IMPORTANT INFORMATION AND INSTRUCTIONS
FOR PATIENTS RECEIVING RADIATION THERAPY
TO THE PELVIS

Your doctors have recommended radiation treatments to the pelvis area. The number and exact location of these treatments will be determined by your radiation oncologist. This handout will acquaint you with some of the side effects associated with treatment to the pelvis. Normal tissues included in your treatment fields may be affected by the radiation and therefore undergo some temporary or permanent changes. Some of the information that follows describes how to manage and cope with many side effects that may occur.

The chance that radiation therapy will be effective in treating your tumor depends on a number of factors. Probably the most important two factors are the kind of tumor that you have and the stage, or amount, of disease. As with any type of medical treatment, radiation therapy does not always work and there is a chance that these treatments may not help you. Your doctor will discuss these possibilities with you, but, if you have further questions do not hesitate to ask your doctors or nurses.

Again, side effects listed below do not occur in all patients. They are changes that MIGHT happen during radiation therapy and may range from mild to severe. Because each case is unique, there may be some additional short and long-term side effects that your doctor will discuss with you. Whenever you have questions or concerns, please bring them up to your physician, radiation therapist or nurse.

APPETITE CHANGES

Explanation: Sometimes appetite changes occur during radiation therapy or they may already be present due to the disease itself and/or other treatments. Nutrition, however, is an important part of your therapy and we recommend you maintain your present weight.

Characteristics: You may notice that you never feel hungry.
You may become full quickly after only a small amount of food.
You may notice foods tasting or smelling different, flat or unpleasant.
You may feel nauseated and/or vomit.
Solutions/Resources: The staff will have suggestions and handouts to help you maintain the best possible nutritional status or to help with symptoms.

FATIGUE

Explanation: Some patients develop a decrease in energy levels or actual fatigue from their radiation treatments. This varies from patient to patient. Your body is using energy to fight cancer cells and/or to repair normal cells and tissues. Causes of fatigue are varied and can be due to your cancer, blood counts, nutrition and prior or current treatments.

Characteristics: You may experience fatigue that builds up toward the 2nd week of treatment and then stabilizes. This fatigue may persist for several weeks after you have finished your radiation treatments.

Solutions/Resources: Be sure to get adequate rest, balance your activities and try to exercise regularly.
   Eat a balanced and nutritious diet.
   Take naps, as necessary.
   Try to maintain a positive attitude towards your therapy.
   Do not expect immediate resolution of your fatigue when treatment stops.
   It may take weeks or months to return to “your old self.”

SKIN CHANGES

Explanation: The skin over your treatment field may become reddened, itchy or tender after several weeks of treatment. At the end of treatment, your skin may appear tanned and there could be some peeling. The area may feel firmer or fuller than surrounding skin due to temporary fluid accumulation. This fluid accumulation will most likely resolve without any treatment after a few months. Over time, the tissues under the skin may become more firm (fibrosis). DO NOT remove marks made on your body by the physician or radiation therapist unless specifically told to do so. Always protect against sunburn. Use products with at least a SPF of 15, or greater.

The skin in the involved area will be more sensitive to sun exposure.

Solutions/Resources: Avoid lotions or creams to the skin over the treatment field unless approved by the staff. The nurse may give samples or suggest preparations you can use. Currently, we are recommending AQUAPHOR ointment. You may also use 100% aloe vera gel. Use mild soaps (e.g., Eucerin, Liquid Olay soap, or Dove) if any. Wash gently and pat dry. Small, blue tattoos (the size of a freckle) will be placed to locate your treatment area once your treatments are underway. These tattoos are small permanent records on your skin as to where you received radiation treatments. Do not shave in the treated areas, unless you use an electric razor. Do not use hot water bottles or heating pads in the treated area. Do not wear tight fitting apparel that may rub or
irritate the treated area.

HAIR LOSS

Explanation: Hair loss related to your radiation treatments occurs only in the areas within the treatment fields. For pelvic radiation, this can be pubic hair and buttock hair. Hair loss generally begins 2 to 3 weeks into your treatment course and re-growth usually begins 3 to 6 months following the completion of your radiation treatments. Occasionally, the hair does not grow back.

GAS FORMATION

Explanation: It is possible that radiation directed to the pelvic area can cause gas formation. This gas formation may cause cramping that may proceed the development of diarrhea in some patients.

Characteristics: You may experience increased burping or flatulence. You may have a feeling or fullness in the stomach or bloating.

Solutions/Resources: The staff has suggestions and handouts for diet measures that will explain about avoiding gas forming foods, eating smaller meals more often. Wearing loose, non-constricting clothing will help with discomfort due to gas formation.

BOWEL CHANGES

Explanation: Radiation treatments directed toward the pelvis area can cause some irritation to the bowels if you are going to experience bowel changes from your radiation treatments, it usually begins after your second week of treatment, although it can occasionally occur later or earlier in your treatment course.

If you are already on bowel stimulants or laxatives for constipation, tell a staff member. They may discontinue those medications if you develop loose stools or diarrhea. If you continue to have problems with your bowels in the months following your addition treatments, please call the Cancer Center.

Characteristics: You may experience increased frequency of bowel movements and looseness of bowel movements (diarrhea).

Solutions/Resources: The two most effective things that can be done to relieve diarrhea are taking the medication and following the Low Residue Diet.
The staff can provide you with handouts explaining a Low Residue Diet. This diet will eliminate high fiber and fatty foods. For actual diarrhea, medication can be prescribed for relief. Imodium is the most common drug prescribed for diarrhea. You will have to adjust the amount of your medication to your individual needs. Most patients take 2 tablets per day, one in the morning and one at night. Extra tablets are to be taken as needed. Do not take more than 8 tablets per day without your physician's permission.

Be sure to check with the physician or nurse before using any bowel stimulants or laxatives.

For cleaning, alcohol free baby wipes instead of toilet paper is suggested.

- **Report to Physician or Nurse:** Passing more than 4-5 loose stools per day. Watery, diarrhea stools.

**FUTURE PELVIC SURGERY**

Any patient being considered for rectal biopsy or surgery should inform his physician that he has had radiation, and the physician should contact the radiation oncologist before biopsy or surgery. Biopsy or surgery on the rectum in a radiated area can result in complications.

**ANAL IRRITATION**

- **Explanation:** Occasionally, patients undergoing pelvic radiation will experience anal irritation or aggravation of pre-existing hemorrhoids. This is more often related to diarrhea or frequent bowel movements than it is the radiation itself.

- **Characteristics:** You may notice pain and burning during bowel movements that increases with the number of stools. You may begin to experience pain and burning between bowel movements.

- **Solutions/Resources:** Because the majority of anal irritation is related to diarrhea, the control of any diarrhea you are having will improve anal irritation you are having as well. For cleansing following bowel movements use alcohol free baby wipes, wiping gently. The staff may suggest you try an over-the-counter remedy such as Anusol or Preparation H to soothe the irritated tissues. **Please only do so with the staff's approval.** Warm sitz baths can be helpful in the relieving of burning. The staff may also prescribe medications for you to relieve discomfort.
BLADDER IRRITATION

Explanation: Sometimes, radiation to the pelvis may cause irritation to the bladder.

Characteristics: After a few weeks of treatment you may notice some burning when urinating.
You may notice the need to urinate more than usual.
You may notice symptoms similar to those associated with bladder infections.

Solutions/Resources: Drinking plenty of clear liquids will help keep your urine diluted so it is less irritating to your bladder. The staff may prescribe medications to help alleviate the symptoms of bladder irritation. One of the drugs prescribed is called PYRIDIUM. It is important to know that this drug will color your urine a bright orange and is a normal side effect of the drug.

Due to differences in male and female pelvic anatomy, we have separated the possible side effects for each.

GENITAL REACTION

Depending on your particular case, the radiation may affect your external genitalia. Your doctor will discuss if this is a possibility with you.

FEMALE PATIENTS:

Explanation: As a women, you may experience changes or side effects in your reproductive organs.

The labia, or folds of the skin around the vagina, may develop more of a skin reaction than other areas. It is important this area be kept as clean as possible using warm sitz baths 1-2 times each day with gentle cleansing. Pat the area dry after each bath. To help keep the skin folds and area dry, wear only cotton underwear, whenever possible sit with the area exposed to the air. Using a fan or blow dryer on the “cool” and “low” setting will help keep this area as dry as possible. Women having pelvic radiation can expect to stop menstruating and may have other symptoms of menopause. You may experience hot flashes, emotional swings or palpitation.
It is likely that your fertility will be affected. This does not mean that conception can not occur. You will need to continue or alter your birth
control practices accordingly. You will need to discuss these topics frankly with your physician prior to beginning your radiation treatments if they are issues for you.

You may continue sexual activities throughout your radiation treatments unless it causes too much discomfort, causes bleeding or you have been advised by your physician to not do so.

For vaginal dryness, we suggest using Replens, which are available at most drug or grocery stores. For sexual intercourse, you may want to use a water soluble lubricant such as K-Y jelly.

Occasionally, the vaginal area tightens following surgery and/or radiation treatments. If this may be the case for you we can instruct you in the use of a vaginal dilator which will decrease the amount of tightening you will experience over time.

The last pages of this instruction and side-effect sheet discuss female and Vaginal health. It is important that you read and follow these instructions.

Please check with the staff about douching. Usually, patients use one (1) tablespoon of white vinegar in one (1) quart of warm water. If you find the vinegar irritating, use warm water only.

It is not unusual to have some slight blood streaking or discharge during treatment. If the amount of blood or the discharge change dramatically or increase, please let the staff know.

**MALE PATIENTS**

**Explanation:** As a male you may experience some side effects specific to your gender.

High doses of radiation can temporarily or permanently affect a man’s libido or ability to have an erection. Occasionally some men will become impotent, but this is not generally the case.

For those men with large prostates, radiation may cause some swelling around the urethra, or tube that carries your urine from your bladder through your penis. This may cause you to urinate slower, have a smaller stream of urine or even may cause a complete blockage. If you notice a change in your ability to urinate, please let the staff know immediately. If you are not able to urinate at all, please immediately report to the nearest emergency room for care.
If radiation is given to an area that include the testes, there can be a reduction in the number of sperm and their ability to fertilize. This does not mean that conception can not occur and you will need to continue or alter your current birth control practices. It is important that your partner not become pregnant in the next year. Please discuss these issues frankly with your physician before beginning your radiation treatments.

**FERTILITY**

Both chemotherapy and radiation therapy can potentially affect fertility. If you are getting chemotherapy, you should talk to your medical oncology doctor (chemotherapy doctor) about any potential impact on fertility and their recommendations.

As for radiation therapy, we generally recommend that while on radiation therapy, patients should take appropriate steps for birth control. This is true for both men and women, as both sperm and eggs can be affected by radiation therapy. Therefore, it is very important that you take measures to prevent starting a pregnancy.

As for long-term fertility issues, this varies dramatically depending on the type of radiation therapy. With many treatments, there is no long-term impact to fertility from radiation therapy. However, for patients that receive radiation therapy to the pelvis or upper thighs, there can be impact on fertility. If that is the case, your radiation oncologist will talk to you about infertility risks, and give you information, if you are male patient, on sperm banking if you wish to preserve fertility. For female patients that wish to preserve fertility, information will be given on oocyte, egg or ovarian tissue banking prior to treatment.

On a long-term basis, even though there may be some impact on fertility, you cannot assume that you are sterile in the future. Therefore, it is generally recommended that if you do not to have a pregnancy in the future, that you apply any necessary birth control measures.

If you have questions regarding this, do not hesitate to talk to your physicians.
LONG TERM SIDE EFFECTS/PERMANENT COMPLICATIONS

Explanation: Any type of cancer treatment can result in complications that occur weeks, months or years following completion of treatment. Generally, late complications occur in less than 10% of patients receiving standard treatments.

As with most short term side effects, many long term effects affect body structures included in or adjacent to, the radiation treatment fields. Organs that are treated with pelvic radiation fields include bladder, bowel, rectum, reproductive organs and spinal cord. Skin, skin color changes and connecting tissues may be affected. Lymphedema or a permanent swollen extremity can occur. General effects of suppression of the immune system, endocrine system, arthritis, psychosocial complications and fertility problems may occur.

Any organ or tissue that is in the treatment area will be affected to a varying degree. The number of treatments, dose per day, total dose and techniques are calculated to try and reduce the risk of long-term damage. Your cancer may require treatment that may permanently affect tissues or organs. Your physician will discuss this with you.

Radiation therapy has been reported to increase the occurrence of new cancer. This is unlikely, however, if it happens it is usually after many years.

If there is any possibility that you are pregnant, it is important to inform your physician, nurse or radiation therapist immediately. If you or your spouse are considering pregnancy in the next year, please discuss this with your physician as soon as possible.

The possibility that long term consequences may occur following cancer treatment is a major reason that regular, lifelong medical follow-up is essential. Your physician will discuss any problems that may be associated with your particular cancer or type of treatment.
INSTRUCTIONS TO PATIENTS RECEIVING PELVIC RADIATION THERAPY

Numerous studies have shown that rectal and bladder distension can change the location and shape of organs in the pelvis. Basically, this means that the amount of urine in your bladder, and/or the amount of stool in your rectum can effect the location of organs or portion of organs that we wish to treat. Because of this, it is very important that we try to insure that your organs and structures are in the same position daily. This means that it is very important that you try and have your bladder and bowels consistent.

Please follow any of the recommendations that are checked below.

- □ Rectum/Empty □ During entire course

Throughout all of your treatments it is important that your rectum/rectal vault be empty. This is true for not only any bowel movement or stool, but gas as well. Please try to avoid foods that you know cause gas. If you need to pass gas, please try pass it before your treatments, not after. If you are constipated, please take medication such as a stool softener and talk to your physician about reducing your constipation. Please try and have a bowel movement, if possible, prior to your radiation therapy so that your rectum is not full of stool.

- □ Bladder/Full □ During entire course □ During treatment #

If you were instructed to have a full bladder for your treatment, it is important that you follow these instructions. If you have difficulty holding your urine, or are incontinent, please discuss this with your physician. The importance of having a full bladder is that it may displace small intestine out of the pelvis, therefore reducing both acute (current) and long-term side effects.

In general, we recommend that you urinate two hours prior to your radiation therapy treatment. Following this, try and drink 16 ounces of water (pop, power drinks and fruit juices do not work as well). After this, try and hold your urine so that your bladder is full for treatment.

Obviously, everyone’s bladder size and control is different. If this protocol is simply not manageable for you, you certainly can modify it but make sure you tell us. Understandably, everyone is concerned regarding possible “accidents.” However, because of the high number of pelvic patients that we treat, and the fact that we try and maintain this protocol on many patients, we are accustomed to accidents and certainly understand.

- □ Bladder/Empty □ During entire course □ During treatment #

In this particular case, we wish to have your bladder empty (without any urine). This is probably the easiest of all three protocols. Simply make sure that you urinate just prior to your radiation therapy treatment.
Female Health After Radiation Therapy

Radiation therapy, chemotherapy, certain type of pelvic surgery, or menopause can cause changes to your body. These may affect the vagina. It can become drier, less elastic, narrower, and shorter. You may or may not notice these changes. For example, if you are sexually active, intercourse may be painful. If you are not sexually active, this may not be a concern to you. However, these changes can make it hard for the doctor to do a pelvic exam. This is important after your treatment. You can do a number of things to improve your vaginal health.

Vaginal dryness can make you more likely to get infections, such as a yeast infection. Let your doctor know if you have symptoms such as vaginal itching, a discharge or soreness. Tablets, creams and pessaries to treat a vaginal yeast infection are also available over the pharmacy counter under brand names such as Monistat. But if you haven’t had thrush before, see your OB-GYN or GP first. Always see your physician if you’re not sure whether it’s thrush, if symptoms don’t improve or if it keeps coming back.

Vaginal Moisturizers

Moisturizers help to relieve vaginal drying. Use Replens® two to three times a week as directed on the package. This is available without a prescription in most drug stores. If you have trouble finding it, call (800) 252-0454.

Vaginal Lubricants

Use a vaginal lubricant when you have intercourse. This will make intercourse more comfortable and will prevent injury to the vaginal membranes. Also, use the lubricant each time you use your dilator (see below). Use only water-based lubricants. Examples are:

- Surgilube®.
- K-Y® Jelly.
- Astroglide®. You may have trouble finding this one at your drugstore. You can order it by calling (800) 848-5900.

Never use petroleum jelly or Vaseline®. Do not use lubricants that:

- Make the skin feel warm.
- Have colors.
- Have flavors.
- Kill bacteria.

These can irritate your vagina.

Vaginal Dilator

A vaginal dilator stretches your vagina. This can minimize narrowing and shortening. You will need to order a dilator set on the internet. The address is vaginismus.com. If you cannot use a computer, tell our nursing staff and we can have someone help you order this set. We recommend product # T8077 “Vaginal Dilator Set”.

Start using the dilator ________ weeks after you last radiation treatment.

Use the dilator ________ time(s) a week.
- Use the dilator for the rest of your life. Use it even if you are having intercourse.
- Tell your doctor or nurse if it hurts to use the dilator. Your doctor may prescribe medicine to help ease pain.

**How to Use Your Dilator**

1. Set aside private time to use the dilator.
2. Gather all the equipment you will need:
   - Dilator
   - Lubricant
   - A towel
   - Pillows
3. Prepare to do something that will help you relax. For example, have a:
   - Television remote to watch TV.
   - Radio or CD player to listen to music.
   - Book or magazine to read.
4. Wash your hands.
5. Go to a private area where you can lay down.
6. Place pillows to support your shoulders and neck. You do not want to pull yourself -year-old with your abdominal muscles. Position yourself in a “frog” position. This can be done by lying down against the pills with your knees bent at a 45-degree angle. They should be shoulder width apart. Rest your feet comfortably on the bed or couch. Make sure you can easily touch the opening of your vagina. Use a hand mirror if you need it.
7. The first time you use the dilator select the smallest one.
8. Squeeze some lubricant on your hand and apply it to the labia, the lips of the outside of the vagina. Also apply a generous amount of lubricant to the outside of the dilator.
9. Using gentle pressure, slowly insert the round end of the dilator into the opening of your vagina.
10. Take several slow deep breaths. Gently insert the dilator into the vagina as you breathe out. Always insert it at a flat or slightly upward angle. Never insert at a downward angle. Once the dilator is inserted, try to relax your muscles. While breathing out, push the dilator in further until you feel discomfort or resistance. It is normal to have such discomfort. The dilator will only go in a few inches.
11. Gently press the dilator against each side of the vagina to permit those tissues to stretch. If there is any tenderness or tightness along the walls of the vagina, very gently press the dilator in that direction and hold for a few seconds.
12. The dilator may start to slowly slip out of the vagina. Hold it in place using gentle pressure to keep it inserted as deeply as possible. Keep it in place for ten minutes if you can. This may be difficult in the beginning or when you start a new size dilator.

13. The dilator should feel snug but not painful when you insert it into your vagina. Once the dilator is inserted, you may do Kegel exercises while the dilator is inside. Tense and release the muscles you would use to stop your urine stream. Think of this as physical therapy for your vagina. Stay on your back and try to keep your legs relaxed.

14. Remove the dilator when the time is up. Wash it with soap and warm water. Do not use anything but soap and water. Dry it with a clean towel after each use. Store it as instructed in the kit.

15. If you were able to keep the dilator in place for 10 full minutes without much discomfort, the next time you use the dilator use the next larger size. If you have discomfort, continue with the same size until this becomes easier.

16. Many women need help as they begin using the dilator, so do not feel alone. If it hurts, stop and call your doctor or nurse for advice and more information.

17. It is also normal for the vagina to have a small amount of bleeding when you use the dilator. A panty liner will be enough to manage this. If you have a lot of bleeding, call your doctor. Soaking a sanitary napkin would be a lot of bleeding.
Dilator Feedback

"...patients who have pelvic floor dysesthesia, vaginismus, vulvodynia, and vulvar vestibulitis are very impressed with the design of your dilators... the tapering of the tip of your design is easier for insertion and the handle component allows for more control."

Karen Molinari, PT, M.S., CEEAA
Pelvic Floor Physical Therapy
New York, NY

"I like that your dilators are tapered at the end for greater ease of insertion."

Karen Fain, PT
Pelvic Floor Physical Therapy
Ann Arbor, MI

"I am very pleased with your product... loved the dilators because they have a handle and are easier for patients to use."

Holly Hermann, MS, PT, CGO
St. James HealthCare
Healthy Women, Cambridge MA

"I think your products are great. I recommend them to many of my patients."

Roger Perlman, MD
Providence, RI

"The set comes with a universal handle that easily attaches to the dilator and... and easily inserted by patients... effective and priced well."

Gail Shelly, PT, DVA, FAPTA
AFS Journal of Women's Health
Physical Therapy (Winter 2006)

"We use the vaginal dilators to assist in tightening the pelvic floor muscles... Patients are very happy with the results and by using them the patients feel that they are taking an active role in their treatment/recovery. Thank you for your help with these patients."

Amy Allen, PT
Beyond Basic Physical Therapy
New York, NY

"I prescribed your dilators... I used them regularly and found that they were easy to use, clean, and they worked very well for me. Thanks."

D.W.

"My patients suffer from vaginismus and with vestibulitis, pelvic floor dysfunction, endometriosis, interstitial cystitis, etc. Many patients like the idea of the handle, whereas most other dilators do not have this feature."

Linda McNulty, PT
Women's Pelvic Health Services
Therapy Plus Clinic, Dearborn, MI

"I am very impressed with the price of the product. It is much more affordable than what I have recommended to patients in the past."

Sara Jackson, PT
North Coast Medical Center, OH

"I ordered dilators through your website and they're great! I am so glad there is a website like yours, dedicated to helping women like me attain normal sex lives. Keep up the good work and thanks!"

Y.T.