PET Scan During Chemotherapy Helps Predict Prognosis for People With Rare Esophageal Cancer

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In a recent study, researchers used positron emission tomography (PET) scan with fluorodeoxyglucose or FDG (called an FDG-PET scan) to find out whether chemotherapy was working. The patients in this study had adenocarcinoma of the esophagogastric junction, a rare type of esophageal cancer that starts where the esophagus and the stomach meet. A PET scan creates pictures of inside the body by using a small amount of a radioactive substance (FDG in this study). This substance is absorbed by organs and tissues that use the most energy. Because cancer tends to use energy actively, it absorbs more of the radioactive substance than healthy tissue.

When patients received an FDG-PET scan two weeks after starting chemotherapy, researchers were able to see that the tumors of 33 patients were less metabolically active, meaning they were using less energy, than they were before treatment. This means that these tumors were responding to treatment and chemotherapy was working. For these patients, chemotherapy continued for three months to shrink the tumor, and then the patients had surgery to remove the tumor.

For 23 patients in the study, the tumors did not show a decrease in the amount of energy used, which is an indication that chemotherapy was not helping shrink the tumor. Treatment was changed for these patients, and they were given radiation therapy to help shrink the tumor before having surgery.

After surgery, 82% of the patients who received chemotherapy only had no evidence of the cancer compared with 70% of the patients who had radiation therapy plus chemotherapy.

What this means for patients

?PET testing after two weeks of chemotherapy is a very important tool to predict a patient's chance of recovery. It can help doctors find out when chemotherapy is working, and spare patients the side effects of chemotherapy when it is not working,? said lead researcher Florian Lordick, MD, PhD, Director of the Department of Hematology and Oncology at Klinikum Braunschweig in Brunswick, Germany and senior lecturer at Hannover Medical School. ?Unfortunately, there is not yet an effective treatment for patients when chemotherapy is not working. We're continuing to look for more effective ways to treat this group of patients.?

What to ask your doctor

- What type of esophageal cancer do I have? What is the stage?
- What are my treatment options?
- How will the cancer be monitored during treatment? Would a PET scan be used?

For More Information

Guide to Esophageal Cancer [1]

Positron Emission Tomography (PET) Scan - What to Expect [2]

Links:
[1] http://dev-cancernet.asco.org/node/18783
[2] http://dev-cancernet.asco.org/node/24648