MYCOBACTERIUM TUBERCULOSIS WHOLE GENOME SEQUENCING REPORT

NOT FOR DIAGNOSTIC USE

Patient Name	GORDON COLE	Patient ID	23456789
Birth Date	1862-12-12	Location	CAMBRIDGE
Sample Type	SPUTUM	Sample Date	1916-12-26
Reporting Lab	OXFORD	Report Date	1917-01-06

Summary

The specimen was positive for **Mycobacterium tuberculosis**. It is predicted to be **resistant to Isoniazid and Rifampin**. It belongs to a cluster, suggesting **recent transmission**

Organism

The specimen was positive for **Mycobacterium tuberculosis**

Drug Susceptibility

Drug susceptibility is predicted by the detection of known *M. tuberculosis* drug resistance conferring genetic mutations

☐ No drug resistance predicted
☐ Mono-resistance predicted
☑ Multi-drug resistance predicted
☐ Extensive drug resistance predicted

Drug class	Prediction	Drug	Resistance Gene (Amino Acid Mutation)
First-line	Sensitive	Ethambutol	No resistance mutation detected
		Pyrazinimide	No resistance mutation detected
	Resistant	Isoniazid	katG (S315T)
		Rifampin	rpoB (S531L)
Second-line	Sensitive	Streptomycin	No resistance mutation detected
		Ciprofloxacin	No resistance mutation detected
		Moxifloacin	No resistance mutation detected
		Amikacin	No resistance mutation detected
		Kanamycin	No resistance mutation detected
		Capreomycin	No resistance mutation detected

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Cluster Detection

Current specimen was found to be closely clustered with previous specimens suggesting **recent transmission**

Relatedness	Number of prior matching isolates
Likely Related (< 5 SNPS apart)	**2** isolates
Possibly Related (6 to 30 SNPS apart)	**2** isolates