

Research hope for bladder cancer

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Bladder cancer is a common condition – an estimated 10,000 people are diagnosed with the disease each year in the UK. It is the seventh most common cancer in the UK, affecting men more than women.

Some people develop [invasive bladder cancer](#), which is where the cancer has grown through the muscle layer of the bladder. When this occurs, there is a higher risk that the cancer will spread to other areas of the body and it is much more difficult to treat.

Until now the signalling process that allows a benign, small polyp to develop into something that spreads and is invasive has not been clear. But research carried out by a team at Plymouth University has for the first identified an important mechanism behind this process.

The research is published today 1st August 2013 in the *American Journal of Physiology – Renal Physiology*.

Key to the research is a protein, pancreatic secretory [trypsin inhibitor](#) (PSTI), which is present in most bladder cancers. The research has identified the role PSTI plays in the signalling process that allows the spread and invasion of bladder cancer.

By understanding the process by which this protein helps the cells to spread, and invade into other tissue, researchers can start to develop ways to interrupt this process, potentially leading to new treatments.. This has the potential to improve the survival and [life quality](#) of those with early diagnosed bladder cancer, and reduce the instances where rigorous drug regimes or [invasive surgery](#) are required.

The research was led by Professor Raymond Playford and Dr. Tanya Marchbank from Plymouth University. Professor Playford said: "Although bladder cancer can be readily treated if caught early enough, once it starts to invade into deeper

tissues and spread to distant sites it is a much more difficult, painful and life-affecting cancer to live with. Treatment becomes more difficult as tumours grow deeper into the [bladder wall](#) and spread, and [survival rates](#) decline – it is estimated that just 25 per cent of those with severe invasive bladder cancer will be alive and well three years after diagnosis and treatment. By identifying the mechanism by which bladder cancer develops and spreads, we hope that in time therapies that manipulate this mechanism may be developed to improve the quality of life and survival rates of those with invasive bladder cancer."

Provided by University of Plymouth

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