# Help fund cutting-edge research into real-world patient outcomes

It is difficult to accurately predict how drugs will benefit breast cancer patients because many factors can influence their survival. Dr David Morrison will analyse a range of data for patients receiving chemotherapy, to find ways to help doctors and patients make better decisions.

## The challenge

Although we know from clinical trials how effective a particular drug might be, sometimes the benefits of the drug for patients in the 'real world' can vary. We need to better understand all the factors that influence outcomes for women with breast cancer so that doctors and patients make decisions with the most complete information available.

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| **Aim:** | Understanding what influences the survival of breast cancer patients receiving taxane chemotherapy |
| **Researcher:** | Dr David Morrison |
| **Where:** | University of Glasgow |
| **Research Theme:** | Secondary breast cancer |
| **Grant ref:** | 2015NovSP691 |
| **Duration:** | Four months |

## The science behind the project

Doctors across the world rely upon the results of clinical trials to determine how effective a drug is. However, patients that participate in clinical trials differ from those in the 'real world', i.e. the people doctors see every day. In practice, women with breast cancer may have other health conditions or have more advanced disease than has been studied in clinical trials. Ideally, doctors would take into account all these factors when deciding on the most appropriate treatment for their patients. However, it is difficult to estimate how much each of these factors will influence survival for a particular patient.

Dr David Morrison hopes to develop methods to more accurately calculate the chances of survival for individual patients being treated with a range of drugs, starting in this project with chemotherapy drugs called 'taxanes', such as docetaxel and paclitaxel. He will do this by collecting a range of information from secondary breast cancer patients treated with taxanes at a collaborating cancer centre, and analysing how different factors influenced the effectiveness of these treatments.

## What difference will this project make?

Starting with taxane chemotherapy drugs, Dr Morrison's research could eventually provide doctors and patients with methods to more accurately estimate the benefits of breast cancer drugs for an individual patient, taking into account a fuller range of factors than are currently considered. This will help doctors to make better decisions to improve the chances of survival and quality of life for women with breast cancer.