

Mayo Clinic News Network

Title: Expedited breast cancer treatment / Date: June, 2017

Intro: Early-stage breast cancer patients now have a fast-track treatment option at Mayo Clinic. Select, low-risk patients are completing their surgery and radiation in less than 10 days.

"It's a great option for women who are really, really busy and would like to complete all their therapy within a [short] time frame and get on with the rest of their life," says Dr. Tina Hieken, a Mayo Clinic surgeon who helped develop the program. "Yet, we're still able to deliver the maximum cancer therapy benefit [with] the optimal treatment to just the right area."

The program combines a pathologist's mid-surgery confirmation that the cancer has not spread, with a type of partial breast radiation called brachytherapy. Dr. Sean Park, a Mayo Clinic radiation oncologist, says their research confirmed that the novel approach works well.

"It was a one-year experience with 123 patients. [Cosmetic] outcomes are excellent, and our results are very good – excellent," says Dr. Park. "All look comparable to the whole breast radiotherapy, if not better in terms of cosmetics." Dennis Douda shows how it works.

Video	Audio
Total running time [Estimated 3:50]	/// VIDEO
Jane Brandhagen speaking	"It was a shock. You know, I was already, in my mind, picking out wigs and thinking how much longer I'd have here. I was terrified."
Dennis Douda speaking	Jane Brandhagen was facing the news 1 in 8 women will hear. She had breast cancer. Her yearly mammogram had revealed a small tumor. She wanted to treat it very aggressively and wanted to wrap up her treatment as quickly as possible.
TITLE: Jane Brandhagen Breast Cancer Patient	"I could have gone with a full-out double mastectomy, and then I would be done."
Dennis Douda speaking	Mayo Clinic surgeon Dr. Tina Hieken says it's the main decision breast cancer patients have to make: to remove the entire breast in a mastectomy or have breast-preserving surgery. Because Jane's cancer was caught early, Dr. Hieken said she was a good candidate for a new option, which would also reduce her entire treatment to just a matter of days.
TITLE: Tina Hieken, M.D. Surgery Mayo Clinic	"So for those patients who have no evidence of disease in the lymph node and have small tumors that are completely removed with a lumpectomy,

	they leave the operating room with a catheter in place. It's an outpatient procedure."
Dennis Douda speaking	Called brachytherapy, the catheter delivers the necessary follow-up radiation treatments internally, in a fraction of the time of standard external radiation therapy.
TITLE: Sean Park, M.D., Ph.D., Radiation Oncology Mayo Clinic	"Treatments are delivered over five weekdays, twice a day, approximately six hours apart, for a total of 10 treatments."
Dennis Douda speaking	Brachytherapy itself is not new, but patients routinely have to wait two to four weeks for a second surgery to implant the catheter – because that can't happen until a pathology report comes back saying it's OK to proceed. So Dr. Park and Dr. Hieken designed a treatment regimen to eliminate the waiting time by using a single surgery. First, special dyes are injected to identify any cancer cells that may have spread beyond the tumor site – or to the lymph nodes under the arm. That allows a pathologist to immediately screen the lymph nodes – and a safe margin of tissue removed from around the tumor – while the patient is still under anesthesia. Once the all-clear is given, the surgery continues with a second incision to insert the brachytherapy catheter and expand it, filling the lumpectomy cavity. The very next day, the patient's radiation plan is mapped out during a simulation. The following morning the brachytherapy begins, using a computer-controlled robotic machine, which manipulates a single radioactive seed smaller than a grain of rice within the implanted catheter.
Dr. Sean Park speaking	"The radioactive seed will travel through the cable into the patient, into the catheter, and stop at different locations that we program it to, for a different amount of time. And that shapes the radiation dose."
Dennis Douda speaking	Unlike externally delivered radiation, Dr. Park says brachytherapy is delivered more precisely to the target area, without passing through healthy tissues...
Dr. Sean Park speaking	"...meaning the breast tissue, the chest wall, lung tissue – for left-sided cancer patients, importantly – the heart tissue."

Dennis Douda speaking	It's hoped the expedited brachytherapy option encourages more women to receive the full benefit of their recommended post-surgery radiation – particularly those living far from a treatment center.
Dr. Tina Hieken speaking	"So, with standard therapy, they are driving a couple hundred miles round-trip each day for three, four, six weeks. The actual rate of completing the radiation may be as low as 60 or 70 percent."
Dennis Douda speaking	Jane says she leaped at the chance to be part of a pilot study that completed her brachytherapy in just three sessions.
Jane Brandhagen speaking	"So from Monday to Friday, five days, that was surgery and radiation all in five days, which I think is amazing."
Dennis Douda speaking	Jane and other patients in the study will continue to be followed for five years, to verify that their long-term health and survival is just as good as those receiving standard radiation procedures. For the Mayo Clinic News Network, I'm Dennis Douda.

Anchor tag: Jane says she feels very lucky to have caught her cancer so early, not only because it allowed her to have the type of treatment she did, but also because it gives her the best chance of long-term survival. She credits her habit of getting an annual mammogram for the early detection.