

Diagnostic Imaging Pathways - Bleeding (Post-Menopausal)

Population Covered By The Guidance

This pathway provides guidance on the imaging of adult female patients with unexplained postmenopausal bleeding.

Date reviewed: October 2013

Date of next review: 2017/2018

Published: November 2013

Quick User Guide

Move the mouse cursor over the **PINK** text boxes inside the flow chart to bring up a pop up box with salient points.

Clicking on the **PINK** text box will bring up the full text.

The relative radiation level (RRL) of each imaging investigation is displayed in the pop up box.

SYMBOL	RRL	EFFECTIVE DOSE RANGE
	None	0
	Minimal	< 1 millisieverts
	Low	1-5mSv
	Medium	5-10 mSv
	High	>10 mSv

Pathway Diagram

Date reviewed: October 2013
Please note that this pathway is
subject to review and revision

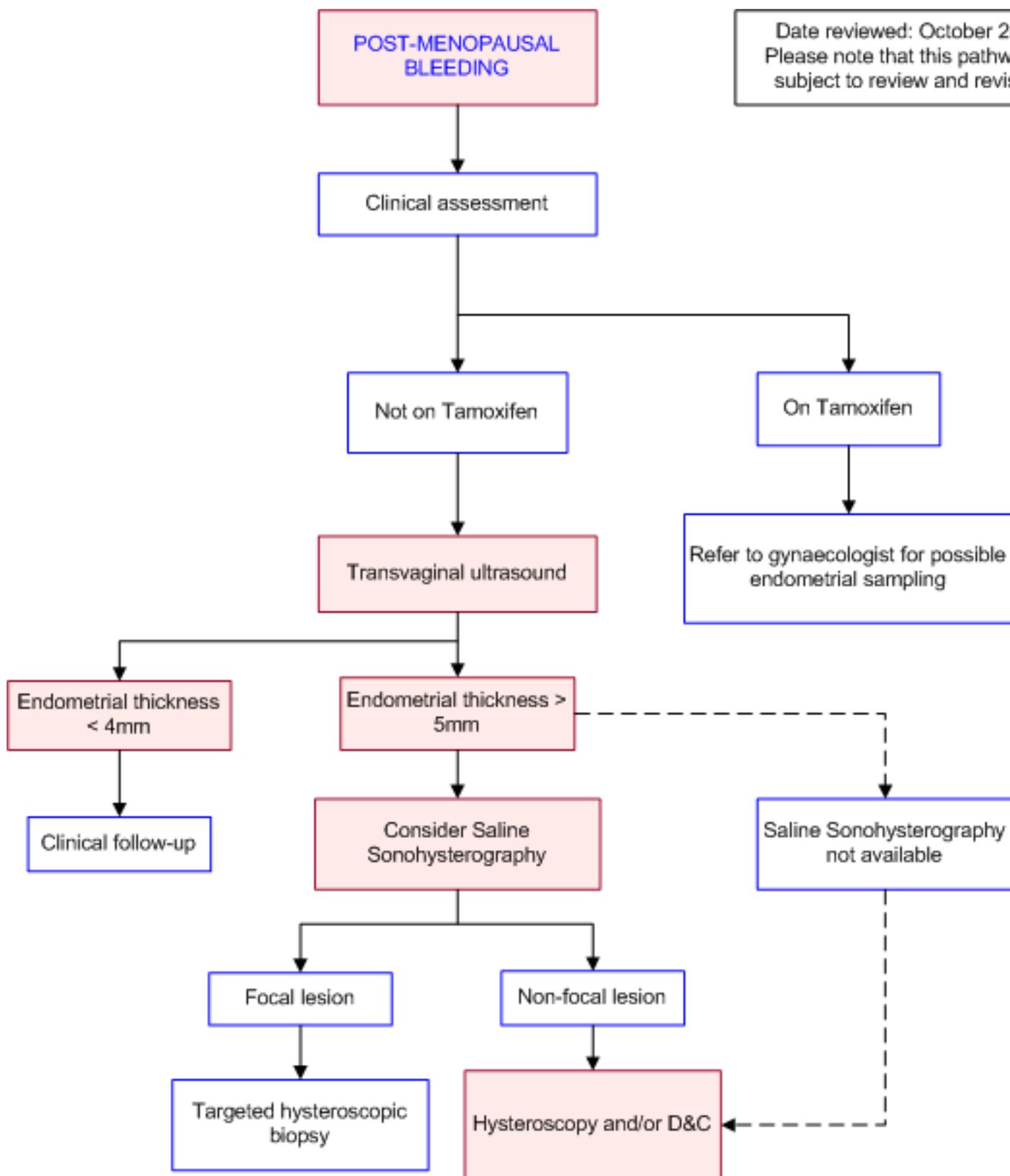


Image Gallery

Note: These images open in a new page



Image 1 (Saline Infusion Sonohysterography): There is a soft tissue structure connected to the endometrium via a thin stalk and supplied by a single blood vessel (arrow). The features are consistent with an endometrial polyp.

2



Endometrial Polyp

Image 2 : Hysterectomy specimen showing a polyp arising from the fundus of the endometrial cavity. Histological examination confirmed this to be an adenomyoma.

3a



Endometrial Cancer

Image 3a, 3b (Transabdominal Ultrasound) and 2c (Transvaginal Ultrasound): The uterus is anteverted and measures 77 x 31 x 49mm. There are no signs of fibroids. The endometrium is 17mm thick at the fundus and has a number of cystic spaces within it. No free fluid is seen in the pelvis. Biopsy confirmed endometrial cancer.

3b



3c



4a



Endometrial Cancer

Image 4a: Hysterectomy showing an extensive endometrioid adenocarcinoma filling the endometrial cavity down to the isthmus.

4b



Image 4b (H&E, x2.5) and 4c (H&E, x10): Uterine curettings showing an endometrioid adenocarcinoma composed of closely packed glands with complex architecture. At high power, the malignant cells are columnar and demonstrate irregular nuclei with prominent nucleoli and occasional mitotic figures.

4c



Teaching Points

- Post menopausal bleeding (PMB) is defined as spontaneous vaginal bleeding which occurs more than one year after the date of the last menstrual period
- For women on combined oestrogen/progesterone HRT, investigations are only warranted if the bleeding persists for > 6 months
- Transvaginal ultrasound is the initial imaging modality of choice. It can detect focal abnormalities of

the endometrium, as well as measure the endometrial wall thickness which has been correlated with uterine pathology

- Saline infusion sonohysterography involves infusing saline into the endometrial cavity followed by transvaginal ultrasound to improve visualisation of focal endometrial lesions
- Further investigations may include a hysteroscopy and endometrial biopsy

Post-Menopausal Bleeding

- Defined as spontaneous vaginal bleeding which occurs more than one year after the date of the last menstrual period. For women on combined oestrogen/progesterone HRT, investigations are only warranted if the bleeding persists for > 6 months

Transvaginal Ultrasound (TVUS)

- Uses of TVUS include
 - To assess focal abnormalities such as polyps and the thickness of the endometrium
 - To determine those patients with a thin endometrium who are unlikely to require further investigation [1-4](#)
- In the absence of focal abnormalities, endometrial thickness, morphology and vascularisation as seen with Doppler have been used as markers of endometrial pathology [10](#)
 - Endometrium thickness is assessed by measuring the anterior and posterior layers of the endometrium in the sagittal plane and summing the values [11](#)
 - This technique has a high reproducibility and high intraobserver and interobserver reliability for experienced radiologists [12,13](#)
 - Current recommendations suggest using the same threshold of endometrial thickness for users and non-users of HRT. The risk of endometrial cancer for a thickness < 4mm in users of HRT is 0.1% and in non-users is 1% [14](#)
 - With a thickness > 5mm, the sensitivity and specificity of detecting endometrial cancer is 100% and 37-57% respectively [14,15](#)
- The use of transabdominal ultrasound gives a good overall view of the pelvis but is inferior to transvaginal ultrasound for viewing endometrial morphology and measuring endometrial thickness [16](#)

Saline Infusion Sonohysterography (SIS)

- Involves infusing saline into the endometrial cavity followed by transvaginal ultrasound to improve visualisation of focal endometrial lesions
- The sensitivity for detecting endometrial cancer is 96% and for any pathology is 98%. [17](#) However, it cannot confidently discriminate between benign disease and malignancy [18](#)
- Studies indicate that women prefer this study compared to hysteroscopy [19](#)

Hysteroscopy and Endometrial Sampling

- Based on a meta-analysis of 56 studies, the sensitivity of hysteroscopy for the detection of endometrial cancer is 86.4% with a specificity of 99.2% and positive likelihood ratio of 60.9 [20](#)
- Advantages

- Allows for removal of polyps and biopsy of suspicious lesions for histological examination
- Targeted biopsy of a visualised focal lesion is more accurate than blind dilatation and curettage
- Disadvantages
 - Invasive procedure and less well tolerated compared to saline infusion sonohysterography

[19](#)

References

References are graded from Level I to V according to the Oxford Centre for Evidence-Based Medicine, Levels of Evidence. [Download the document](#)

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