

Chemo plus radiation before surgery increases tumor response for rectal cancer

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Rectal cancer patients who use a new combination of the chemotherapy, Capecitabine, together with five weeks of radiation (50 Gy) before surgery have an 88 percent chance of surviving the cancer three years after treatment, according to randomized trial presented at the plenary session, October 3, 2011, at the 53rd Annual Meeting of the American Society for Radiation Oncology (ASTRO).

"The results of the trial allow us to recommend a new pre-operative treatment, the 'CAP 50' regimen, in locally advanced rectal cancer. It's safe and reduces the risk of the cancer coming back to less than 5 percent," Jean Pierre Gerard, MD, a [radiation oncologist](#) at Centre Antoine-Lacassagne in Nice, France, said.

The primary treatment for cancer of the rectum (found in the lower 15 centimeters of the bowel) is surgery. However, there is a risk of cancer re-growth within the bowel and surrounding tissues. Not only is this recurrence incurable in the majority of patients, but it can cause negative side effects. Depending on the location and stage of the cancer, doctors usually recommend [radiation therapy](#) and [chemotherapy](#) before surgery. The optimal regimen is still in discussion.

The ACCORD 12 trial involved 598 patients with locally advanced rectal cancer (tumors that have spread to the perirectal fat, but not travelled to distant parts of the body) who were diagnosed and treated in 50 hospitals in France between 2005 and 2008.

Researchers wanted to find the most effective and safe preoperative treatment for rectal cancer by comparing a combination of two different chemotherapies and two different [radiation doses](#). Patients were randomized to receive either Cap45 (chemotherapy, [Capecitabine](#), and [radiation treatment](#) at 45 Gy) or Capox50 (chemotherapies, Capecitabine and Oxaliplatin, along with radiation at 50 Gy). At three years after treatment, the Capox50 regimen did not significantly increase the chance of the cancer returning or surviving the disease, compared to the Cap45 treatment. [Oxaliplatin](#), given as part of the Capox50 treatment, was shown to immediately increase side effects, with some cases of severe diarrhea, and was not effective in increasing the chance of local tumor sterilization.

However, the increase of radiation dose from 45 to 50 Gy in five weeks was effective, well tolerated and did not extend the duration of treatment.

"The results of this trial, when analyzed together with the Italian STAR01 and the American NSABP R04 randomized trials, bring solid scientific evidence that a 'CAP50 regimen' should be the standard treatment for locally advanced rectal cancer. Using Capecitabine avoids the intravenous injection of fluorouracil, while a radiation dose of 50 Gy in 25 fractions over five weeks increases the chance of tumor sterilization and limits the risk of local recurrence to 5 percent or less," Dr. Gerard said.

Provided by American Society for Radiation Oncology

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