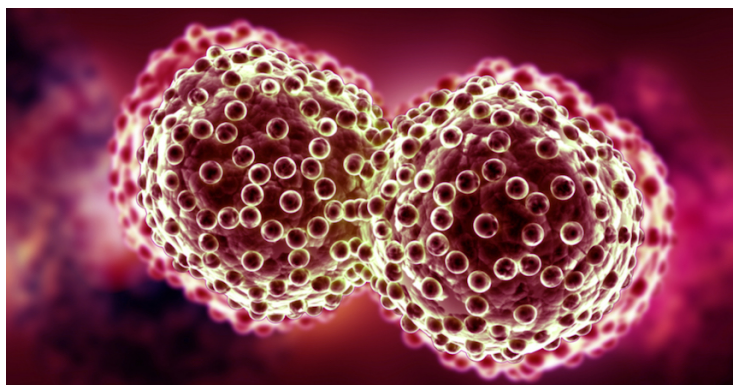


## Korea-Singapore research offers simultaneous diagnosis and treatment of cancer

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**According to statistics, cancer remained the primary cause of mortality in Korea in 2021**



A research team from South Korea-based Pohang University of Science and Technology (POSTECH) collaborated with researchers at A\*STAR in Singapore to determine the ability of fluorescent probe for tumour-initiating cell yellow (TiY) to stain the cells responsible for tumour growth and simultaneously suppress the growth of those cells.

In their previous study, the research team developed fluorescent probe TiY with the ability to selectively identify and detect tumour-initiating cells (TICs), much like a fluorescent highlighter. Building upon this accomplishment, the team has conducted research aimed at exploring the potential of TiY for cancer treatment.

When exposed to a low concentration, TiY has been demonstrated to have the ability to stain cancer stem cells. However, as the concentration of TiY increases, it exhibits the remarkable ability to effectively inhibit the growth of cancer stem cells, leading to their substantial destruction.

Current cancer treatments often fail to achieve complete tumour removal, as cancer cells can be metastasised to other organs or recur. Given the challenge, TiY presents a promising approach to cancer treatment as it can facilitate both diagnosis and treatment in a single step.