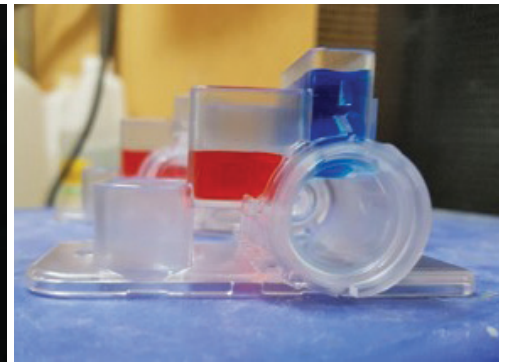
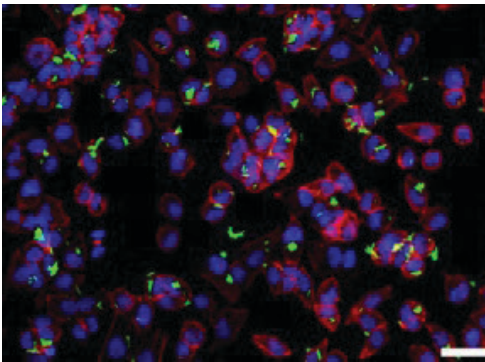


# Bladder Cancer Diagnostic.

A non-invasive diagnostic device



## Overview.

Current bladder cancer screening tests require an invasive cystoscopy. With the high recurrence rate of urothelial cancers and ongoing patient monitoring, cancer specialists were looking for a non-invasive test to alleviate patient discomfort and save time.

The Bladder Cancer Sensor is a 'lab-on-a-chip' diagnostic device for non-invasive, early detection of urothelial cancers. The test sends a urine sample through microfluidic channels, where antibodies are applied and selectively capture bladder cancer cells via plasma polymerisation and a microfluidics sensor. A stain and rinse is used to ensure the cancer cells can be easily identified under a microscope.

## Expertise.

Motherson were proud to support knowledge transfer amongst the cross-functional team working on research and development for the Bladder Cancer Sensor. The team consisted of materials scientists, biologists, clinical researchers, urologists, manufacturing and design engineers.

Our collaboration with UniSA Researchers allowed us to translate the clinical opportunity from bench-top to patient.

Our products are built keeping patient safety and customer requirements in mind. Motherson embedded engineers in University labs and set up a pilot manufacturing facility capable of high-precision injection moulding and plasma polymerisation.

We created a functionalised surface using an ultra-thin plasma polymer, ready for the bladder cancer specific antibody and patient sample to be applied, bond and begin the selective capture of cancer cells.

## Outcome.

The Bladder Cancer Sensor is a single-use device created in our state-of-the-art clean room to ISO 13485 standards. The final product is assembled manually, vacuum packed in a moisture and light (medical grade) proof bag including a desiccant for advanced moisture protection and sent to clinical trial teams.

Motherson is proud to be part of medical device innovation and together with UniSA's Future Industries Institute and Flinders Medical Centre, the successful clinical trials of this CRC-P project continue.

**Contact us for more information.**