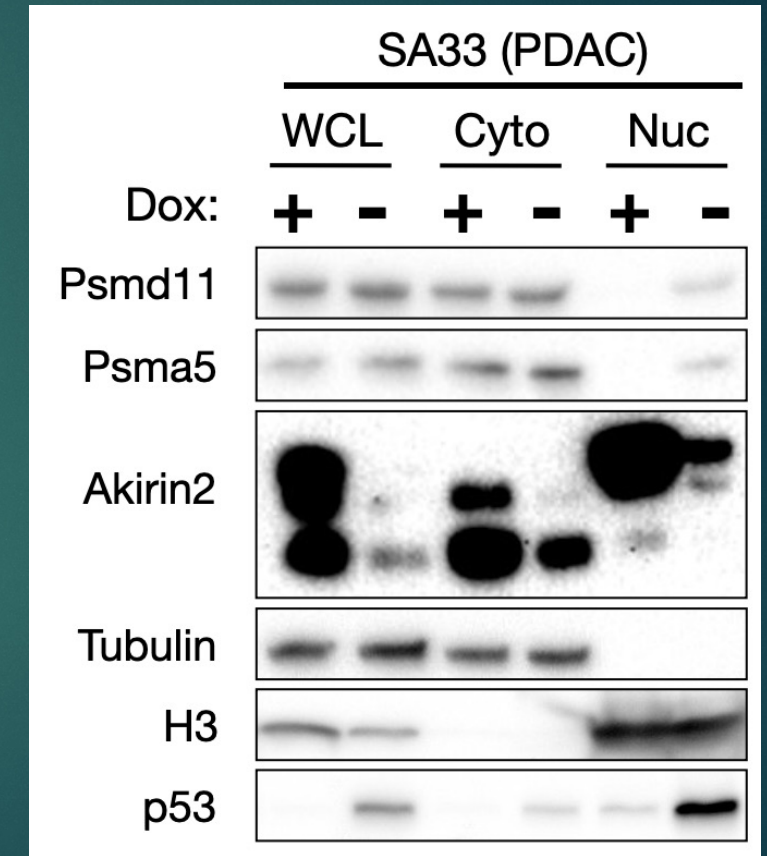
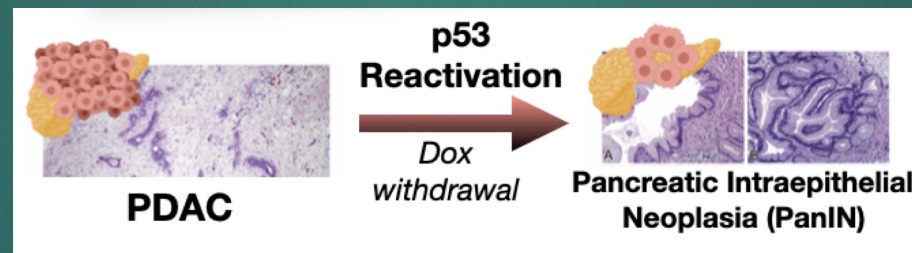
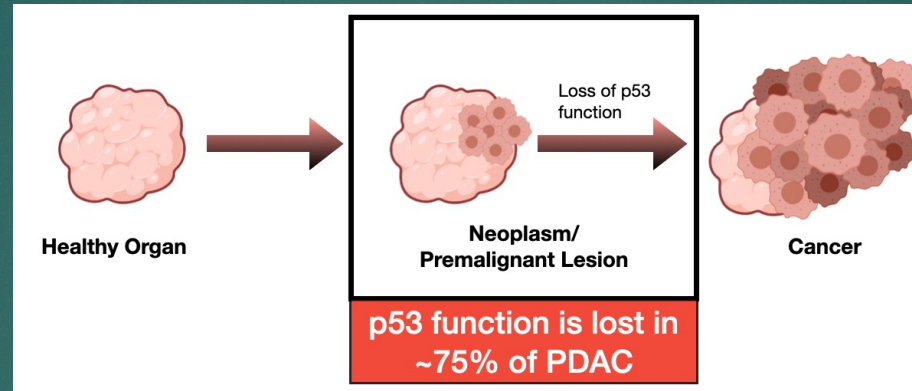


# The role of p53 pathway in nuclear proteasome localization



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# Research goal:

- DETERMINE IF P53 CAUSES NUCLEAR PROTEASOME ACCUMULATION AND ELUCIDATE POTENTIAL MECHANISMS BY WHICH P53 UP REGULATES NUCLEAR PROTEASOME LEVELS.

# Purpose:

- THIS WORK PRESENTS A NEW INSIGHT INTO THE FIELD OF NUCLEAR PROTEASOME LOCALIZATION, BY PROVIDING NEW WAYS OF HOW P53 IMPORTS THE PROTEASOME TO THE NUCLEUS.
- SUCH INFORMATION CAN BE BENEFICIAL FOR FINDING CANCER DRUGS THAT MANIPULATE THE LEVELS OF P53 IN THE CELLS.

# Results:

- P53 UP REGULATES PROTEASOME LEVELS IN THE NUCLEUS.
- KNOCK DOWN OF AKIRIN2 AND P21 DID NOT DRAMATICALLY REDUCE NUCLEAR PROTEASOME LEVELS, SUGGESTING THAT NUCLEAR IMPORT MIGHT BE INDEPENDENT OF AKIRIN2 AND THAT THE CELL-CYCLE MIGHT PLAY A SMALL ROLE IN NUCLEAR IMPORT.
- LEVELS OF PROTEIN DEGRADATION IS SIMILAR WHEN P53 IS ON AND OFF OVER TIME, SUGGESTING THAT EVEN THOUGH THERE IS MORE PROTEASOME IN THE NUCLEUS, IT DOES NOT MEAN THAT THERE IS MORE DEGRADATION.

# Importance:

- THESE RESULTS ARE IMPORTANT BECAUSE FELLOW RESEARCHERS CAN VERIFY OUR RESULTS AND BUILT ON THE DATA THAT P53 UP REGULATES PROTEASOME NUCLEAR IMPORT TO HELP FIND ITS MECHANISM.
- IT IS IMPORTANT TO THE GENERAL AUDIENCE BECAUSE FINDING THIS MECHANISM CAN HELP TO DEVELOP TREATMENTS FOR CANCER PATIENTS.