Crab dinner inspires cancer-removing robot

They say you can find inspiration anywhere, so why not a crab dinner?

Inspired by our crustacean friends, researchers in Singapore have created a mini robot that can be used to remove early-stage stomach cancer in a far less invasive way than other procedures. The robot has the ability to crawl down a patient's throat and features a pincer and hook that can remove cancerous tissue.

The idea first came up in 2004 when Lawrence Ho, an enterologist at Singapore's National University Hospital, and Louis Phee, an associate professor at Nanyang Technological Institute's School of Mechanical and Aerospace Engineering, had dinner with Hong Kong surgeon Sydney Chung, who is well-known for his fight against SARS.
While dining on Singapore's signature chili crab dish, Chung suggested the two use the crab as a prototype, making note of the strength of a crab's pincers and its ability to pick up sand.

Taking his advice, Ho and Phee created their crab-like robot by attaching a pincer and hook to an endoscope, along with a small camera to provide visual feedback. The bot enters through the patient's mouth, and once inside the stomach area, the surgeon can maneuver the pincer to grab the cancerous tissue and then use the hook to slice it off.

Ho said the robot allows for more precision on the surgeon's part. "Our movements are very huge and if you want to make very fine movements, your hands will tremble... But robots can execute very fine movements without trembling," he told Reuters [http://www.reuters.com/article/2012/02/01/us-cancer-singapore-robot-idUSTRE81009020120201].

There are other benefits as well. The robot only takes a fraction of the time of open and keyhole (laparoscopic) surgeries, and it also reduces the risk of infection and visible scars.

The crab robot has already been used to remove early-stage stomach cancer in five patients in India and Hong Kong, and Ho and Phee hope to make it commercially available in three years.

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http://news.cnet.com/8301-17938_105-57371230-1/crab-dinner-inspire...