Printed December 11, 2013 from http://www.cancer.net/cancer-advances-using-mri-measure-tumor-shrinkage-predicts-survival-advanced-rectal-cancer

Cancer Advances: Using MRI to Measure Tumor Shrinkage Predicts Survival in Advanced Rectal Cancer

Posted online August 29, 2011 on www.jco.org [1].

A new study has shown that for patients with advanced rectal cancer, using magnetic resonance imaging (MRI) to assess their tumor's response to pre-surgery chemotherapy or radiation treatment may predict survival. The findings suggest that by using MRI to gauge whether a tumor has responded to such treatments, physicians can use the results to determine whether to proceed with surgery or to consider other treatment options for a given patient.

Rectal cancer is commonly detected in advanced stages, and as a result, chemoradiation prior to surgery is frequently given to try to shrink tumors to make them easier to operate on. While surgeons attempt to completely remove the cancer in order to minimize the chances of cancer returning, advanced tumors are more difficult to completely remove and more likely to have unseen cancer remaining at the edges of tissue at the surgery site. A positive surgical margin (tumor that remains at the borders of the surgical resection) is considered a strong predictor of local recurrence.

In the study, 111 patients with advanced rectal cancer received chemotherapy and/or radiation treatment before undergoing surgery. Using MRI, investigators measured the cancer's response to this treatment, and patients were classified as ?good? or ?poor? responders according to how much tumor shrinkage there was. Investigators found that 72 percent of good responders to chemotherapy/radiation were alive after five years compared to just over one-fourth (27 percent) of those who were poor responders, with little tumor shrinkage. The disease-free survival for those with good responses was 64 percent versus 31 percent for the poor responders. In addition, patients whose MRI results predicted cancer remaining in the margins after surgery had a local recurrence rate of 28 percent at five years compared to 12 percent for patients with predicted cancer-free tumor margins.

The authors suggest that this use of MRI can aid physicians in deciding on the best treatment approaches for rectal cancer. Using MRI prior to surgery could help in the management of patients in a number of ways, including offering more intense therapy or alternative chemotherapy or changing the surgical plan. Clinical trials may be designed that can use these MRI evaluations as an initial assessment of treatment effectiveness.

What This Means for Patients

This study shows that using imaging, specifically MRI, to re-examine rectal cancer tumors after treatment with chemotherapy and radiation can be helpful to physicians to determine whether a patient is a candidate for surgery or should receive other therapies instead of, or prior to, surgery.

Helpful Links

Guide to Colorectal Cancer [2]

MRI What to Expect [3]

Understanding Chemotherapy [4]

Understanding Radiation Therapy [5]

Links:
[1] http://www.jco.org/
[2] http://www.cancer.net/patient/Cancer+Types/Colorectal+Cancer
[3] http://www.cancer.net/patient/All+About+Cancer/Cancer.Net+Feature+Articles/Cancer+Screening+and+Prevention/Magnetic+Resonance+Imaging+(MRI)%26mdash%3BWhat+to+Expect
[4] http://www.cancer.net/patient/All+About+Cancer/Cancer.Net+Feature+Articles/Treatments%2C+Tests%2C+and+Procedures/Understanding+Chemotherapy
[5] http://www.cancer.net/patient/All+About+Cancer/Cancer.Net+Feature+Articles/Treatments%2C+Tests%2C+and+Procedures/Understanding+Radiation+Therapy