

Testing Colorectal Cancer Treatments in Mice

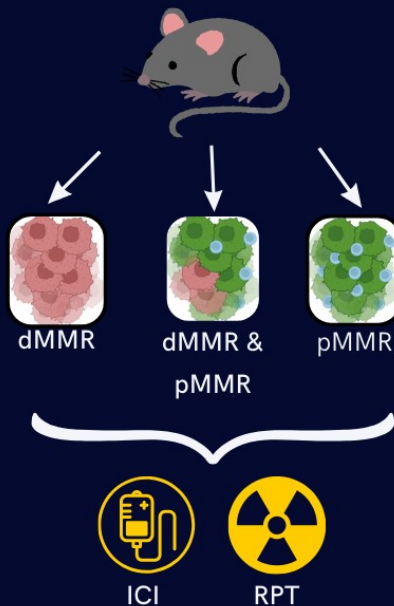


RESEARCH ABSTRACT

WHY DO WE USE MICE TO STUDY CANCER?

Before testing cancer treatments in humans, scientists test how well they work in other animals. Mice are often used for testing because we can change their DNA, see cancers in them, and test treatments quickly. However, mice do not naturally grow all the same cancers as humans. For this study, the scientists changed mice DNA so they would grow colorectal cancers that are seen in humans.

WHAT DID WE STUDY?



Human colorectal cancer often has dMMR and pMMR cells. dMMR cells lack a DNA repair protein, while pMMR cells have the repair protein. These two types of cancer cells may need different treatments.

To study colorectal cancer treatments, scientists changed mice DNA so they would grow cancers that have dMMR, pMMR, and a mix of the two cell types.

The scientists gave these mice cancer treatments called immune checkpoint inhibition (ICI) therapy and radiopharmaceutical therapy (RPT) to see how well they worked against dMMR and pMMR cancer cells.

WHAT DID WE LEARN?

dMMR colorectal cancer cells may be best treated by RPT followed by ICI.
pMMR colorectal cancer cells are not well treated by ICI but can be treated with RPT.

WHAT'S NEXT?

ICI and RPT treatments may be tested in clinical trials in humans with dMMR colorectal cancer cells.



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