DOES TAKING ASPIRIN REDUCE THE RISK OF BREAST CANCER SPREADING TO OTHER PARTS OF THE BODY?

WHY DID WE DO THIS RESEARCH?

Women diagnosed with breast cancer that has spread outside the breast to other parts of the body are more likely to die from their cancer. Breast cancer cells that spread to other parts of the body are called “metastases”. One of the places that breast cancer commonly spreads to is the lymph-nodes near the breast and under the arms.

Laboratory research suggests that aspirin may prevent breast cancer cells from spreading to the lymph-nodes. Aspirin is a medicine which people take to relieve pain, but is it also commonly prescribed to prevent heart attacks or stroke. Some studies have shown that taking aspirin may also reduce the risk of dying from breast cancer. We do not know how aspirin reduces the risk of dying from breast cancer. It is possible that it may work by preventing breast cancer cells from spreading to the lymph-nodes and/or other parts of the body.

We carried out this research to answer two questions: 1) Are women who take aspirin before being diagnosed with breast cancer less likely to have lymph-node metastases? 2) Are women who have taken aspirin before being diagnosed with breast cancer less likely to die from the disease?

HOW DID WE DO THIS RESEARCH?

We used anonymous data from Ireland’s National Cancer Registry (website) and National Prescribing Database to do this research. The National Cancer Registry collects information on all breast cancers diagnosed in people who live in Ireland. The National Prescribing Database records information on all medicines dispensed to people with a medical card in Ireland.

We analysed this data to find out whether women taking aspirin regularly were less likely to have lymph-node metastases, or die from their breast cancer.
**WHAT DID OUR RESEARCH FIND?**

We found that women who took aspirin regularly before being diagnosed with breast cancer were less likely to have cancer that had spread to the lymph-nodes than women who did not take aspirin. These women were also less likely to die from their breast cancer.

**WHAT DO THESE RESULTS MEAN?**

Our results suggest that taking aspirin may prevent breast cancer from spreading to the lymph-nodes near the breast. This could explain how aspirin works to reduce a woman’s risk of dying from breast cancer.

The next steps for our research will be to: 1) identify exactly how aspirin prevents breast cancer from spreading to the lymph-nodes; and 2) which women with breast cancer are most likely to benefit from taking aspirin.

**WHO DID THIS RESEARCH?**

This study was carried out by researchers in Ireland (Trinity College Dublin, National Cancer Registry) and the USA (Johns Hopkins Bloomberg School of Public Health). The full description of this research was published by the American Association for Cancer Research in the journal *Cancer Research* (website).

**WHO FUNDED THIS RESEARCH?**

The researchers working on this study received funding from the Health Research Board Ireland (website), and the Irish Cancer Society (website) as part of the Breast-Predict Collaborative Cancer Research Centre.

**WHERE CAN I FIND OUT MORE ABOUT THIS RESEARCH?**

You can find out more information about this research at our BreastPredict website.