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NanoKnife to debut in India for cancer therapy

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NanoKnife to make debut in India for cancer therapy

Patients with small tumors, typically less than five centimeters, which are considered inoperable or poor candidates for traditional treatments, can heave a sigh of relief, as a breakthrough electrical technology called "NanoKnife" is all set to debut at the Rajiv Gandhi Cancer Institute and Research Centre (RGCI & RC), one of the country's premier cancer institutes.

This announcement was made at the three-day RGCON 2013, one of the biggest oncology congresses of its kind held in Delhi where around 600 oncologists from across the world participated to discuss the changing trends in colorectal cancer treatment. The theme of the RGCON, 12th Annual International Conference on Colorectal Cancer held from February 15 -17, 2013 was "Changing Scenario in Colorectal Cancer."

NanoKnife is a minimally invasive cancer treatment that uses irreversible "electroporation technology" to precisely target and kill hard-to-reach tumors at the cellular level. The precision of the NanoKnife allows interventional radiologists to treat tumors

that in the past would be virtually impossible for surgeons to operate on due to their location. Developed by AngioDynamics, USA, the device costs about Rs 15 crore.

According to RGCI & RC, its procurement is in an advanced stage of negotiation. The technology would be installed at the hospital as early as June this year and treatment could cost about Rs 3-4 lakh per patient.
Dr Shivendra Singh, senior consultant and chief of GI Onco Surgery and Liver Transplant Services, RGCI & RC said, "The Nanoknife is able to target especially small tumors, typically less than 5 cm in size and difficult tumors which can't be removed because of their critical location, or those that have not responded to conventional treatment."

Explaining the procedure, Dr Swarupa Mitra, consultant, Radiation Oncology, RGCI & RC said, "With the help of NanoKnife technology, doctors can remove cancerous tumors non-invasively using only three needle-like electrodes or probes, a computer and a powerful burst of electricity, rather than using surgery or a transplant. NanoKnife technology applies a series of quick bursts of electrical energy through electrodes that are inserted directly into and around the tumour and destroy it, leaving the surrounding tissue, veins, nerves and ducts unaffected. Healthy cells and tissue can then grow back and regenerate within the area."