

A. Brammer, Ultrasound Modality Lead, The Rotherham NHS Foundation Trust
 Catriona Hynes, Senior Lecturer, Sheffield Hallam University

Background:

Prescriptions for Hormone Replacement Therapy (HRT) have risen in recent years, particularly in peri-menopausal patients. Unscheduled bleeding is common with HRT and may trigger referral to an urgent suspected cancer pathway (USCP), despite the risk of cancer being low. The South Yorkshire and Bassetlaw Cancer Alliance (SYB CA, 2024) introduced a new pathway in 2024, based on the British Menopause Society's (BMS) pathway, allowing direct referral to ultrasound for these patients rather than the USCP. This service evaluation reviews the pathway's impact, and highlights the role of ultrasound in supporting appropriate management or onward referral reducing pressure on cancer services.

Aims & Objectives:

The evaluation reviewed all patients referred to a SYB CA trust via the GP Direct Access Unscheduled Bleeding on HRT Pathway over a six-month period (29 July 2024 to 30 January 2025)

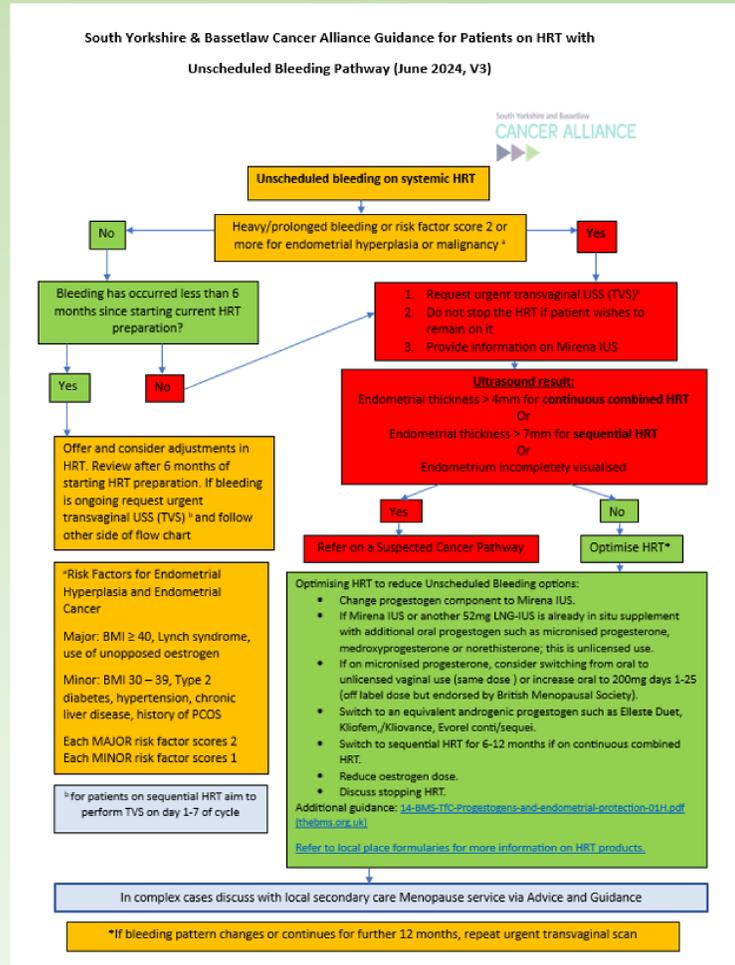
- To evaluate the number and appropriateness of referrals via the new GP direct access unscheduled bleeding on HRT pathway
- To evaluate if the ultrasound scan turnaround times for this pathway are achievable in line with cancer pathways targets
- To understand which patients are being referred and for what clinical reasons
- To examine whether the ultrasound scan findings aid primary care with patient management either to a suspected cancer pathway, gynaecology referral or HRT optimisation
- To establish if this pathway is as effective for patients on the two different HRT regimes

Methodology:

A retrospective service evaluation of 158 patient records referred to a single Trust for unscheduled bleeding on HRT over six months. The evaluation examined referral volumes, ultrasound turnaround times (TAT), referral appropriateness (per clinical guidance), and the impact of ultrasound findings on management or onward referral across two HRT regimes. Data were analysed by HRT type (ccHRT vs sHRT) and correlated with ET thresholds, ultrasound findings, and outcomes using descriptive statistics for percentages and trends. Ethics approval was obtained through Trust Clinical Effectiveness and University processes.

Results:

This service evaluation cohort included 84% of patients on ccHRT and 16% on sHRT. Most patients were aged 51–58, consistent with typical HRT users. Sonographer and GP adherence to the pathway was high (over 90%), with 90.5% of patients managed appropriately. Ultrasound timing met national targets, with 98% completed within 14 days. An abnormal ET was significantly more common in the ccHRT group ($p < 0.001$), though no malignancies were detected across either group.



HRT Definitions:

(Combined) Sequential HRT – Continuous oestrogen and cyclical progesterone (or progestogen) for 12-14 days in a 28 day cycle. Produces regular and expected bleeding after the end of the progesterone phase.
Continuous Combined HRT – Continuous (daily) use of oestrogen and a progestogen or progesterone. It should induce amenorrhoea usually within 6 months of therapy.

ALL PATIENTS	
Referral - Scan (days)	Count
0	3
1	2
2	15
3	15
4	15
5	34
6	30
7	21
8	4
9	6
10	4
11	2
12	1
13	2
14	1
15	1
18	1
23	1
Total	158

Total 133		Total 25	
ccHRT ET ≤4mm (normal for pathway)	ccHRT ET >4mm (abnormal for pathway)	sHRT ET ≤7mm (normal for pathway)	sHRT ET >7mm (abnormal for pathway)
Total = 40/133 (30.1%)	Total = 93/133 (69.9%)	Total = 17/25 (68%)	Total = 8/25 (32%)
	91/133 (68.4%) (due to ET)		7/25 (28%) (due to ET)
	*2/133 (1.5%) (Unable to measure ET)		**1/25 (4%) (ET 6.9mm but not fully assessed)
Range 1.9 – 4mm	Range 4.1 – 17.1mm	Range 2 – 6.6mm	Range 7.1 – 15mm
There is a statistically significant difference in the distribution of normal versus abnormal cases between ccHRT and sHRT. Fisher's exact test (p value < 0.001) Odds Ratio = 0.202. Phi/Cramer's V = 0.288 (effect size moderate)			

Table below shows how the recommended advice was/wasn't followed by GP.

ccHRT ET ≤4mm	ccHRT ET >4mm or unable to assess fully	sHRT ET ≤7mm	sHRT ET >7mm or unable to assess fully
Not required as per ET = 40/133 (30.1%)	Required as per ET/unable to measure ET = 93/133 (69.9%)	Not required as per ET = 17/25 (68%)	Required as per ET/unable to fully assess ET = 8/25 (32%)
Referral not made = 38/40 (95%) ✓	Referral made = 79/93 (84.9%) ✓	Referral not made = 14/17 (82.4%) ✓	Referral made = 7/8 (87.5%) ✓
Referral made = 2/40 (5%) (Justified)	Referral not made = 14/93 (15.1%) * x	Referral made = 3/17 (17.6%) (Justified)	Referral not made = 1/8 (12.5%) ** x
81 patients referred to gynaecology out of a possible 95 who should have been referred to gynaecology 81/95 (85%)		10 patients referred to gynaecology out of a possible 11 who should have been referred to gynaecology 10/11 (91%)	
119/133 (89.5%) pathway followed		24/25 (96%) pathway followed	
Overall in 143/158 (90.5%) patients, the pathway was followed			

Onward referral to Gynaecology

Based on the pathway:

- ccHRT ET
 - ≤4mm managed by GP
 - >4mm refer to USCP
- sHRT ET
 - ≤7mm managed by GP
 - >7mm refer to USCP

Discussion & Conclusion:

The evaluation found the new HRT bleeding pathway safe and effective, with high GP and sonographer compliance and timely ultrasound access. It reduced unnecessary urgent cancer referrals without compromising patient care. **Most referrals were appropriate, and no malignancies were detected**, supporting its continued use with minor improvements and further monitoring. Post-menopausal, simple ovarian cysts were occasionally missed for follow-up, highlighting the need for clearer guidance to GPs. **Overall, the pathway showed strong compliance and reduced unnecessary referrals to USCP, improving patient experience and resource use.** Further training in primary care could enhance adherence and safety even further.

References:

British Menopause Society. (2024). *Management of unscheduled bleeding on hormone replacement therapy (HRT) 01-BMS-GUIDELINE-Management-of-unscheduled-bleeding-HRT-APRIL2024-F.pdf* (thebms.org.uk).
 Hormone replacement therapy users with postmenopausal bleeding: Retrospective cohort study. *Post Reproductive Health*, 28(3), 143-148. <https://doi.org/10.1177/2053369121116171>
 Burbos, N., Musonda, P., Duncan, T. J., Crocker, S.G., Nieto, J.J. & Morris, E.P. (2012). Postmenopausal vaginal bleeding in women using hormone replacement therapy. *Menopause International*, 18(1), 5-9. <https://doi.org.hallam.idm.oclc.org/10.1258/mi.2011.011111>
 Dave, F. G., Adedipe, T., Disu, S., & Laiyemo, R. (2019). Unscheduled bleeding with hormone replacement therapy. *The Obstetrician and Gynaecologist*, 21(2) 95-101. <https://doi.org/10.1111/tog.12553>
 National Institute for Health and Care Excellence (NICE). (2024). *Menopause: Identification and Management*. (NICE Guideline NG23). Updated 07 November 2024 <https://www.nice.org.uk/guidance/ng23>
 Lou, Y.Y., Kannappan, J. & Sathiyathasan, S. (2017). Unscheduled bleeding on HRT – do we always need to investigate for endometrial pathology? *International Journal of Reproduction, Contraception, Obstetrics and Gynaecology*, 6(10) 4174-8 <http://dx.doi.org/10.18203/2320-1770.ijrcog20174391>
 Manley, K. et al (2024). Management of unscheduled bleeding on HRT: A joint guideline on behalf of the British Menopause Society, Royal College Obstetricians and Gynaecologists, British Gynaecological Cancer Society, British Society for Gynaecological Endoscopy, Faculty of Sexual and Reproductive Health, Royal College of General Practitioners and Getting it Right First Time. *Post Reproductive Health*, 30(2), 95-116. <https://doi.org/10.1177/20533691241254413>