MYOMECTOMY INFORMATION & CONSENT

We recommend that you read this handout carefully to prepare yourself or family members for the proposed procedure. A proper understanding of the procedure, its preparation, and post-procedure expectations and care can improve your safety and outcome. We strongly encourage you to contact your Care Center prior to your procedure if you still have any questions or concerns.

Definition

Leio = Denoting smooth

Myoma = Benign tumor of muscle

Ectomy = Denoting surgical removal of a segment or all of an organ

A leiomyoma is a benign (non-cancerous) tumor made up of smooth muscle and connective tissue and can arise in any part of the body containing smooth muscle. There are numerous terms used to refer to leiomyomas, such as myomas, fibromas and, most frequently fibroids, or fibroid tumors. The discussion here pertains to leiomyomas of the uterus, the most common tumor of the uterus and female pelvis.

Almost half of all women will have uterine myomas of some size, though most women will not have any symptoms from them. The symptoms of uterine leiomyomas are abnormal uterine bleeding, heavy menstrual bleeding, pelvic and vaginal pressure, pelvic pain, abdominal distortion, spontaneous miscarriage, and infertility. Risk factors for symptoms are size, location, number, and rapid growth.

Risk factors for the development of fibroids appear to be:

- African American ethnicity (2-3 times as frequent as white women)
- Obesity
- First period when younger than age 12

Uterine myomas can be divided into those occurring beneath the lining of the uterus (submucous), within the muscle of the uterus (intramural), and those on the "outside" surface of the uterus (subserous).

A myomectomy refers to the surgical removal of one or more uterine leiomyoma(s). Myomectomy is intended to remove fibroids from the uterus that are responsible for symptoms such as those listed earlier. This operation can be performed using three different methods:

- Hysteroscopy: Operating within the uterine cavity with telescopic vision and small instruments to remove submucous fibroids (see D&C/Hysteroscopy). This procedure is done through the vagina.
- Laparoscopy: Operating through the abdomen with telescopic vision and small instruments to remove or ablate (destroy) fibroids on the uterine surface and within the uterine muscle.

Patient Initials _____

- Laparotomy: Traditional "open" abdominal surgery to remove larger fibroids or many small fibroids.

Leiomyomas do not require treatment. Treatment of fibroids can include observation, myomectomy, hysterectomy, and in recent decades, procedures to destroy (ablate) the tumors or to deprive them of their blood supply to cause them to die (uterine artery embolization). Medications to shrink fibroid tumors can now be given for a short period of time (up to 1-2 years). After stopping the medication, the fibroid tumors often regrow to the previous size.

The approach to management of your leiomyomas will depend on your symptoms, the size, location and number of fibroids, treatment goals, and the preference of you and your doctor. The pros and cons of each will be discussed with you prior to any procedure.

Preparation

As with all procedures where general anesthesia is administered, you will be asked not to eat or drink anything after a certain time on the evening prior to your surgery. You may brush your teeth in the morning but should not swallow the water. If you are on medications that must be taken, you will discuss this with your provider and/or the anesthesiologist at your pre-operative visit and instructions will be given to you. You are obligated to inform us if anything has changed (medication or otherwise) since your previous visit. The procedure may not be performed if you are currently taking or have recently taken any medication that may interfere with your ability to clot blood (blood thinners, aspirin, anti-inflammatory medicines, etc.). The most common of these medications is aspirin and all related pain relievers or anti-inflammatory compounds (whether prescription or over-the-counter).

Procedure

For hysteroscopic and laparoscopic surgery, you will be lying on your back with your knees and hips bent and heels in stirrups much like you would for pelvic examination. For laparoscopic procedures, an instrument may be placed into the uterus via the vagina to allow for uterine manipulation. For abdominal surgery you will be lying on you back with your legs extended. The procedure can take from 30 minutes to 2 hours depending on the size, number, and location of fibroids as well as the type of surgery. General anesthesia is administered, and you will "go to sleep" for the duration of the surgery.

Hysteroscopy: The procedure begins by gently cleaning the vagina and then placing a speculum in the vagina to hold it open. The cervix is grasped with an instrument to hold it still, while the opening is gradually dilated with surgical instruments until the hysteroscope (telescope for the uterine cavity) or resectoscope (hysteroscope for operating) can be inserted without force. The cavity of the uterus is much like a balloon. When empty, it is flat, but when inflated, space is created inside the balloon where there was none. Performing hysteroscopy involves inflating the cavity of the uterus with a liquid (flowing in and out through the telescope) so that each surface can be seen. Miniaturized instruments can then be placed along with the telescope to remove or destroy the fibroid(s).

Laparoscopy: After cleaning the abdomen, a small incision is made at the belly button and the laparoscope (telescope to see in the abdomen) is inserted. Other small incisions are made to allow small surgical instruments to be inserted. Using techniques similar to traditional "open" surgery, the fibroids are removed or destroyed.

Laparotomy: After cleaning the abdomen, an incision large enough to see and reach into the pelvis is made. Large and multiple fibroids can then be removed. Laparotomy permits the easiest access to the uterus, but also requires the longest hospitalization and recovery.

Patient Initials _____

Post Procedure

In the case of hysteroscopy and most laparoscopic procedures, you will be in the recovery room for a short time before being sent home. After a laparotomy, you will be sent to a hospital bed where most patients spend one or two nights. There may be discomfort around the incision sites, within the vagina, and on the lower abdomen depending on the procedure you had performed. There may be a small dressing over the abdominal incision site(s) (if there are any). There may be small blood staining on the wound dressing. If the dressing becomes soaked or you see active blood oozing, please contact us immediately. You may shower one day after surgery, but no bathing or swimming (unless otherwise instructed). It is normal to have some bloody discharge from the vagina for up to two weeks. If you have significant bleeding, you should call our office. We ask that you refrain from any strenuous activity or heavy lifting until your follow up visit. Every patient has some degree of swelling and bruising, and it is not possible to predict in whom this might be minimal or significant.

- *Hysteroscopy*: Though you may have some discomfort and cramping following the procedure, it is usually not necessary for you to plan time off work or your normal activities beyond the day of surgery. It is normal to have some bleeding and discharge following hysteroscopic myomectomy. It is suggested that you use menstrual pads to maintain hygiene and protect your clothing. You are instructed to refrain from vaginal intercourse, douching and tampon use until told by your doctor.
- *Laparoscopy*: You may have some discomfort and cramping following the procedure, including gas pain and shoulder pain. This discomfort is often due to the gas used to inflate the abdomen for surgery and typically resolves after the first 1-2 post-operative days. It is not necessary for you to plan an extended time off from work or your normal activities. Most women can resume activity, other than strenuous activity and lifting, within 3-4 days. It is normal to have some bleeding and discharge. It is suggested that you use menstrual pads to maintain hygiene and protect your clothing. You are instructed to refrain from vaginal intercourse, douching and tampon use until told by your doctor.
- *Laparotomy*: We strongly encourage you to take at least 3-4 weeks off from work and perhaps more if your occupation requires strenuous activity or heavy lifting. In the first 48 hours, it is to your advantage to minimize activity and to rest often in a lying down position. Periodic walking is encouraged. Some patients have almost no discomfort while others are somewhat uncomfortable for a few days to weeks. We may provide you with a prescription for pain medication to be used as needed. An antibiotic prescription may also be given and should be taken until completion. If any side effects occur, contact our office immediately. You must refrain from any strenuous activity or heavy lifting until we tell you otherwise. Sexual activity of any sort is absolutely prohibited until we will tell you (usually six to eight weeks).

Expectations of Outcome

The goal of myomectomy is the relief of symptoms caused by fibroid tumors while keeping the uterus. Many women will notice a reduction in symptoms while other will not. The success of myomectomy for long-standing infertility depends largely on the age of the patient, the size/number of fibroids, and other factors affecting fertility.

Myomectomy complicated by bleeding requires hysterectomy in 10% of cases. Within 20 years of myomectomy, 25% of women will have a hysterectomy for recurrent leiomyomas.

Patient Initials _____

Possible Complications

All surgical procedures, regardless of complexity or time, can be associated with unforeseen problems. They may be immediate or quite delayed in presentation. Aside from anesthesia complications, it is important that every patient be made aware of all possible outcomes, which may include, but are not limited to:

- *Deep Vein Thrombosis (DVT)/Pulmonary Embolus (PE*) – In any operation (especially longer operations), you can develop a clot in the vein of the leg (DVT). Typically, this presents 2-7 days (or longer) after the procedure as pain, swelling, and tenderness to touch in the lower leg (calf). Your ankle and foot can also become swollen. **If you notice these signs, you should go directly to an emergency room and contact your care center.** Although less likely, this blood clot can move through the veins and block off part of the lung (PE). This would present as shortness of breath and possibly chest pain. We may sometimes ask the medical doctors to be involved with the management of either of these problems.
- *Urinary/Tract Infection or Sepsis*: Although we may give you antibiotics prior to and after the operation, it is possible for you to get an infection. The most common type is a simple bladder infection that presents with symptoms of burning urination, urinary frequency, and a strong urge to urinate. This will usually resolve with a few days of antibiotics. If the infection enters the bloodstream, you might feel very ill. This type of infection can present with both urinary symptoms and any combination of the following: fevers, shaking chills, weakness or dizziness, nausea, and vomiting. You may require a short hospitalization for intravenous antibiotics, fluids, and observation. This problem is more common in diabetics, patients on long-term steroids, or in patients with disorders of the immune system.
- *Wound Infection*: If you have a laparoscopy or laparotomy, the incision sites can become infected. While an infection typically resolves with antibiotics and local wound care, occasionally, part or all of the incision may open and require revision.
- *Scar Tissue Formation*: Scar tissue can form within the abdomen (adhesions) or within the cavity of the uterus that can lead to infertility or chronic pain.
- *Need for Cesarean Section/Risk of Uterine Rupture*: If the incision to remove the fibroid(s) involves the inner layer of the uterus (endometrium), your doctor might recommend cesarean section without labor for delivery of all future pregnancies.
- *Treatment Failure*: Many women will see improvement in their symptoms after myomectomy, although these same symptoms can recur at some point in the month or years after surgery. 25% of women will have a hysterectomy for recurrent fibroids.
- *Blood Loss/Transfusion*: The uterus is quite vascular. Blood loss in this procedure is usually minimal to moderate. In some cases, blood loss can be significant enough to necessitate hysterectomy to control bleeding or transfusion to replace blood lost to hemorrhage.
- *Fluid Imbalance*: (applies only with hysteroscopic myomectomy) In addition to water, fluids used to inflate the cavity of the uterus for hysteroscopy contain dissolved sugars, starches, and salts. These substances give the fluids certain desirable properties for visualization of the uterine cavity. When too much fluid flows from the uterus and enters the abdominal cavity or blood stream, a serious imbalance in the water content of the blood may result. Careful choice of fluid and monitoring of fluid delivery make this an uncommon complication.

Patient Initials _____

- *Bleeding/Hematoma*: When a small blood vessel continues to ooze or bleed after the procedure is over, the area of collected blood is referred to as a hematoma. The body normally re-absorbs this collection over a short period of time, and surgical drainage is not common.
- *Ileus or Bowel Obstruction*: Because we operate near the intestines, they can go into prolonged spasm (ileus), or they may become blocked (obstruction). Treatment ranges from observation to open surgery.
- *Lower Extremity Weakness/Numbness* – This is possible following procedures where the patient is in the lithotomy (legs up in the air) position on the operating table for a long period. This is a rare event and is usually self-limited, with a return to baseline expected.
- *Chronic Pain*: As with any procedure, a patient can develop chronic pain in an area that has undergone surgery. Typically, the pain disappears over time, although some pain or feeling of numbness may persist. If persistent, further evaluation may be necessary.
- *Organ Injury:* For hysteroscopic procedures, perforation of the uterus is the most serious complication of the procedure. This is the creation of a perforation or hole in the wall of the uterus. Perforation of the uterus may lead to injury of other structures and organs within the abdomen (blood vessels, nerves, intestines, and bladder), bleeding, or infection. Perforation is not common but may require another operation to be treated appropriately. For laparoscopic procedures, during initial placement of the instruments or during any part of the dissection, any organ in the abdomen or pelvis (liver, spleen, colon, intestine, bladder, stomach, ureter, uterus, tubes, ovaries, etc.) can be inadvertently injured. Often, the problem can be treated through the laparoscope. In other instances, conversion to an open operation may be necessary. Treatment depends on the particular organ injured and the severity of the injury. For open procedures, any organ in the abdomen or pelvis (liver, spleen, colon, intestine, bladder, stomach, ureter, uterus, tubes, ovaries, etc.) can be inadvertently injured.
- The following complications are specific to laparoscopic procedures:
    - *Subcutaneous Emphysema*: In rare instances, the carbon dioxide gas (CO_2) can escape into the subcutaneous (below the skin) tissue plane. In the post-operative period, this would present with minor to severe swelling and bruising (depending on the amount of gas in the tissue). The gas eventually gets reabsorbed by the body, and the swelling and bruising resolve with time.
    - *Tension Pneumoperitoneum*: The pressure of CO_2 gas in the peritoneum (intra-abdominal space) is carefully monitored, and there are short intermittent fluctuations of no consequence. Sometimes, the pressure can remain high for a prolonged period. In this instance, the elevated pressure can push upward on the chest cavity and cause problems with proper ventilation (breathing). This may result in blood pressure fluctuation and problems with the heart. In rare instances, high intra-abdominal pressures can result in a tension pneumothorax (collapse of the lung due to high surrounding pressures). See pneumothorax below.
    - *Gas Embolism*: This unusual problem results from a significant amount of CO_2 gas getting into the blood vessels. The result can be changes in heart rhythm and blood pressure. While cardiac arrest (complete stop of the heart) is possible, it is highly unusual.
    - *Pneumothorax (Collapse of the Lung)*: This can occur if one of the instruments is inadvertently placed in the thoracic (chest) cavity or if dissection opens a small hole in the pleura (chest cavity lining). A chest tube (lung cavity drain) would be placed that will be removed in a few days. There are rarely long-term complications as a result. If this is not recognized however, CO_2 gas can force its way into the cavity outside of the heart

and lung blood vessels (pneumomediastinum) or even directly around the heart (pneumopericardium). These very rare complications can be life threatening and require immediate attention in an intensive care setting.

- *Hernia*: Not all small incisions are sutured closed in the deep layers. It is possible to develop a small hernia (tissue protrusion) in the wound. Treatment can be observation (if it is only a cosmetic issue) or a surgery to repair the weak area of supportive tissue.

_____ _____/_____/_____

Patient Name Date

_____

Patient/Health Care Agent/Guardian/Relative Signature

_____

Physician Signature

_____

Witness Signature

Patient Initials _____