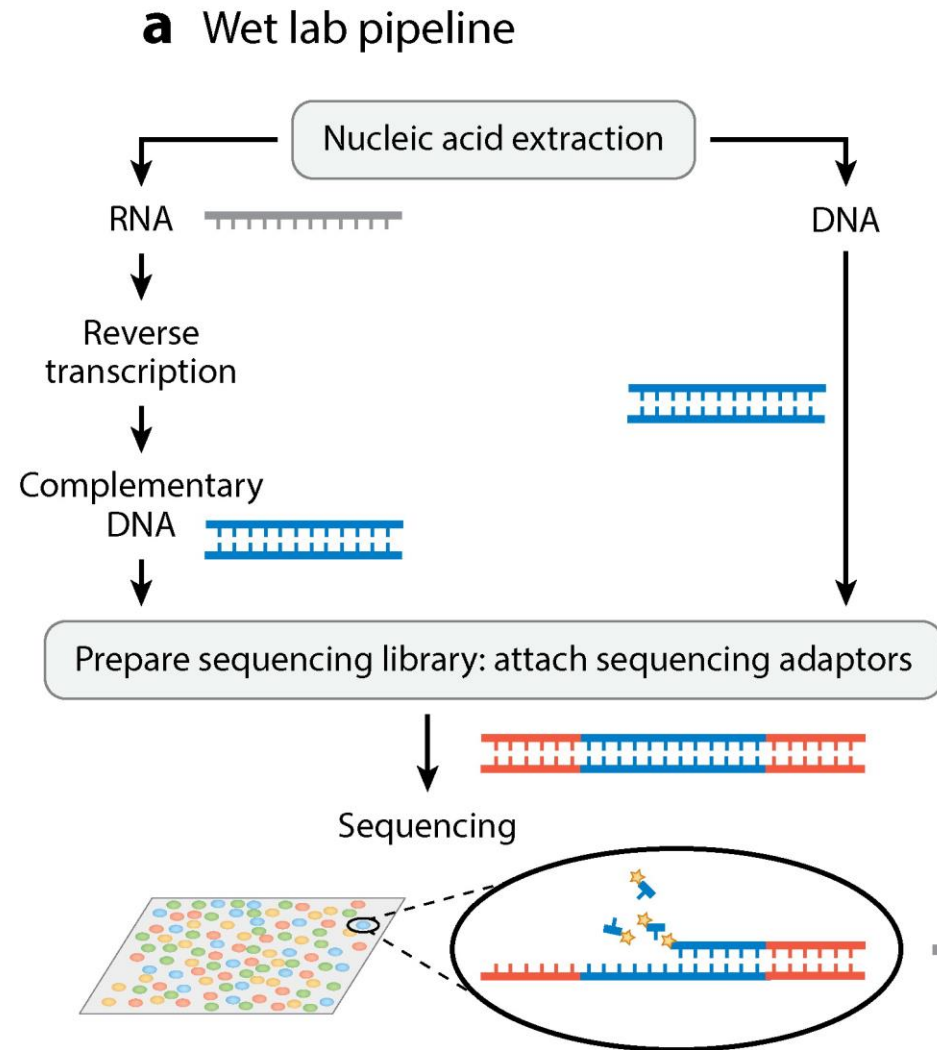
Standard methods were unable to diagnose the illness.

Metatranscriptomic sequencing (RNA) from bronchoalveolar lavage fluid.

Objectives

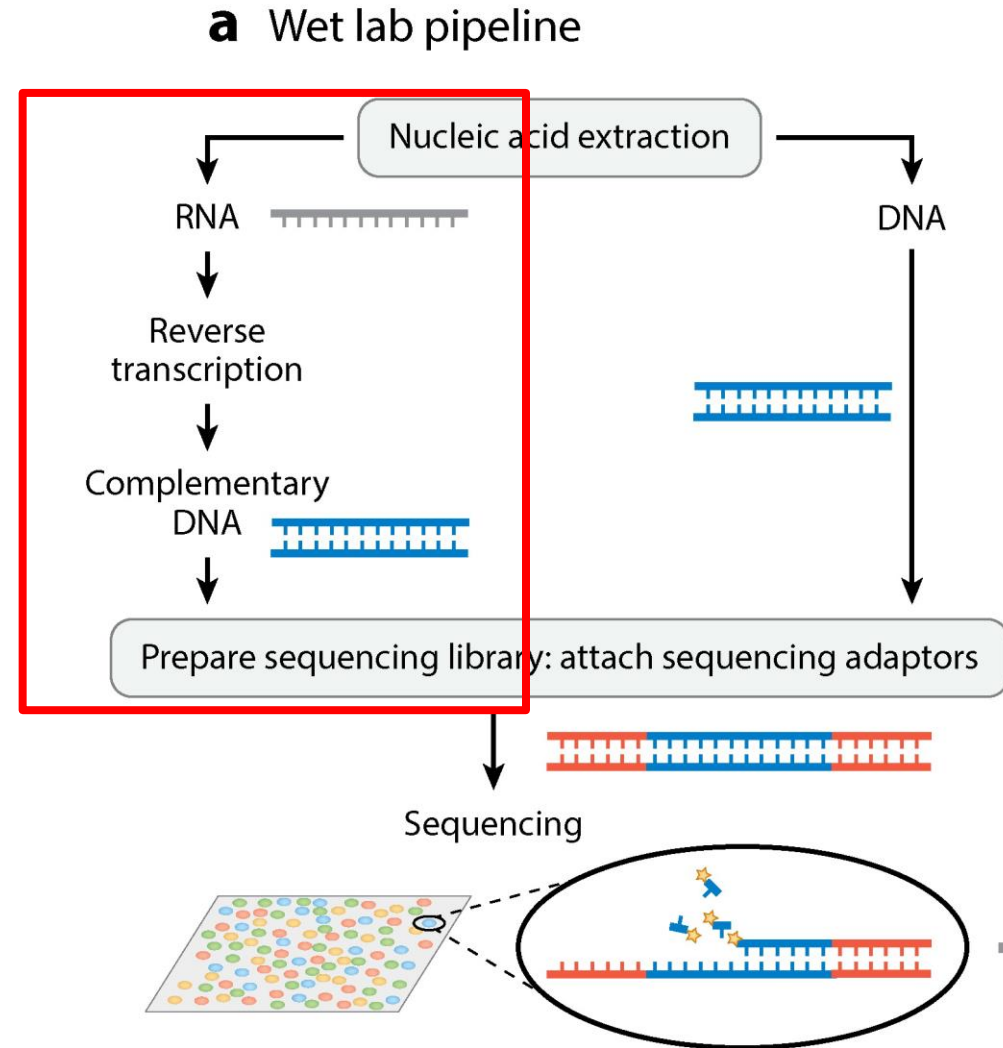
Follow through the lab instructions to establish a hypothesis on the source of the illness.

Metatranscriptomic (RNA-Seq)



Gu W, et al. 2019. "Clinical Metagenomic Next-Generation Sequencing for Pathogen Detection".
<https://www.annualreviews.org/doi/full/10.1146/annurev-pathmechdis-012418-012751>

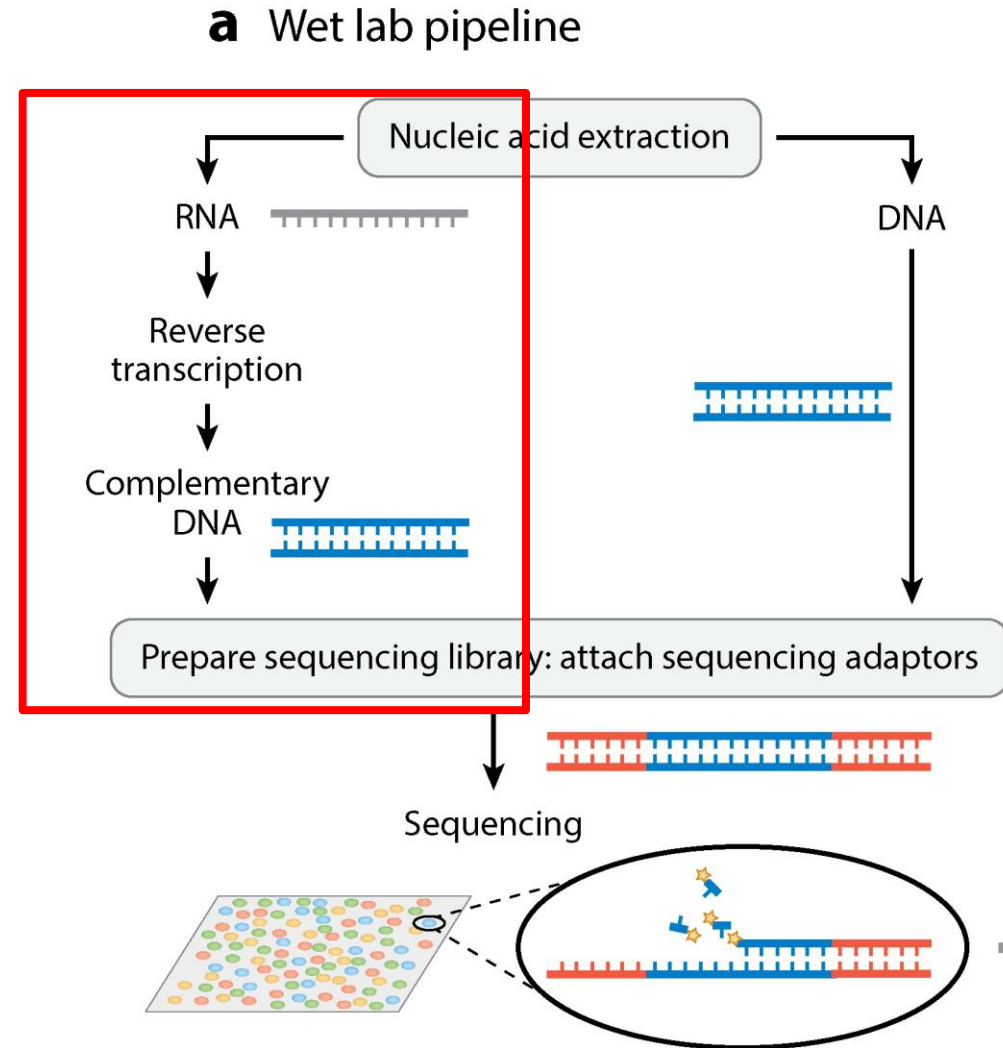
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Metatranscriptomic (RNA-Seq)

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@read1 length=151
CCCGTGTTTCGATTGGCATTTCACCCCTATCCAC
AACTCATCCCAAAGCTTTTCAACGCTCACGAGT
TCGGTCCTCCACACAATTTTACCTGTGCTTCAA
CCTGGCCATGGATAGATCACTACGGTTTCGGGT
CTACTATTACTAACTGAAC
```

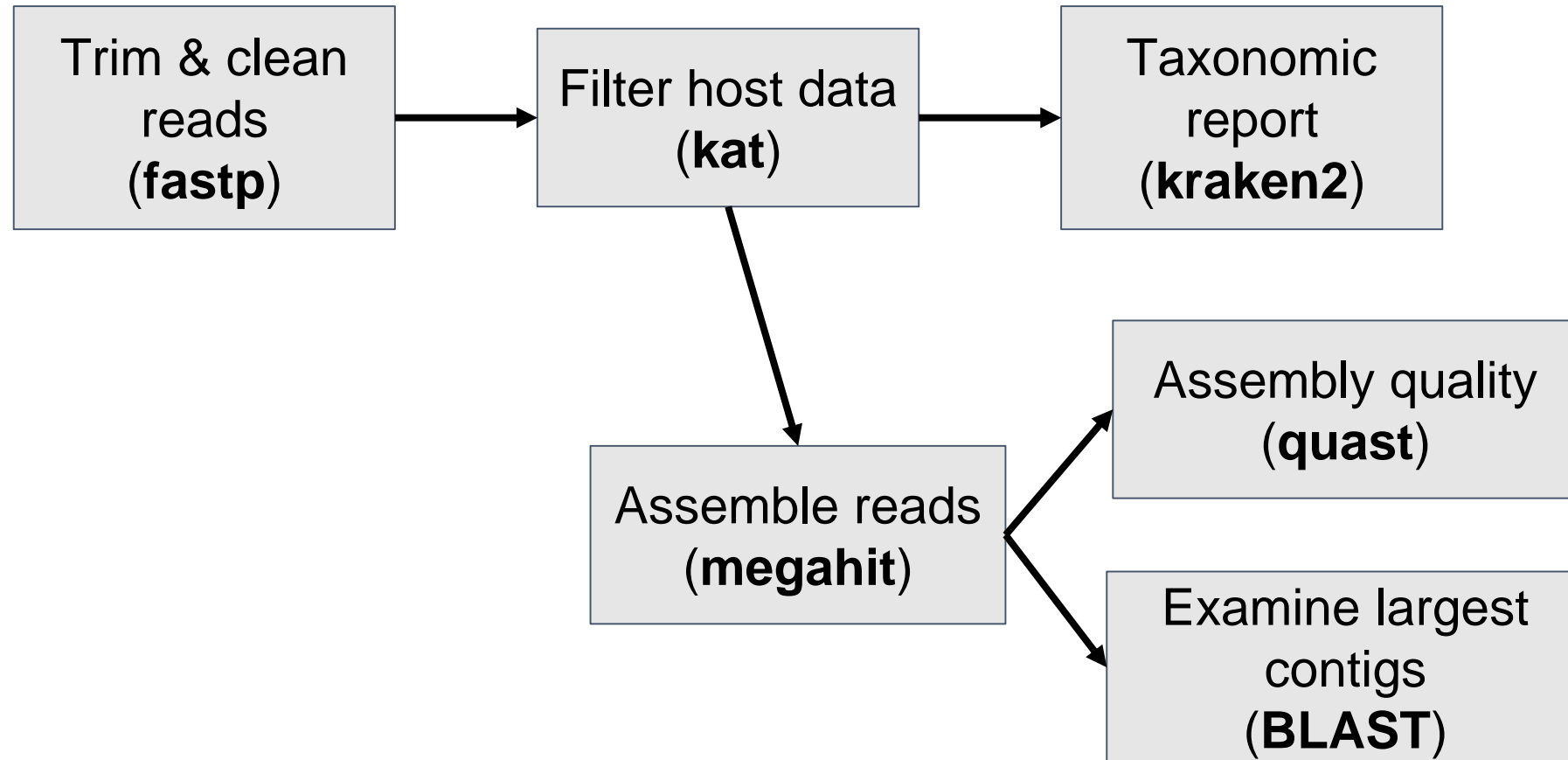


Gu W, et al. 2019. "Clinical Metagenomic Next-Generation Sequencing for Pathogen Detection".
<https://www.annualreviews.org/doi/full/10.1146/annurev-pathmechdis-012418-012751>

Procedure



Procedure



We are on a Coffee Break & Networking Session

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