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## Treating Therapy-related Rectal Irritation

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Radiation therapy for prostate cancer is associated with several types of side effects, including bladder issues and urinary incontinence, impotence, fatigue and bowel problems. Fortunately, the incidence of some of these side effects has decreased in recent years because of emerging technologies that enable physicians to spare the rectum more effectively. This column briefly reviews side effects related to prostate radiation therapy and reports on a new treatment for radiation-related rectal irritation.

### Overview of Treatment Side Effects

Following radiation treatment for prostate cancer, patients might need to urinate more often, have a burning sensation while they urinate and notice blood in their urine. Bladder problems usually improve with time. Urinary incontinence is less common after radiation therapy than after surgery, but the chance of incontinence increases each year for several years after treatment.

After a few years, the impotence rate after radiation is similar to that of surgery. Impotence usually does not occur immediately after radiation therapy treatment, but develops slowly over 1 or more years. This is different from surgery, where impotence occurs immediately and may improve with time. In older studies, approximately 3 out of 4 men were impotent within 5 years of having external-beam radiation therapy; however, some of these men had erection problems before treatment. In men who had normal erections before treatment, about half were impotent at 5 years. It is not clear whether these numbers also will apply to newer forms of radiation. As with surgery, the older the patient, the greater the risk of impotence. Treatments, including erectile dysfunction medicines, can help with impotence.

Radiation therapy can cause fatigue that may not disappear until a few months after treatment stops.

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During and after external-beam radiation therapy treatment, patients could have diarrhea, sometimes with blood in the stool, rectal leakage and an irritated large intestine.<sup>1</sup> Most of these problems go away with time, but in rare cases normal bowel function does not return after treatment ends. In the past, approximately 10% to 20% of men reported bowel problems after external-beam radiation therapy.

Radiation-generated bowel problems can increase bowel movements. This increase can cause rectal irritation because of the mucus released with the bowel movement. The mucus is created in the small intestine and usually is secreted in small amounts; however, many factors (eg, constipation, diarrhea, ulcerative colitis, Crohn disease, celiac disease and diverticulitis) can increase mucus production and secretion.

The Radiation Therapy Oncology Group divides rectal toxicity into 4 grades, as follows:<sup>2</sup>

- Grade I — increased frequency or change in quality of bowel habits that does not require medication or rectal discomfort that does not require analgesics.
- Grade II — diarrhea that requires parasympatholytic drugs (eg, diphenoxylate and atropine); mucus discharge that does not necessitate sanitary pads; or rectal or abdominal pain that requires analgesics.
- Grade III — diarrhea requiring parenteral support, severe mucus or bloody discharge that necessitates sanitary pads, or abdominal distention.
- Grade IV — acute or subacute obstruction, fistula or perforation; gastrointestinal bleeding requiring transfusion; or abdominal pain or tenesmus that requires tube decompression or bowel diversion.<sup>2</sup>

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## Study of a Treatment for Rectal Irritation

In 2009 at the Cancer Center of Irvine, California, 61 patients were treated for prostate cancer. Fifty-six patients were stage II with T1c, N0, M0 and T2c, N0, M0 dominating; 5 patients were stage III and each had T3a, N0, M0. Of the 61 patients, 42 were treated with a combination of high dose rate (HDR) brachytherapy and intensity-modulated radiation therapy (IMRT). These patients each received a dose of 450 cGy per fraction for 4 fractions, 2 fractions per day separated by 1 week for HDR, followed by external-beam doses of 180 cGy per fraction for 28 fractions. The remaining 19 patients were treated exclusively with IMRT at 180 cGy per fraction for 45 fractions. Out of these patients, the 61 patients, 19 experienced 11 patients experienced

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Grade 1 rectal irritation and 8 patients experienced Grade 2 rectal irritation. ~~needed rectal irritation.~~

Of the 19 patients who experienced rectal irritation, 1 physician recommended using a multipurpose, moisture barrier ointment (Calmoseptine, Huntington Beach, California) on the exterior skin of the anus after each bowel movement. The area should be wiped clean with a moist towel before applying the ointment. After a few days of ointment use, the rectal irritation was reduced 50% to 75%.

In 2010, the treating physician began prescribing a regimen including betamethasone (a moderately potent glucocorticoid steroid with anti-inflammatory and immunosuppressive properties) and Calmoseptine to improve side effects. The patients received the same preparatory instructions, then the betamethasone was applied and followed by the Calmoseptine. Of the 48 patients who used this regimen, the results are significant. The patients reported a 70% to 95% improvement within 2 to 3 days. This regimen now is standard practice for our treating physician at the Cancer Center of Irvine to reduce side effects related to radiation-induced rectal irritation.

## References

1. Prostate cancer: radiation therapy. American Cancer Society website.  
<http://www.cancer.org/Cancer/ProstateCancer/DetailedGuide/prostate-cancer-treating-radiation-therapy>  
[www.cancer.org/docroot/CRI/content/CRI\\_2\\_4\\_4X\\_Radiation\\_Therapy\\_36.asp?nav=cr](http://www.cancer.org/docroot/CRI/content/CRI_2_4_4X_Radiation_Therapy_36.asp?nav=cr) Revised November 24, 2009. Accessed February 9, 2010.
2. Acute radiation morbidity scoring criteria. Radiation Therapy Oncology Group website.  
[www.rtog.org/members/toxicity/acute.html](http://www.rtog.org/members/toxicity/acute.html). Accessed June 12, 2010.

**Commented [LK9]:** Can we specify whether the rectal irritation was grade 1 or grade 2 to better define what is meant? 11 patients Grade 1, 8 patients Grade 2

**Commented [LK10]:** Comment from Mark Daniels: In this last paragraph there is some indication as to the rectal irritation was reduced by 50-75% or feel a 70-95% improvement. How is this assessment made? From what to what is what I kept asking myself. Was a pain assessment type scale given to the patients before and after and their mean scores dropped by this percentage, or perhaps it reduced the incidence of Grade 3 toxicity by 50% or reduced 75% of patients who were experiencing Grade 2 toxicity to Grade 1...that helps tie together the first page explaining the different Grades of toxicity if that is what was meant.  
This was based on a pre-symptom assessment form and a comparison to an EPIC form that we have all patients fill out at 5 weeks and at the end of treatment. EPIC (Expanded Prostate Cancer Index Form)

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**Commented [k12]:** Maybe better to say "at the Cancer Center of Irvine" than to refer to one physician? Yes thank you!

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<http://www.cancer.org/Cancer/ProstateCancer/DetailedGuide/prostate-cancer-treating-radiation-therapy>