The Effects of Exon 14 Skipping in Lung Cancer Patients

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Introduction
- Rutgers Cancer Institute is a cancer treatment and research institution
- Investigating the exon 14 skipping mechanism in lung cancer patients
- Important work because if we prove these lung cancers are associated with exon 14 skipping, they can be treated with MET inhibitors

Results
- Results from the lab experiments is not yet conclusive, we can not say for sure that the patient as an exon 14 skipping mutation
- More rounds of PCR will be completed for confirmation
- However, patient is responding to MET inhibitor treatment, received through a drug called crizotinib

Objective of the Project
The objective of the project was to prove that a 67 year old, female patient's lung cancer was the result of a MET mutation which led to exon 14 skipping.

Methods
- Conducted background research about known mutations related to exon 14 skipping
- Recommended experimental design using polymerase chain reaction (PCR)
- Recorded observations for each experiment

Discussion
- If we can prove that there is an association between this mutation and exon 14 skipping, it would provide a means for treating other lung cancer patients with a mutation near the same splice site
- Following the conclusion of this project, the lab will likely work to test other known mutations which cause exon 14 skipping, to see if they can also be treated with MET inhibitors

Personal Reflection
- The research I participated in the summer confirmed my career interest in clinical oncology
- Having a research background is useful even as a practicing physician

Conclusion
- The work completed this summer has provided some evidence of association between various non small cell lung cancers (NSCLC) and exon 14 skipping mutations

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