



Endometrial biopsy

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Abnormal uterine
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Atypical glandular
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Uterine cancer

Summary Endometrial biopsy is one of the most common outpatient gynecologic procedures and is rapid, safe, and inexpensive. It is a procedure that family physicians can easily perform in the office. Indications for endometrial biopsy include abnormal uterine bleeding (especially if the patient is on tamoxifen therapy), postmenopausal bleeding, atypical glandular cells on pap smear, follow-up of previously diagnosed endometrial hyperplasia, Lynch syndrome, evaluation of premenopausal patients with one year of amenorrhea, infertility, and response to hormone therapy. It has been determined by the American College of Obstetrics and Gynecology and the Society of Radiologists in Ultrasound to be effective and accurate for the evaluation of abnormal uterine bleeding and postmenopausal bleeding, including diagnosing or ruling out uterine cancer. Contraindications include pregnancy, profuse bleeding, clotting disorders, acute cervical infection, acute pelvic inflammatory disease, and cervical cancer. Serious complications are rare.

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Endometrial biopsy is a common and simple procedure that family physicians can perform in the office. It is one of the most common outpatient gynecologic procedures.¹ It is a rapid, safe, and inexpensive procedure.² This article highlights the indications, contraindications, possible complications, and procedural details of endometrial biopsy. A sample consent form and patient educational handout are provided, as well as the most recent current procedure terminology (CPT) and International Classification of Diseases, 9th revision (ICD-9) codes for the clinician to use for coding and billing.

Indications

There are several indications for endometrial biopsy (Table 1). These include abnormal uterine bleeding (especially if the patient is on tamoxifen therapy³), postmenopausal bleeding, patients who have atypical glandular cells on pap

Table 1 Indications for endometrial biopsy

Abnormal uterine bleeding
Postmenopausal bleeding
Atypical glandular cells on Pap smear
One year of amenorrhea
Follow-up of previously diagnosed endometrial hyperplasia
Endometrial dating to define the phase of the menstrual cycle
Evaluation of infertility
Evaluation of uterine response to hormone therapy
Cancer screening in those with a history of Lynch syndrome
Tamoxifen therapy with abnormal uterine bleeding

smear, follow-up of previously diagnosed endometrial hyperplasia, cancer screening in those with a history of Lynch syndrome (hereditary nonpolyposis colon cancer), and evaluation of premenopausal patients with one year of amenorrhea. It can also be used for endometrial dating to define the phase of the menstrual cycle, evaluation of infertility, and evaluation of uterine response to hormone therapy.^{4,5}

Abnormal vaginal bleeding is a frequent presenting complaint in women in the postmenopausal or perimenopausal period.⁶ A consensus panel from the Society of Radiologists

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Table 2 Contraindications to endometrial biopsy

Pregnancy
Profuse bleeding
Acute pelvic inflammatory disease
Acute cervical infection
Acute vaginal infection
Clotting disorders
Cervical cancer

in Ultrasound determined that either endometrial biopsy or transvaginal ultrasonography is effective as a first step in the evaluation of postmenopausal bleeding.⁷ The American College of Obstetrics and Gynecology (ACOG) Bulletin (1991) concluded that the accuracy of office endometrial biopsy under optimal conditions approaches that of dilation and curettage (D & C) for abnormal uterine bleeding.⁸

Contraindications/complications

There are very few contraindications to endometrial biopsy (Table 2). Pregnancy is an absolute contraindication. Other contraindications include profuse bleeding, acute pelvic inflammatory disease, clotting disorders, acute cervical or vaginal infections, and cervical cancers.^{1,4} Conditions that may prohibit endometrial biopsy include morbid obesity, severe cervical stenosis, and severe pelvic relaxation with uterine descensus.⁹

Serious complications of endometrial biopsy are rare. Pain and cramping are common. These can be decreased with the use of oral naproxen sodium or ibuprofen or an intrauterine anesthetic such as lidocaine or benzocaine. Most commonly, 500 mg naproxen sodium or 600 mg ibuprofen is given 30 minutes to 2 hours before the procedure.⁴ Vasovagal reactions, bleeding, and infection are potential complications. Significant bleeding is rarely encountered. Uterine perforation occurs at a rate of 1 to 2 per 1000 procedures.¹

Materials

Materials needed for the procedure are (Fig. 1):

- Drape
- Gloves
- Vaginal speculum
- Betadine or chlorhexidine antiseptic
- Cotton balls or large cotton-tipped swabs
- Ring forceps
- Tenaculum
- Uterine sound (may or may not be needed)
- Endometrial aspirator (Pipelle)
- Anesthetic gel or spray (optional)
- Sample container with buffered formalin with label

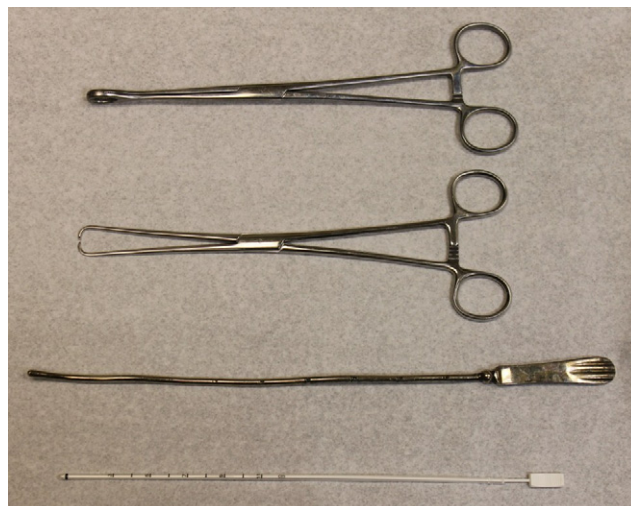


Figure 1 From top to bottom: ring forceps, tenaculum with teeth, metal uterine sound, and endometrial aspirator (pipelle).

- Large cotton-tipped swabs or sponge sticks (to help control bleeding after removal of tenaculum, if needed)
- Monsel's solution or silver nitrate sticks (to help control bleeding, if needed)

Consent

Informed consent is required from the patient. An example form is provided in the Appendix.

The materials listed previously can be laid out on a mayo table and used to help explain to the patient what the procedure entails.

Procedure

All materials and instruments should be set up in the procedure room. If chosen, a laminaria such as seaweed can be inserted into the cervical os 4 to 6 hours before the procedure for dilation, but this is not required.

The patient lies on an examination table in the dorsal lithotomy position. A bimanual examination can be performed to assess the position and size of the uterus as well as to palpate for any obvious masses.

Insert a vaginal speculum and ensure that the cervix is in full view and centered in the speculum. If indicated, a pap smear can be performed at this point. Use the ring forceps to grasp a cotton ball and dip it in Betadine or chlorhexidine prep. Alternatively, prepackaged Betadine swab sticks can be used if the patient is not allergic to iodine. Cleanse the cervix completely with the Betadine or chlorhexidine prep. Repeat this step twice (3 times total).

A toothed or atraumatic tenaculum can be applied at the 12 o'clock position midway between the cervical os and the outer cervical edge to grasp the cervix and allow it to be

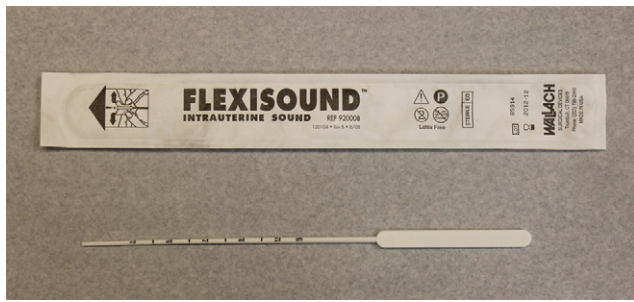


Figure 2 Disposable uterine sound.

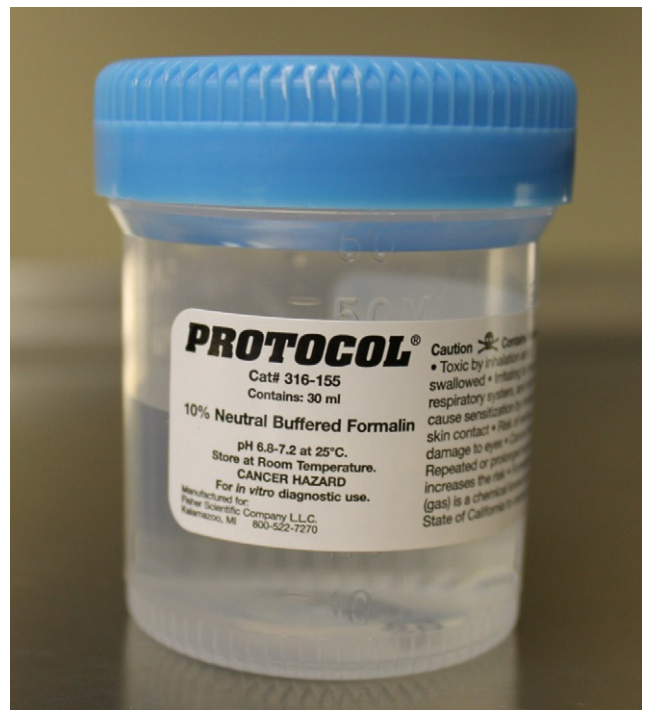


Figure 4 Sterile Formalin container.

pulled toward the physician to straighten the path from the vagina to the fundus of the uterus. This step is not required but will allow the endometrial aspirator or Pipelle to be inserted much easier. The atraumatic tenaculum causes less bleeding.

To lessen pain, lidocaine or benzocaine can be applied into the uterine cavity. This is not performed routinely, but is an option especially, if the patient is very anxious. One technique is to insert an 18-g angiocatheter through the endocervix into the uterine cavity to instill 5 mL of 2% lidocaine. The angiocatheter can be left in place for 3 minutes before withdrawing to limit backflow.¹

Sound the uterus with a uterine sound (disposable plastic [Fig. 2] or sterilized metal). Use of a metal sound, as opposed to a plastic one, will help dilate the cervix in addition to sounding the uterus. Alternatively, an attempt can be made to insert the Pipelle (Fig. 3) without using a uterine sound if it can be inserted easily and to the correct depth. However, the uterine sound does help dilate the cervix and generally makes inserting the Pipelle much easier. The uterus is typically 6 to 8 cm in length. If even a metal sound cannot be passed through the endocervical canal, a cervical dilator may need to be used to dilate the cervix.

Insert the Pipelle (Fig. 3) through the external os and through the endocervical canal, into the uterus and up to the fundus. Sterile lubricant can be applied to the sides of the Pipelle to make insertion easier before insertion.

With the aspirator fully inserted, hold the outer sheath between the thumb and index finger of one hand. Use the other hand to draw the piston completely back in one continuous motion to create negative pressure within the sheath. Keep the piston held back to maintain negative pressure (Fig. 1).

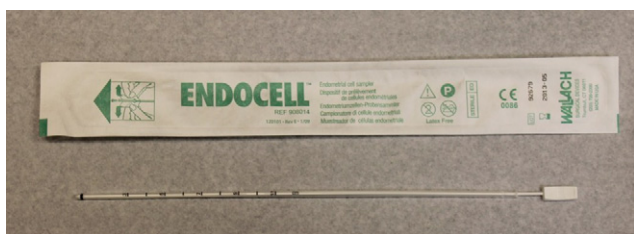


Figure 3 Endometrial aspirator (pipelle).

Twirl the sheath of the aspirator between the thumb and the index finger. Begin moving it in and out between the internal os and the uterine fundus. This allows sampling of various areas of the uterus. If the catheter is accidentally withdrawn from the cervix, it will lose its suction. An attempt should be made to completely fill the sheath with tissue before withdrawing it. Keep the piston drawn back after withdrawing it and hold the tip over the sample container filled with formalin. Push the piston forward to expel the sample into the formalin container. If there is inadequate

Table 3 Coding and billing

ICD-9 codes	CPT codes
626.8 Dysfunctional uterine bleeding	58100 Endometrial sampling (biopsy) with or without endocervical sampling (biopsy), without cervical dilation
626.9 Abnormal uterine bleeding	57800 Cervical dilation (instrument)
627.0 Menopausal and premenopausal bleeding	59200 Cervical dilation (laminaria)
627.1 Postmenopausal bleeding	
621.2 Enlarged uterus	
621.0 Uterine polyp	
795.00 Abnormal glandular pap smear of cervix	
625.9 Pelvic pain	
V84.09 Genetic susceptibility to other malignant neoplasm (e.g., Lynch syndrome)	

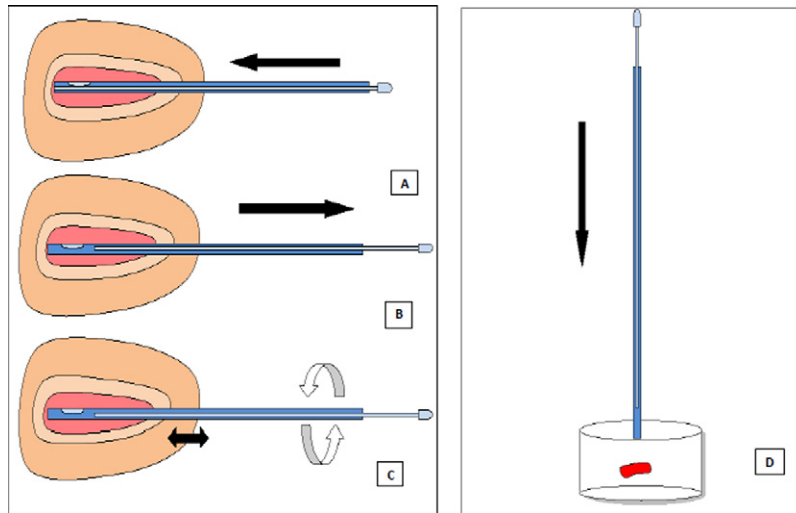


Figure 5 Endometrial pipelle being used for aspiration. (A) Pipelle is inserted through cervical os to uterine fundus. (B) Piston is drawn backwards to create suction. (C) Pipelle is twisted and moved in all directions while piston remains pulled back. (D) Piston pushed into pipelle to release tissue sample into sample cup.

sample and the tip has not been contaminated, it may be reinserted into the uterus to obtain more tissue using the same procedure as described before. Alternatively, a new aspirator may be used to obtain more tissue. An adequate sample will usually appear as a dark red, solid material and will not disintegrate in the formalin. The container should be capped tightly to send to pathology (Fig. 4).

Remove the tenaculum from the cervix, if used. Most bleeding can be controlled with gentle pressure via a large cotton-tipped swab or sponge stick. If bleeding continues, use Monsel's solution (ferric subsulfate) or silver nitrate sticks to cauterize the site. Remove the speculum from the vagina. Ask the patient to take her legs out of the stirrups and continue to lie on the table for 5 to 10 minutes before rising to help avoid any vasovagal reaction.

Postprocedural care

The patient should be given a menstrual pad because there will likely be a small amount of bleeding. She should be instructed to take naproxen or ibuprofen (if no contraindications) as needed for cramping or pain. It is important that patients are instructed to be evaluated immediately if severe pain, severe bleeding, or any signs or symptoms of infection (such as fever or abnormal vaginal discharge) occur. The patient should return in approximately one week to review the pathology in clinic with the provider who performed the procedure.

Coding and billing

As with any procedure, coding for the procedure with a CPT code as well as a diagnosis (ICD) code is required for billing and reimbursement. Table 3 shows common diagnosis codes indicating the need for endometrial biopsy, as well as CPT

codes for an endometrial biopsy and cervical dilation. If the endometrial biopsy is performed on the same day as evaluation and management for other conditions, a -25 modifier may be used for the Evaluation and Management code (level of care) for the other medical problems (Fig. 5).

Appendix

Patient Consent Form for Endometrial Biopsy

Patient Name: _____

MR#: _____

DOB: _____

I, _____, consent to have an endometrial biopsy performed by Dr. _____.

I understand the benefits of this procedure to include:

Obtaining tissue samples through biopsy to help make a diagnosis of my condition

Helping plan for future therapy or follow-up

I understand the risks of this procedure include, but are not limited to:

Pain or cramping—usually controlled with naproxen or ibuprofen

Bleeding—usually mild and can be controlled with outpatient treatment in most cases, but rarely may require hospitalization

Infection (rare)

Missed diagnosis (rare)

Perforation of the uterus, which may require hospitalization and/or surgery (rare)

My physician has explained the alternatives to diagnose my condition. I understand there may be other tests that need to be done to diagnose my condition in addition to the endometrial biopsy.

I verify that I have read this consent in its entirety and understand it completely. I have been given the opportunity

to ask my physician questions and have received satisfactory answers to any questions I have asked. I hereby request and agree to undergo an endometrial biopsy.

I also understand that I must follow up the results of this procedure with my physician and will do so.

_____	_____
Patient's Signature	Date/Time
_____	_____
Physician Signature	Date/Time
_____	_____
Witness's Signature	Date/Time

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