

# Postmenopausal Bleeding — Signs and Differential Diagnosis

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**Postmenopausal bleeding is uterine bleeding that occurs one year or more after menopause. The inclusion of one year in the definition is very important as menopause and the final menstrual period are both diagnosed retrospectively after one year of amenorrhea. Postmenopausal bleeding is a common problem and is often caused by endometrial disease. The etiologies of postmenopausal bleeding can be classified into benign and malignant conditions. An accurate diagnosis can be assessed by measurement of the thickness of endometrium by transvaginal ultrasonography in postmenopausal bleeding.**



## Epidemiology of Postmenopausal Bleeding

Postmenopausal bleeding is **very common, especially in the first years after menopause**. It is estimated that approximately 10% of women who enter menopause might have postmenopausal bleeding. Endometrial carcinoma is the most feared etiology of postmenopausal bleeding and accounts for approximately 10–15% of the cases. It is a common incidence in 1 in 10 postmenopausal women who are above 55 years.

The **most common etiology of postmenopausal bleeding is endometrial polyps**. These polyps are more common in patients with increased endometrial thickness. Up to 40% of the cases of postmenopausal bleeding are caused by endometrial polyps and increased endometrial thickness. Fortunately, this is a benign condition that can be treated easily.

Endometrial cancer is the most common malignancy of the female reproductive tract in the United States. Because the **most common presentation of endometrial cancer is postmenopausal vaginal bleeding in 90% cases**, early diagnosis is usually possible in most cases. The early diagnosis of endometrial cancer makes this common malignancy a potentially curable disease.

## Clinical Presentation of Postmenopausal Bleeding

A **patient with postmenopausal bleeding typically presents with an episode of vaginal bleeding after one year or more of amenorrhea**. The main concern of the patient and the doctor is endometrial cancer; therefore, the diagnostic workup is aimed to exclude this malignant and potentially curable cancer.

Presence of other symptoms other than uterine bleeding can help to assess other causes. History taking should focus on the known risk factors for endometrial cancer, such as the use of estrogen-only hormone replacement therapy and cigarette smoking history.

### Common Causes of Postmenopausal Bleeding are:

- **Endometrial atrophy:** After menopause, the endometrium may become too thin as a result of low estrogen levels
- **Polyps:** Polyps are usually noncancerous growth that develops from tissue similar to the endometrium, the tissue that lines the inside of the uterus
- **Endometrial hyperplasia:** In this condition, the lining of the uterus thickens - hyperplasia can lead to endometrial cancer

## Diagnostic Workup in a Patient with Postmenopausal Bleeding

As we have explained, the main goal of the diagnostic workup in a woman with postmenopausal bleeding is to exclude endometrial carcinoma. **Transvaginal ultrasonography is the first step in the diagnostic approach for endometrial carcinoma**. This is usually followed by an invasive endometrial assessment method such as endometrial sampling, hysteroscopy or dilation, and curettage.

## Transvaginal Ultrasonography for Postmenopausal Bleeding

The **aim of transvaginal ultrasonography is to assess the thickness of the endometrium**. Endometrial thickness in a postmenopausal woman that is 4 mm or less excludes an endometrial pathology as the etiology of postmenopausal bleeding and makes endometrial sampling unnecessary.

When performing transvaginal ultrasonography, it is important to determine the estimated risk of endometrial cancer in the woman before performing the imaging study.

The **risk of endometrial carcinoma in a woman with postmenopausal bleeding is significantly higher** compared to the general healthy population.

Additionally, a woman who is 80 years old and develops postmenopausal bleeding is very likely to have endometrial cancer compared to a woman in her fifties; therefore, it might be reasonable to go directly for invasive endometrial assessment approaches in the elderly who present with postmenopausal bleeding.

Ultrasound imaging is good for the initial evaluation of the postmenopausal bleeding because of accuracy by assessment of the thickness of the endometrium.

**Note:** Women who have diabetes and obesity are at least twice as likely as those without these two conditions to have endometrial carcinoma.

It might be reasonable to go directly for invasive procedures in a woman who is old, who has postmenopausal bleeding, and who is both obese and diabetic.

## Invasive Endometrial Assessment for Postmenopausal Bleeding

Nowadays, it is recommended to **go for invasive endometrial assessment only if the woman has a high pretest probability of endometrial carcinoma** or if transvaginal ultrasonography



**Image:** "Carcinoma Endometrium" by Tandulwadkar S, Deshmukh P, Lodha P, Agarwal B. License: [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/)

shows an endometrial thickness of more than 4 mm.

In the past, dilation and curettage was the procedure of choice for endometrial sampling to exclude or confirm the diagnosis of endometrial carcinoma. This procedure is very invasive, and requires in-patient care and general anesthesia; therefore, **it is no longer recommended to perform dilation and curettage in a woman with postmenopausal bleeding.**

In current modern practice, guided invasive procedures are the best at the exclusion of endometrial cancer or the confirmation of the diagnosis. Hysteroscopy with biopsy sampling of the endometrium is very specific and sensitive for endometrial carcinoma.

Endometrial sampling with a Pipelle device has a detection rate of endometrial carcinoma of around 99.6%. Hysteroscopy and **endometrial sampling can be performed in an outpatient setting without the need for general anesthesia.**

## Diagnostic Algorithm for Postmenopausal Bleeding

When a woman presents with postmenopausal bleeding, it is important to **be systematic so that one does not miss any potential malignant disease.** Additionally, one should be as conservative as possible so that the patient does not have to face unnecessary invasive procedures.

The **first step in the management of the woman who presents with postmenopausal bleeding is to use a patient characteristics prediction model** to assess the pre-test probability of endometrial cancer. Women who have a very high probability of this assessment are expected to have a malignant etiology, i.e. endometrial carcinoma, and should undergo further testing.

On the other hand, a young menopausal woman who takes combined oral contraceptives with progestin, and who has a low probability of endometrial carcinoma, might receive expectant management and need to be evaluated for recurrent bleeding in the future.

**Those who present with recurrent bleeding should be considered as high risk for malignancy and should undergo endometrial sampling.** On the other hand, patients who present with postmenopausal bleeding for the first time, who have a high pretest probability of endometrial cancer, are recommended to receive transvaginal ultrasonography to assess the thickness of the endometrium and abnormal blood flow pattern developed due to the tumor.

Patients with an endometrial thickness of 4 mm or less should again receive expectant management and wait and see which approach is recommended. If they develop recurrent bleeding, they should go for endometrial sampling to exclude malignancy. On the other hand, women who have an endometrial thickness of more than 4 mm on transvaginal ultrasonography should go for endometrial sampling.

**Endometrial sampling results can be classified into three main categories:**

- Malignancy ruled out
- Insufficient endometrial sample
- Malignancy confirmed

In the case of malignancy confirmed, a hysterectomy is recommended. Fortunately, **most cases of endometrial carcinoma are recognized early enough that a hysterectomy is usually curative.**

Women who have a sufficient endometrial sample that excludes malignancy should undergo expectant management. If bleeding recurs, they should undergo a hysteroscopy and guided biopsy of suspicious lesions. Finally, women who have an insufficient endometrial sample should go directly for a hysteroscopy.

## References

Breijer MC, Timmermans A, van Doorn HC, Mol BWJ, Opmeer BC. Diagnostic Strategies for Postmenopausal Bleeding. *Obstetrics and Gynecology International*. 2010;2010:850812. doi:10.1155/2010/850812.

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