Aster HOSPITALS & CLINICS
We'll Treat You Well

HealthNews DIGEST

SEPTEMBER 2025

32nd Edition

Dr. Sherbaz Bichu

CEO & Specialist Anaesthetist
Aster Hospitals & Clinics, UAE

On behalf of Aster's leadership, I am pleased to welcome you to the momentous 32nd edition of our HealthNews Digest. I sincerely appreciate all of you for your exceptional commitment to handling critical cases and advancing medical excellence. Your expertise and dedication continue to define the strength of our medical community.

At the same time, it is essential to focus on immediate **Seasonal Health Priorities**. With schools reopening and flu season upon us, I urge you to reinforce preventive care, encourage vaccination, provide proactive patient education, and remain vigilant in early diagnosis and management as schools reopen and flu season approaches. Strengthening public awareness and preparedness will be vital in protecting vulnerable groups and minimising seasonal health risks.

As we move forward, let us combine advanced medical science with compassionate care to shape better outcomes and raise the standards of patient care.

Dr. Ramanathan V

Medical Director
Aster Hospitals & Clinics, UAE

As the Group Medical Director of Aster Hospitals and Clinics, I am excited to welcome you to the 32nd edition of HealthNews, a newsletter that reflects our collective progress and continued commitment to clinical excellence.

As we observe **World Heart Day** this month, it is an opportune moment to refocus on heart health - both in terms of prevention and advanced interventions. I am immensely proud to announce that our team has successfully performed **200+ Cardiothoracic and Vascular Surgeries (CTVS)**, a significant milestone that underscores the expertise of our surgical team and the trust our patients have in us. These outcomes highlight technical proficiency and the importance of innovation, teamwork, and patient-centred care in high-risk procedures.

I want to express my sincere gratitude to each of you for your unwavering dedication and for contributing to a legacy of excellence that inspires confidence in our patients and the medical community.

Dr. Fathima Safa
Obstetrics and Gynaecology (Specialist)
Aster Hospital, Al Qusais

Dr. Aysha Salam
Obstetrics and Gynaecology (Specialist)
Aster Hospital, Mankhool

Successful Laparoscopic Rescue Cervical Cerclage for 18-Week Pregnant Patient with Cervical Insufficiency at Aster Hospital, Al Qusais, Dubai

PRESENTATION

- 30-year-old G3 female, at 18+5 weeks of gestation/recurrent pregnancy loss
- Medical history of Hypothyroidism, on medication
- Surgical history of Cervical Cerclage
- Irregular menstrual history
- Obstetric history of a previous preterm delivery complicated by a subsequent second trimester pregnancy loss at 20 weeks of gestation; the loss was attributed to cervical insufficiency, despite a prior prophylactic transvaginal cerclage:
  - G1 - Miscarriage at 14 weeks, foetus expelled
  - G2 - Miscarriage at 23 weeks, cerclage (double-stitch) done at around 12-13 weeks, foetal expulsion at 23 weeks
  - G3 – Present pregnancy
- Family history of Hypertension and Diabetes Mellitus
- Admitted with complaints of:
  - Pelvic pressure
  - Lower abdominal pain
  - Cramps with spotting

FINDINGS

During Examination:

- Afebrile, Pulse rate - 78/min, BP - 117/78 mmHg
- Significantly short cervix with 2.2 cm length

Pre-operative evaluation involved a comprehensive review of the patient's medical records, emphasising her prior obstetric history and the circumstances surrounding the previous cerclage failure. Detailed imaging studies, including transvaginal ultrasound, were performed to assess cervical length and the presence of funneling.

DURING PROCEDURE

The patient was counselled regarding the risks and benefits of Rescue Cerclage, and after careful consideration, the patient elected to proceed with a Laparoscopic Approach. The laparoscopic approach was chosen due to the patient's prior failed transvaginal cerclage, which made the vaginal route less likely to succeed due to scarring and anatomical distortion.

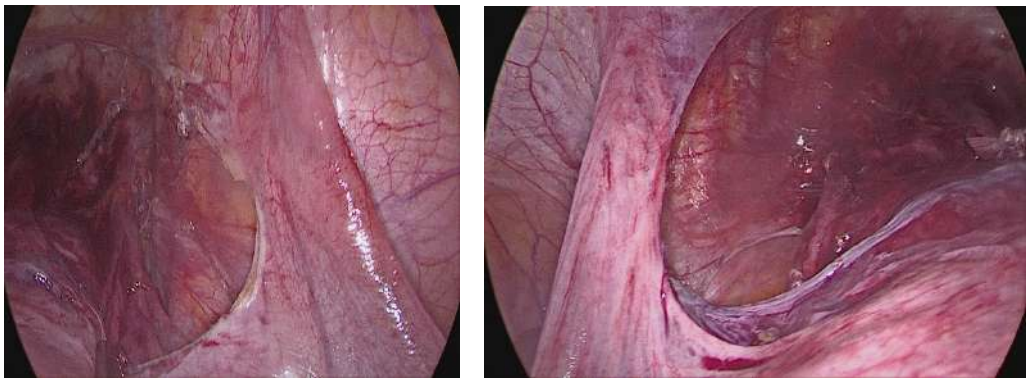
- The patient was placed under general anaesthesia, which ensures complete muscle relaxation, which is essential for optimal visualisation and surgical precision during laparoscopy.
- The abdomen was prepped and draped in a sterile fashion, and a Foley catheter was inserted to decompress the bladder.
- Pneumo-peritoneum was carefully established utilising a direct trocar approach, inserted through the supra-umbilical incision, with meticulous attention to intra-abdominal pressure monitoring to maintain insufflation pressures between 12-15 mmHg, minimising potential hemodynamic compromise and optimising visualisation.

Step 1: Bladder Mobilisation

- Before surgery, a size 14 self-retaining Foley catheter was inserted.
- The bladder flap was created by cutting the uterovesical peritoneal fold and separating the pubocervical fascia from the lower uterus and cervix.
- The anterior broad ligament layer was opened to each side, revealing the uterine arteries and the branching of the ascending vessels with nearby parametrial vessels.

Step 2: Creation of Broad Ligament Window

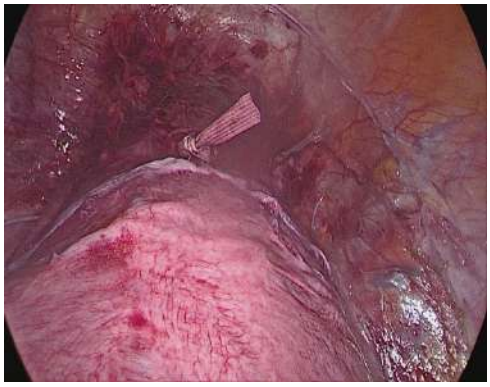
- Two windows measuring 2x3 cm were created bilaterally within the broad ligament, positioned adjacent to the uterine arteries at the internal OS level, utilising Maryland forceps and a Harmonic scalpel.
- This approach facilitated exposure of both the anterior and posterior uterine surfaces, a technique particularly advantageous in a gravid uterus where spatial constraints are increased.
- A curved needle was employed to guide a 5 mm wide, 30 cm long Mersilene tape through the left parametrium, ensuring it closely approximates the cervix, immediately adjacent to the uterine artery, traversing from anterior to posterior under direct visualisation through the window.
- The needle was then grasped posteriorly with a needle holder. This window aided in precise needle placement and corrected posterior positioning within the uterus.
- Subsequently, the needle was advanced through the right window and, under direct observation, positioned at the back of the parametrium, 1.5 cm above and 1 cm lateral to the uterosacral ligament attachment point, through the window.
- A left-hand instrument guided the needle's exit point beside the uterine complex at the internal OS.
- The Mersilene tape was kept flat and untwisted.



Intra-op image showing the creation of the Right and Left Broad Ligament Window

Step 3: Placing the knot

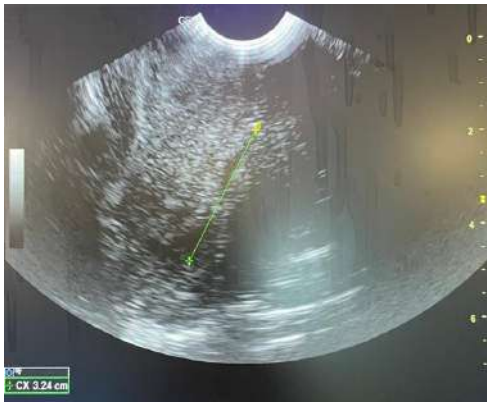
- Knotting began on the right side, with the needle passing from posterior to anterior, and the process was reversed on the opposite side.
- A square knot was tied at or slightly below the internal os, gently compressing the cervical tissue without excessive tightness.



Intra-op image showing the placement of the Cerclage Knot at the Internal OS

POST PROCEDURE

The patient was discharged the following day. A postoperative ultrasound confirmed foetal well-being and a cervical length of 3.2 cm, with the internal cervical OS closed. The pregnancy is progressing without complications, and the patient reports no symptoms.



Post-op image of cervix with closed internal OS of 3.2 cm length

DISCUSSION

Cervical Insufficiency, a clinically significant condition marked by the cervix's inability to maintain structural integrity during pregnancy, poses a substantial risk of preterm birth and subsequent neonatal morbidity. This insufficiency can lead to premature cervical dilation and effacement, frequently resulting in second-trimester pregnancy loss or preterm delivery.

This case report details a successful laparoscopic rescue cerclage performed on a pregnant patient at 18 weeks' gestation, highlighting the surgical technique, postoperative management, and pregnancy outcome.

While prophylactic cerclage has been a cornerstone in managing cervical insufficiency, its efficacy diminishes when intervention is delayed until significant cervical changes occur. Laparoscopic rescue cerclage, performed in the second trimester, presents a viable alternative in such cases, particularly when transvaginal approaches are not feasible or have previously failed.Laparoscopic rescue cerclage presents a minimally invasive solution for managing cervical insufficiency during the second trimester, especially when transvaginal methods are unsuitable or have been unsuccessful. The primary benefit of transabdominal cervical cerclage lies in the precise placement of a permanent, non-absorbable suture at the internal OS. This positioning is theoretically ideal for preventing cervical dilation. While transvaginal cerclage has been a standard treatment in the first or early second trimester for cervical incompetence, it carries a failure rate of approximately 13%. Laparoscopic abdominal cerclage is frequently employed in cases where prior vaginal cerclage has failed. The delivery method is invariably cesarean section due to the permanent nature of the non-absorbable suture. The decision to utilise laparoscopic rescue cerclage requires individual assessment, considering factors such as gestational age, cervical length, patient preferences, and the nature of the non-absorbable suture material. The decision to perform a laparoscopic rescue cerclage must be individualised, considering gestational age, cervical length, and patient preferences.

CONCLUSION AND FUTURE OUTLOOK

The fundamental principle behind laparoscopic cerclage, whether performed during or before pregnancy, remains the same: to place a permanent, non-absorbable stitch at the internal OS level. However, the pregnant uterus and the absence of a vaginal manipulator present unique challenges.

REFERENCES

1. Caughey AB, Robinson JN, Norwitz ER. Contemporary diagnosis and management of preterm premature rupture of membranes. Rev Obstet Gynecol. 2008(1):11-22. PMID: 18701929.
2. Ramesh B, Chaithra T, Prasanna G. Laparoscopic Transabdominal Cervical Cerclage by Broad Ligament Window Technique. Gynecology and Minimally Invasive Therapy. 2018(3):139-140. doi: 10.4103/GMIT.GMIT_50_18.
3. Davis G, Berghella V, Talucci M, Wapner RJ. Patients with a prior failed transvaginal cerclage: a comparison of obstetric outcomes with either transabdominal or transvaginal cerclage. Am J Obstet Gynecol. 2000(4):836-839. doi: 10.1067/mob.2000.108837.
4. Benson RC, Durfee RB. Transabdominal cervico uterine cerclage during pregnancy for the treatment of cervical incompetency. Obstet Gynecol. 1965:145-155. PMID: 14268594.
5. Nalini V, Urmila PK, George E, et al. Cervical encerclage - a stitch in time: Analysis of 23 cases. International Journal of Gynecology & Obstetrics, 27(3):389–393. doi: 10.1016/0020-7292(88)90119-1.
6. Whittle WL, Singh SS, Allen L, et al. Laparoscopic cervico-isthmic cerclage: surgical technique and obstetric outcomes. Am J Obstet Gynecol. 2009(4):364.e1-7. doi: 10.1016/j.ajog.2009.07.018.
7. Burger NB, Brölmann HAM, Einarsson JI, et al. Effectiveness of abdominal cerclage placed via laparotomy or laparoscopy: Systematic Review. J Minim Invasive Gynecol 2011(6):696-704. doi: 10.1016/j.jmig.2011.07.009.

Navigating Thyroid Nodules in Clinical Practice - When to Worry, When to Monitor

Dr. Patanjali Panduranga
Endocrinology (Specialist)
Aster Hospital, Al Qusais, Dubai

INTRODUCTION

Thyroid nodules frequently occur in clinical settings and can present as single or multiple lesions, with cystic or solid characteristics (1). According to the American Thyroid Association, these refer to distinct lesions within the thyroid that appear separate from the surrounding tissue on imaging (1). About 3-7% cases are discovered on self-palpation by the patient, while 20-76% are identified incidentally during a radiologic procedure such as ultrasonography (US) imaging (2). The increased use of sensitive imaging techniques has led to more incidental detection and a global increase in thyroid cancer diagnoses, especially low-risk tumours (3).

Although over 90% of nodules are benign, a small but clinically significant proportion, around 4% to 6.5%, may be malignant, making it important to accurately distinguish these nodules (1,4). Overdiagnosis, particularly of small indolent cancers, has raised concerns about unnecessary surgery and overtreatment (4). Between 2013-2017, 75.6% thyroid cancer cases were linked to overdiagnosis (5). Most of these cancers are asymptomatic and have minimal impact on health or longevity (1).

US is commonly used to evaluate thyroid nodules, with multiple US-based risk stratification systems now guiding individualised patient care (1,3). These systems help reduce unnecessary fine-needle aspiration (FNA) biopsies and surgeries (3).

To mitigate risks associated with overtreatment, recent ATA guidelines recommend active surveillance for selected low-risk patients and favour lobectomy over more aggressive surgical options (6,7). Evidence-based approaches remain key in addressing the high prevalence of thyroid nodules (6).

This article reviews contemporary clinical guidance on the evaluation and management of thyroid nodules, including risk stratification tools, biopsy decision frameworks, handling indeterminate cytology, the role of molecular diagnostics, and evidence-based strategies for surveillance of benign nodules.

IDENTIFYING THE 'WORRY' FACTORS – RISK STRATIFICATION AND INITIAL DIAGNOSTIC PATHWAYS

The initial evaluation of thyroid nodules involves a comprehensive approach, including personal and family history, physical evaluation, thyroid function testing (starting with serum thyroid-stimulating hormone), and neck US (8).

When TSH levels are low, a radionuclide thyroid scan may be appropriate to further evaluate thyroid function (6). In all patients with suspected or established thyroid nodules, US should be performed to confirm the nodules' presence, detect any additional nodules or cervical lymphadenopathy, and evaluate their sonographic characteristics (6). If the criteria are fulfilled, an FNA biopsy is indicated as the next step (6).

Frameworks for risk stratification, including the 2015 ATA guidelines and the 2017 American College of Radiology (ACR) Thyroid Imaging Reporting and Data System (TI-RADS) serve to direct FNA biopsy decisions by evaluating sonographic characteristics and applying specific nodule size criteria (9,10). The ATA classify nodules into five sonographic patterns, each with specific size thresholds for biopsy (11). ACR TI-RADS assigns points for 5 US features - composition, echogenicity, shape, margin, and echogenic foci—to stratify risk and recommend FNA based on cumulative scores and nodule size (11).

The criteria from the 2017 ACR TI-RADS and 2015 ATA guidelines are summarised in Figure 1.

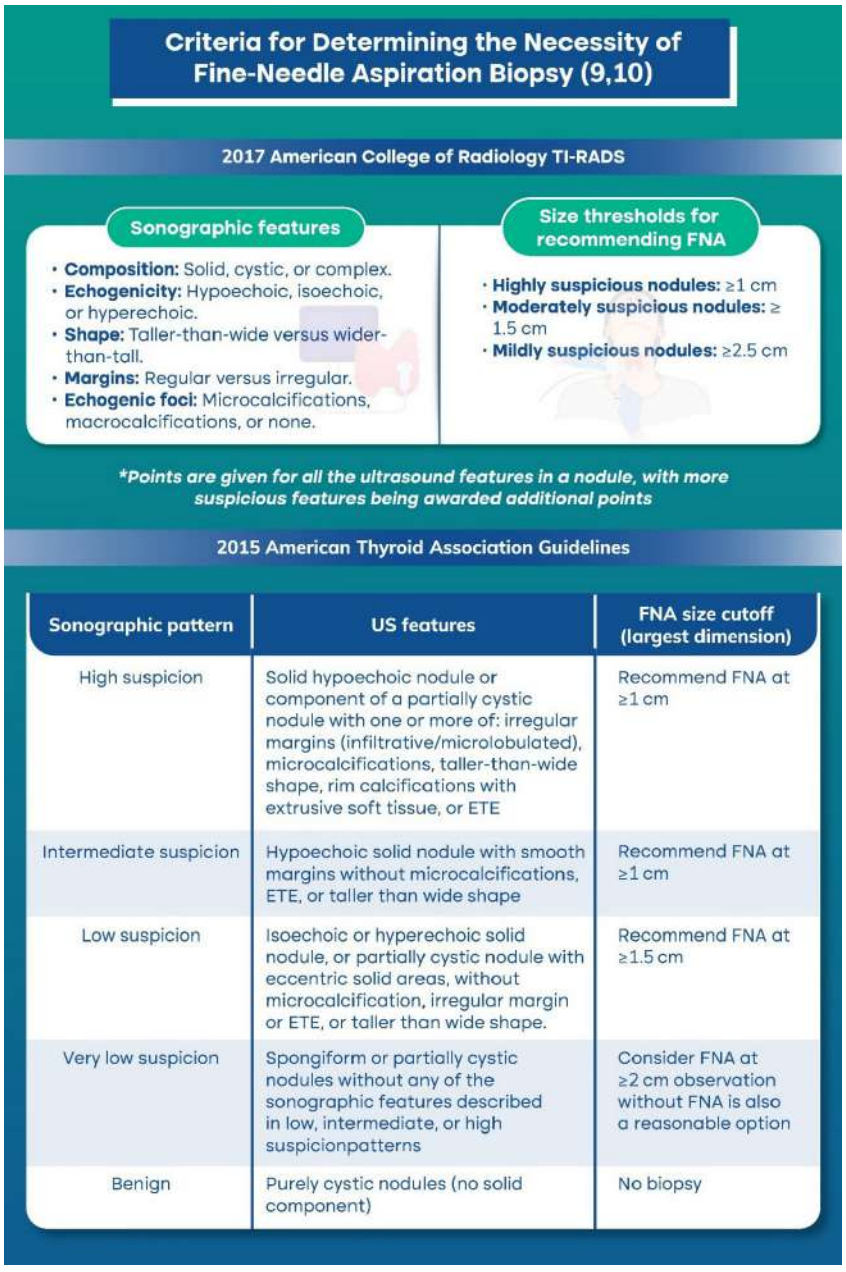


Figure 1: Criteria for FNA of thyroid nodules based on ultrasound features and size, per 2017 ACR TI-RADS and 2015 ATA guidelines (9,10)

(Abbreviations – FNA: fine-needle aspiration; US: ultrasound; ETE: extrathyroidal extension)

Comparative studies show ACR TI-RADS offers higher sensitivity (72.3%) and greater reduction in unnecessary biopsies, while the ATA guidelines provide higher specificity (84.9%) but result in more FNA recommendations overall (11).

Cytological assessment using FNA aids in risk stratification, with approximately 70–80% of nodules classified as benign or malignant (12). The Bethesda System for Reporting Thyroid Cytopathology (TBSRTC), updated in 2023, standardises cytology into six categories (shown in Figure 2), improving communication and diagnostic accuracy, particularly for indeterminate lesions (13,14).

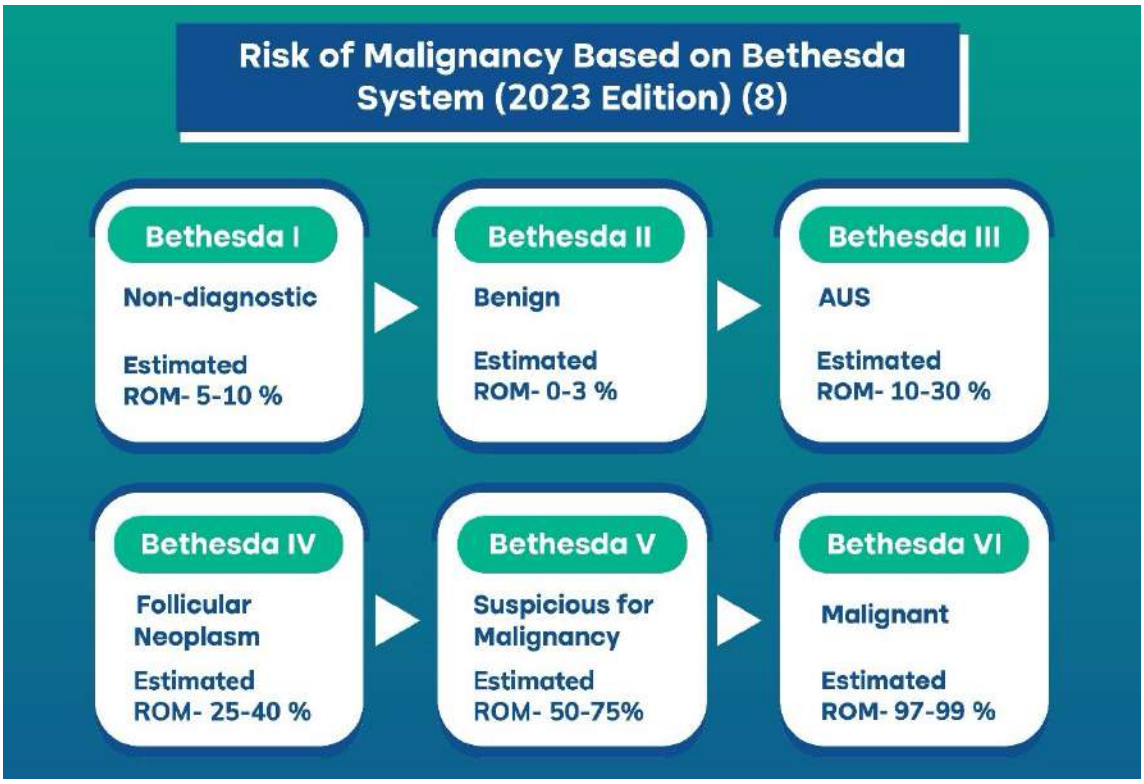


Figure 2: Bethesda classification for thyroid cytology with definitions and estimated risk of malignancy (8)

(Abbreviations – ROM: Risk of Malignancy; AUS: Atypia of Undetermined Significance)

Although FNA has significantly reduced the number of thyroid nodules referred for diagnostic surgery, approximately 20–30% of cases are classified as indeterminate (Bethesda III or IV), with an associated malignancy risk ranging from 15% to 65% (15). These cases present a diagnostic challenge, often requiring advanced diagnostic strategies to refine malignancy risk and guide treatment decisions (3).

NAVIGATING INDETERMINATE NODULES AND THE ROLE OF ADVANCED DIAGNOSTICS

In recent years, significant progress has been made in the molecular profiling of thyroid cancer (12). Genetic alterations, implicated in the progression from differentiated to undifferentiated cancers, have been grouped into molecular subtypes with distinct gene expression profiles (12). These findings contribute to improved accuracy, prognostic evaluation, and the development of individualised treatment strategies (12).

Molecular testing has emerged as a valuable adjunct for evaluating indeterminate nodules (12). These tests are generally categorised as either rule-out or rule-in tools, based on their performance characteristics (12). To reliably

rule out malignancy, a test must demonstrate high sensitivity and a high negative predictive value (NPV) (12). Conversely, high specificity and a high positive predictive value (PPV) are needed to confidently rule in malignancy (12). Among patients with indeterminate nodules, where cancer prevalence falls within 20–40%, an NPV of at least 94% coupled with a sensitivity above 90% is generally adequate for excluding malignancy (12) Conversely, a specificity of 80% or more and a PPV of at least 60% are typically required to confirm its presence (12).

Commonly available commercial molecular assays include ThyroSeq, the Afirma gene sequencing classifier with Xpression Atlas (GSC/XA), and the combined ThyGenNEXT–ThyraMIR tests (12).

Figure 3 lists the potential advantages of molecular testing in thyroid nodules and advanced thyroid cancers.

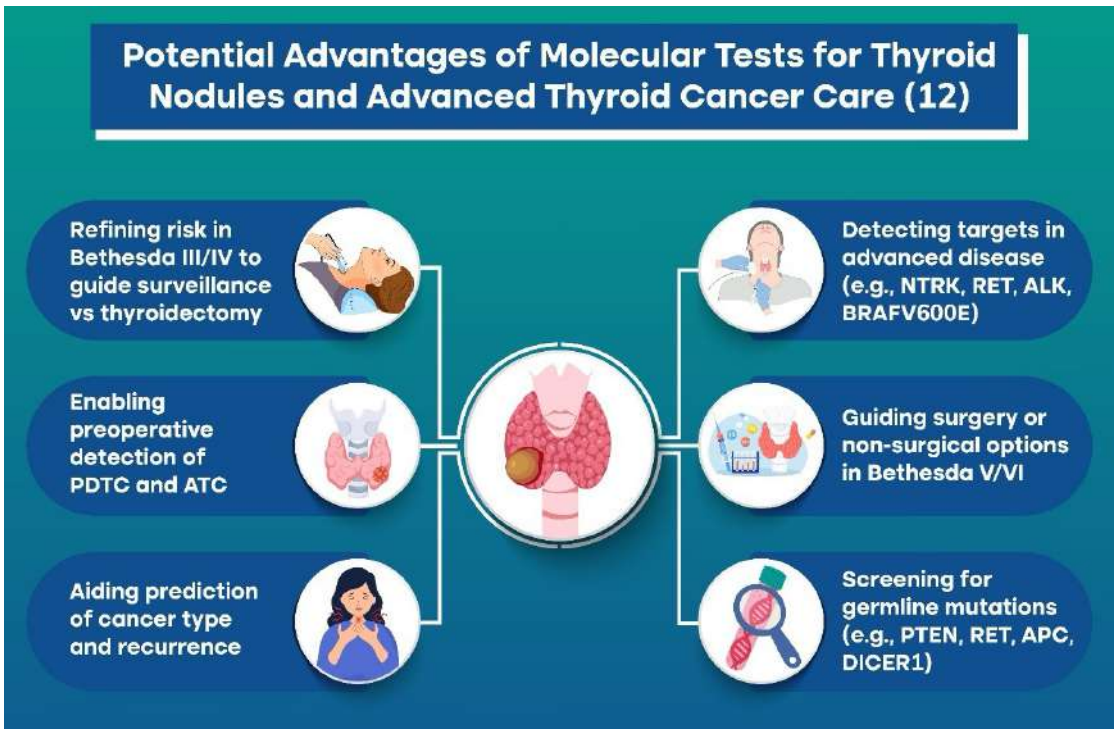


Figure 3: Role of molecular testing in enhancing diagnosis, guiding treatment, and identifying therapeutic targets in thyroid cancer care (12)

(Abbreviations – PDTC: poorly differentiated thyroid carcinoma; ATC: anaplastic thyroid carcinoma; NTRK: neurotrophic tyrosine receptor kinase; RET: rearranged during transfection; ALK: anaplastic lymphoma kinase; BRAFV600E: B-Raf proto-oncogene V600E mutation; PTEN: phosphatase and tensin homolog; APC: adenomatous polyposis coli; DICER1: endoribonuclease Dicer 1)

STRATEGIC MONITORING AND MANAGEMENT OF BENIGN THYROID NODULES

Benign nodules, classified as Bethesda category II or cytologically indeterminate nodules (category III or IV) with benign molecular test results, should be monitored with periodic US evaluation (16). The initial follow-up is recommended at 12 to 24 months, depending on the US characteristics (16). If nodules remain stable, the interval between surveillance scans may be extended to every 3 to 5 years (16).

Significant nodule growth is characterised by a volume increase exceeding 50%, or a size increase of 20% in at least two dimensions, with a minimum change of 2 mm (16). When such growth occurs, further evaluation is warranted, either through repeat FNA or continued sonographic monitoring based on the level of malignancy suspicion (16).

For nodules classified as Bethesda category IV without molecular testing, diagnostic lobectomy is generally recommended (16). In contrast, category III nodules may undergo repeat FNA to refine risk assessment (16).

These follow-up intervals help reduce unnecessary procedures while ensuring the timely identification of potentially suspicious changes (17).

Figure 4. presents the ATA-recommended follow-up intervals stratified by ultrasound features and biopsy results.

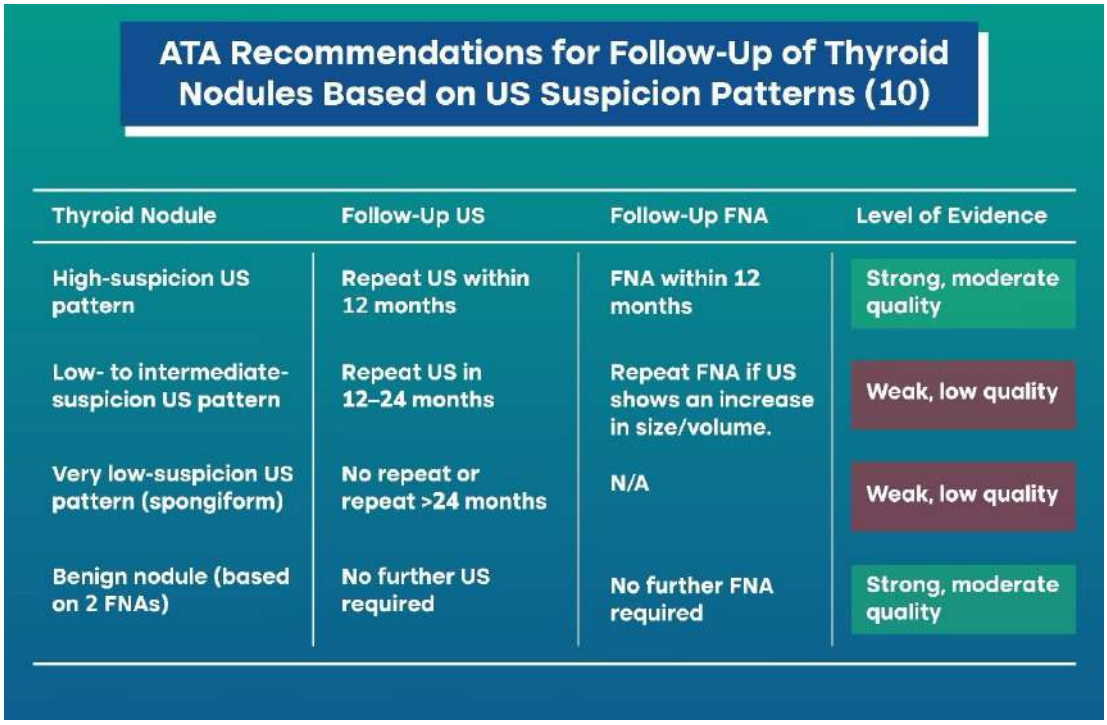


Figure 4. ATA guidelines for thyroid nodule follow-up based on ultrasound pattern and FNA findings (10)

(Abbreviations – US: ultrasound; FNA: fine-needle aspiration)

CRITERIA FOR RE-EVALUATION

Re-evaluation of nodules initially deemed benign should be prompted by the following:

- **Significant Nodule Growth**

  Reassessment is warranted if nodule size increases by 20% or more in at least two dimensions, with each showing a minimum change of 2 mm, or if the overall volume enlarges by over 50%, even when initial cytology is benign (10).

- **Development of Compressive Symptoms**

  Local symptoms such as dysphagia, voice changes, or neck discomfort are indications for clinical reassessment (8).

- **New Suspicious Ultrasound Features**

  These include microcalcifications, irregular margins (spiculated or microlobulated), and a taller-than-wide shape, all of which have been consistently associated with higher malignancy risk (10).

INDICATIONS FOR DISCONTINUING SURVEILLANCE

Surveillance for benign thyroid nodules may be safely discontinued in the following scenarios:

- Two consecutive benign cytology results and no suspicious US findings (10)
- Low-risk clinical profile, given the low false-negative rate of FNA cytology (18)
- Stable ultrasound appearance over 2–4 years, particularly in asymptomatic patients (18).

MANAGEMENT OF SYMPTOMATIC BENIGN NODULES

Although most benign nodules require no intervention, treatment may be considered for those that are symptomatic, cause cosmetic concerns, or continue to enlarge despite benign findings (18).

1. Minimally Invasive Treatment Options

- Percutaneous ethanol injection is the first-line treatment for relapsing benign cystic lesions (18). It is rapid, safe, well-tolerated, and does not require post-treatment observation (18).
- Image-guided thermal ablation on techniques, such as laser or radiofrequency ablation, have proven successful in managing solid or complex thyroid nodules that are growing in size, causing symptoms, or presenting cosmetic concerns (18).

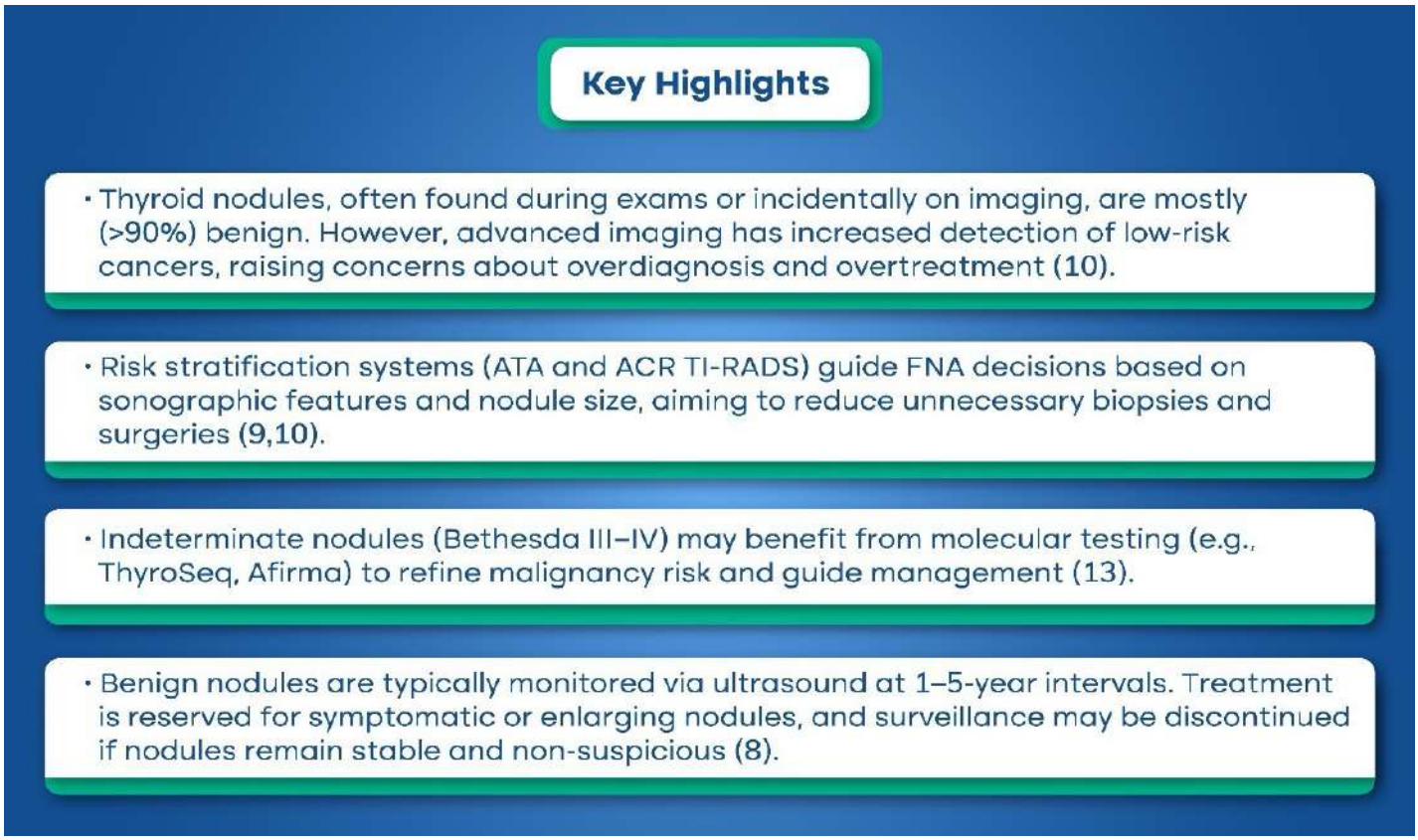
2. Surgical Management

Surgical resection may be indicated when local pressure symptoms are present or are associated with the nodule, or when suspicious ultrasound features appear despite benign cytology (18).

PATIENT-SPECIFIC FACTORS IN MANAGEMENT

Management should be individualised, taking into account not only cytologic or molecular risk stratification but also the patient's overall clinical context (10):

- In older or medically fragile patients, or those who decline surgery, minimally invasive procedures may be preferred (18).
- Prior exposure to head and neck radiation therapy during adolescence, total body radiation for bone marrow transplantation, exposure to ionising radiation from fallout in childhood or adolescence (10).
- For patients with high surgical risk or multiple chronic conditions, nonsurgical approaches such as ablation may offer a safer alternative (18).



REFERENCES

1. Thyroid Nodule - StatPearls - NCBI Bookshelf [Internet]. [cited 2025 Aug 1]. Available from: https://www.ncbi.nlm.nih.gov/books/NBK535422/
2. Xu J, Lau P, Ma Y, Zhao N, Yu X, Zhu H, et al. Prevalence and Associated Factors of Thyroid Nodules Among 52,003 Chinese 'Healthy' Individuals in Beijing: A Retrospective Cross-Sectional Study. RMHP. 2024 Jan;Volume 17:181–9.
3. Ospina NS, Papaleontiou M. Thyroid Nodule Evaluation and Management in Older Adults: A Review of Practical Considerations for Clinical Endocrinologists. Endocrine Practice. 2021 Mar;27(3):261–8.
4. McQueen AS, Bhatia KSS. Thyroid nodule ultrasound: technical advances and future horizons. Insights Imaging. 2015 Apr;6(2):173–88.
5. Li M, Dal Maso L, Pizzato M, Vaccarella S. Evolving epidemiological patterns of thyroid cancer and estimates of overdiagnosis in 2013–17 in 63 countries worldwide: a population-based study. The Lancet Diabetes & Endocrinology. 2024 Nov;12(11):824–36.
6. Tamhane S, Gharib H. Thyroid nodule update on diagnosis and management. Clin Diabetes Endocrinol. 2016 Dec;2(1):17.
7. Jensen CB, Saucke MC, Francis DO, Voils CI, Pitt SC. From Overdiagnosis to Overtreatment of Low-Risk Thyroid Cancer: A Thematic Analysis of Attitudes and Beliefs of Endocrinologists, Surgeons, and Patients. Thyroid. 2020 May 1;30(5):696–703.
8. Durante C, Hegedüs L, Czarniecka A, Paschke R, Russ G, Schmitt F, et al. 2023 European Thyroid Association Clinical Practice Guidelines for thyroid nodule management. European Thyroid Journal. 2023 Jun 23;12(5):e230067.
9. Tessler FN, Middleton WD, Grant EG, Hoang JK, Berland LL, Teefey SA, et al. ACR Thyroid Imaging, Reporting and Data System (TI-RADS): White Paper of the ACR TI-RADS Committee. Journal of the American College of Radiology. 2017 May;14(5):587–95.
10. Haugen BR, Alexander EK, Bible KC, Doherty GM, Mandel SJ, Nikiforov YE, et al. 2015 American Thyroid Association Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer: The American Thyroid Association Guidelines Task Force on Thyroid Nodules and Differentiated Thyroid Cancer. Thyroid. 2016 Jan;26(1):1–133.
11. Torshizian A, Hashemi F, Khoshhal N, Ghodsi A, Rastegar H, Mousavi Z, et al. Diagnostic Performance of ACR TI-RADS and ATA Guidelines in the Prediction of Thyroid Malignancy: A Prospective Single Tertiary Center Study and Literature Review. Diagnostics. 2023 Sep 18;13(18):2972.
12. Rajab M, Payne RJ, Forest VI, Pusztaszeri M. Molecular Testing for Thyroid Nodules: The Experience at McGill University Teaching Hospitals in Canada. Cancers. 2022 Aug 26;14(17):4140.
13. Saharti S. Utility of the 2023 Bethesda System Aus Subcategorization on Thyroid Aspirates. Acta Endo (Buc). 2024;20(1):1–4.
14. Ali SZ, Baloch ZW, Cochand-Priollet B, Schmitt FC, Vielh P, VanderLaan PA. The 2023 Bethesda System for reporting thyroid cytopathology. Journal of the American Society of Cytopathology. 2023 Sep;12(5):319–25.
15. Roy M, Ghander C, Bigorgne C, Brière M, Deniziaut G, Ansart F, et al. An update on management of cytologically indeterminate thyroid nodules. Annales d'Endocrinologie. 2025 Apr;86(2):101711.
16. Kant R, Davis A, Verma V. Thyroid Nodules: Advances in Evaluation and Management. Am Fam Physician. 2020 Sep 1;102(5):298–304.
17. Mohammadi M, Betel C, Burton KR, Higgins KM, Ghorab Z, Halperin IJ. Follow-up of Benign Thyroid Nodules—Can We Do Less? Can Assoc Radiol J. 2019 Feb;70(1):62–7.
18. Gharib H, Papini E, Garber JR, Duick DS, Harrell RM, Hegedus L, et al. American Association of Clinical Endocrinologists, American College of Endocrinology, and Associazione Medici Endocrinologi Medical Guidelines for Clinical Practice for the Diagnosis and Management of Thyroid Nodules - 2016 Update Appendix. Endocrine Practice. 2016 May;22:1–60.

Dr. Rajesh Vijay Kumar
Internal Medicine (Specialist)

Dr. Ragini Rajan
Dermatology (Specialist)

Hydroxyurea-induced Palmoplantar Pigmentation and Melanonychia in a patient with Essential Thrombocytosis managed successfully at Aster Clinic, Al Nahda, Sharjah

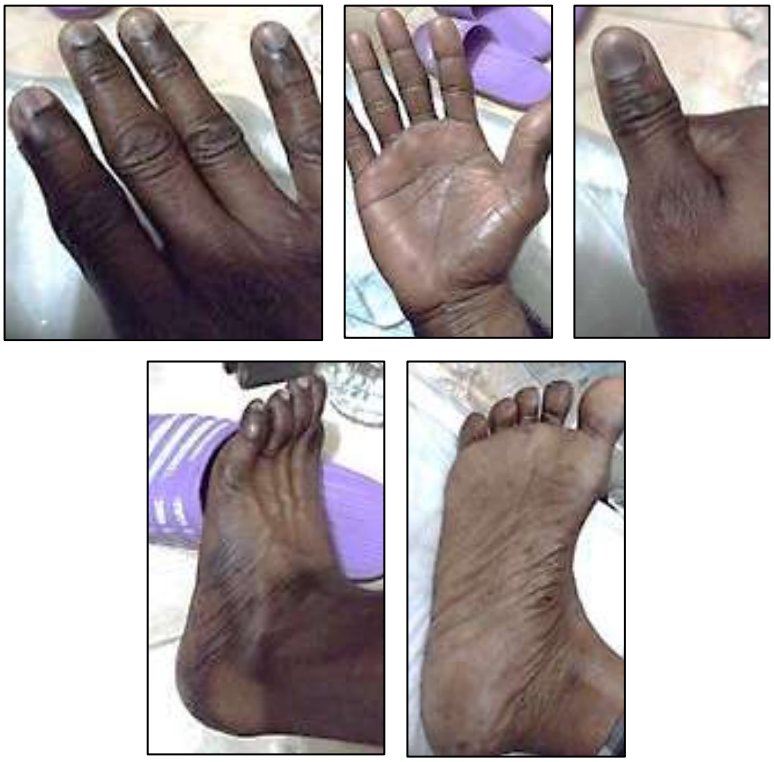
PRESENTATION

- 40-year-old male
- History of being asymptomatic with no bleeding manifestations, consulted for a medical fitness certificate and referred for thrombocytosis
- Further referred to Haematology
- On T. Hydroxyurea (HU) 500mg BD and T. Aspirin 75 OD from 4 months
- Presented with:
  - Hyperpigmentation of fingers, hands, palms, toes, and soles
  - Lesions on nails

FINDINGS

On examination:

- Diffuse hyperpigmented patches involving the palmar and dorsal surface of both hands.
- All the fingernails showed multiple linear longitudinal bands.
- Multiple hyperpigmented macules over the plantar aspects of both feet coalescing to form patches extending to involve the dorsal aspect of the feet.
- Thumb nails of both hands showed lunular melanonychia and multiple linear longitudinal bands. No nail dystrophy or cuticle changes noted.
- Oral and genital mucosa were insignificant
- Other skin areas and scalp were normal



Hands and feet showing Hyperpigmentation on HU

Blood Investigations:

- Haemoglobin: Normal
- MCV, MCH, MCHC: Normal
- Platelet count: 796,000
- Reticulocyte count: Normal
- Peripheral smear: Platelets showed a marked increase in number, and morphology appeared normal. Marked Thrombocytosis.
- Serum iron: Normal
- Serum ferritin: Normal
- Uric acid: Normal
- Calcium and phosphate: Normal
- Renal function test: Normal
- Liver function test: Normal
- Prothrombin time: Normal
- Activated Partial Thromboplastin Time (aPTT): Normal

Bone Marrow Trephine Biopsy:

- Microscopic Examination: Moderate to marked megakaryocytic hyperplasia, forming loose and cohesive clusters. Some megakaryocytes with hyperlobulated nuclei were seen.
- Impression: Myeloproliferative Neoplasm

Molecular Biology:

- JAK2 V617F mutation positive
- Normal karyotype

DIFFERENTIAL DIAGNOSIS

- Hydroxyurea (HU) Dermopathy
- Cutaneous Vasculitis
- Factitial Dermatitis
- Cutaneous Malignancies
- Pyoderma Gangrenosum

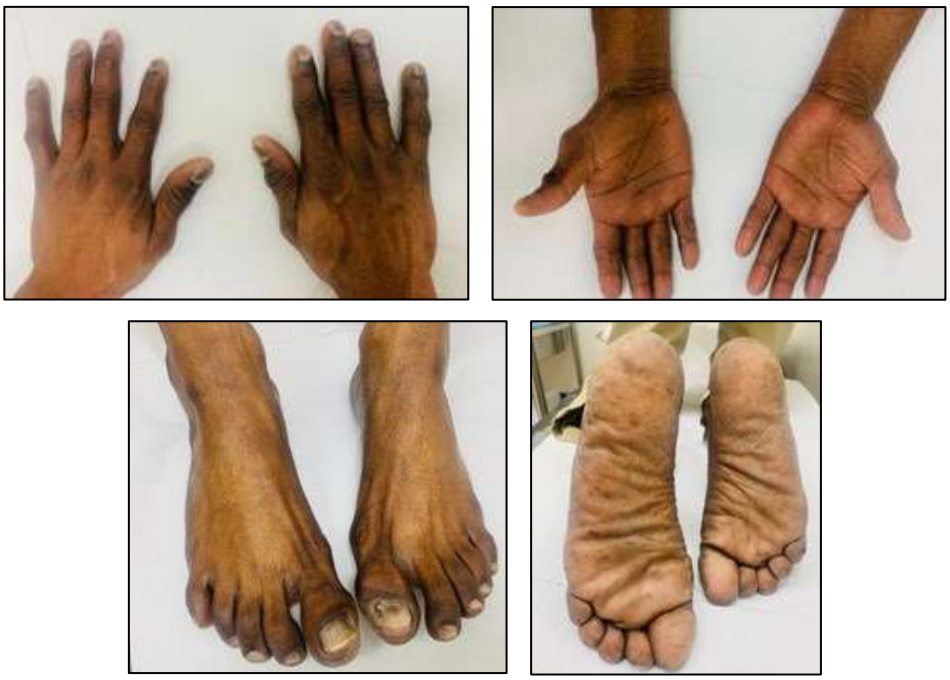
EVALUATION AND TREATMENT

- On presentation, his medications included HU 500 mg BD and Aspirin 75 mg OD, which were started by a haematologist 4 months ago. His platelet count gradually improved from 796,000 to 516,000 and finally to 386,000 on his visit to this clinic.
- The temporal association of the HU therapy initiation and onset of cutaneous manifestations led us to diagnose HU-induced hyperpigmentation and melanonychia.
- The benign nature of the skin lesions was explained to the patient since the patient was increasingly anxious about cutaneous hyperpigmentation and nail changes.
- The medication was reduced to HU 500 mg OD.

FOLLOW-UP

After 4 weeks:

- There was significant improvement in the appearance of skin and nail lesions with reduced pigmentation.



DIAGNOSIS

- HU induced Hyperpigmentation and Melanonychia

DISCUSSION

The World Health Organization classifies the following eight disorders as Myeloproliferative Neoplasms [1]:

- Chronic Myeloid Leukemia (BCR-ABL positive)
- Chronic Neutrophilic Leukemia
- Chronic Eosinophilic Leukemia (not otherwise specified)
- Polycythemia Vera (PV)
- Primary Myelofibrosis (PMF)
- Essential Thrombocytosis (ET)
- Mastocytosis
- Myeloproliferative Neoplasms (Unclassifiable)

Essential Thrombocytosis (ET) is a rare myeloproliferative neoplasm characterised by raised platelet count. Hydroxyurea (HU) is among the medications used to manage ET. This treatment can have dermatologic side effects in up to half of the cases. We report a case of a 40-year-old Indian-origin male who developed palmoplantar hyperpigmentation with homogenous and longitudinal melanonychia 4 months after initiating HU for ET.

ET is a relatively benign neoplasm incidentally identified by raised platelet count on routine medical examination. It is characterised by activation of JAK2, a tyrosine kinase receptor essential for the function of erythropoietin and thrombopoietin receptors [2]. ET is rare with an incidence of 1–2/100,000 and a female predominance. It can occur at any age [3].

ET is asymptomatic in most cases, and there are no specific signs and symptoms. However, both thrombotic and hemorrhagic manifestations can occur. In some situations, erythromelalgia, ocular migraine, or transient ischemic attack has been observed [3].

A complete blood count shows an elevated platelet count. Diagnosis is established by bone marrow examination and genetic testing. About 50% of patients express JAK2 V617F, 30% CALR, and 8% MPL mutations [2]. Transformation to acute leukemia is uncommon in ET in the absence of chemotherapy. ET, PV, and PMF are capable of transforming into each other [4].

ET is managed with salicylates, pegylated IFN-α, anagrelide, or HU. Plateletpheresis is done as a temporary measure [4]. HU is a cytostatic medication that inhibits the enzyme ribonucleotide reductase in the S phase of cellular replication, blocking DNA synthesis and cellular division [5]. It is used in myeloproliferative diseases as a reversible myelosuppressive agent effective in reducing platelet count, with low levels of hepatorenal toxicity and fewer drug interactions [6].

Adverse effects caused by HU are dose-dependent and reversible in up to 43% of cases. The most common side effects are anaemia, macrocytosis, neutropenia, bacterial infection, headache, and peripheral oedema [7]. Of the cutaneous side effects, mucocutaneous hyperpigmentation affects about 10–35% of patients [7]. Additional side effects include oral ulcers, stomatitis, oropharyngeal pigmentation, non-scarring alopecia, facial erythema, actinic keratosis-like lesions, and non-melanoma skin cancers [8,9].

Melanonychia describes a brown/black pigmented longitudinal or transverse band on the fingernail/toenail in

dark-skinned individuals in response to reactive and neoplastic disorders and as an adverse effect of chemotherapeutic and systemic treatments. The incidence of melanonychia in patients receiving HU therapy ranges from 4.3% to 55% [10]. The reported onset of melanonychia after initiation of HU therapy varies, with mean onset ranging from 6.4 weeks to 11 months [10]. Nail changes due to antineoplastic drugs are generally asymptomatic and reversible within a few months after drug discontinuation [10].

The exact mechanism underlying HU-induced melanonychia and hyperpigmentation remains unclear. A multifactorial cellular and molecular approach has been postulated. HU inhibits ribonucleotide reductase, causing cell cycle arrest and biochemical changes in redox and iron metabolism. Changes in iron metabolism may cause an increase in pericellular iron content, which further promotes melanocyte activation and melanin synthesis [11]. The capillary-rich nail apparatus also serves as an environment for HU deposition, especially in the lower extremities where there is stasis of blood flow [11].

Mucocutaneous hyperpigmentation secondary to HU does not require discontinuation of treatment; withdrawal or reduction of the dose can diminish or disappear the lesions [10]. However, in patients on long-term HU therapy, frequent dermatological monitoring is mandatory due to the possibility of malignant actinic keratosis transformation, skin cancers, and leg ulcers [12].

REFERENCES

1. Arber DA, Orazi A, Hasserjian R, et al. (2016). The 2016 revision to the World Health Organization classification of myeloid neoplasms and acute leukemia. Blood, 127(20), 2391-2405. doi: 10.1182/blood-2016-03-643544.
2. Tefferi A, Barbui T. (2019). Polycythemia vera and essential thrombocythemia: 2020 update on diagnosis, risk-stratification and management. Am J Hematol, 95(2), 208-219. doi:10.1002/ajh.25697.
3. Mesa RA, et al. (2007). Essential thrombocythemia: Clinical practice guidelines. Leukemia, 21, 219-226. doi: 10.1038/sj.leu.2404485.
4. Harrison CN, Campbell PJ, Buck G, et al. (2005). Hydroxyurea compared with anagrelide in high-risk essential thrombocythemia. N Engl J Med. 353(1), 33-45. doi: 10.1056/NEJMoa043800.
5. Tefferi A. (2018). Primary myelofibrosis: 2019 update on diagnosis, risk-stratification and management. Am J Hematol. 93(12), 1551-1560. doi: 10.1002/ajh.25230.
6. Gangat N, Wolanskyj AP, Tefferi A. (2006). Hydroxyurea therapy for essential thrombocythemia and polycythemia vera: an analysis of efficacy, toxicity, and leukemogenicity. Cancer. 107(1), 102-110. doi: 10.1002/cncr.21917.
7. Capraro GA, Maize JC. (2017). Hydroxyurea-induced melanonychia: Report of 2 cases and review of the literature. J Am Acad Dermatol Case Rep. 3(1), 36-39. doi: 10.1016/j.jdcr.2016.11.002.
8. Musto P, et al. (1998). Hydroxyurea-induced skin ulcers: A rare complication of long-term therapy for chronic myeloproliferative disorders. Haematologica. 83(10), 960-964. PMID: 9848024.
9. Sánchez-Palacios C, Guitart J. (2004). Hydroxyurea-induced dermopathy: a clinicopathologic study of 20 cases. J Am Acad Dermatol, 50(6), 923-928. doi: 10.1016/j.jaad.2003.11.028.
10. Van de Donk NW, et al. (2002). Melanonychia due to hydroxyurea. Leuk Lymphoma. 43(8), 1711–1712. doi: 10.1080/1042819021000010261.
11. Chan YK, et al. (2022). Cutaneous Adverse Effects of Hydroxyurea in Patients with Myeloproliferative Neoplasms: A Systematic Review. Cancers. 14(14), 3385. doi: 10.3390/cancers14143385.
12. Atallah E, Verstovsek S. (2010). Therapy for myeloproliferative neoplasms: When, which agent, and how? Blood Rev. 24(6), 273–282. doi: 10.1016/j.blre.2010.08.001.

A Clinical Review of Diagnostic and Management Strategies for Postmenopausal Bleeding

Dr. Deepa Rajan
Obstetrics and Gynaecology (Specialist)
Aster Hospital, Al Qusais, Dubai

INTRODUCTION

Postmenopausal bleeding (PMB) refers to any abnormal uterine bleeding that occurs after a woman has experienced 12 consecutive months of amenorrhoea, in the absence of pregnancy, lactation, or hormone disorders (1). Patients presenting with PMB account for nearly two-thirds of gynaecological consultations among postmenopausal women (2).

While genital tract atrophy accounts for 60% of PMB cases, more than 90% cases of endometrial cancer in this population also present with vaginal bleeding (2). Although PMB is often presumed to originate from the uterus, it can also result from extrauterine sources such as the vulva, vagina, cervix, urethra, or rectum (3). Women with obesity, unopposed oestrogen exposure, tamoxifen therapy, or hereditary syndromes such as Lynch or Cowden are at increased risk of developing endometrial cancer (3).

When diagnosing PMB, the main goal of diagnostic evaluation is to exclude endometrial hyperplasia or malignancy, particularly endometrial cancer (4). The differential diagnosis should include both gynaecologic and non-gynaecologic causes, such as genital tract malignancies and conditions involving the urethra, bladder, or gastrointestinal tract (4). In addition to malignancy, benign causes such as fibroids, endometrial polyps, infections, and iatrogenic or non-gynaecologic sources should also be considered (4).

This article outlines a structured clinical approach to postmenopausal bleeding, from initial evaluation to therapeutic intervention, with emphasis on hysteroscopy for diagnosis and laparoscopy for treatment.

STEP-BY-STEP DIAGNOSTIC APPROACH TO PMB

In women with PMB, the primary goal is to assess the risk of endometrial cancer; those at low risk may be monitored expectantly, whereas those at high risk should undergo an endometrial biopsy (5). The secondary goal is to detect any focal lesions, as this is essential for determining the most appropriate biopsy approach (5).

Step 1: Initial clinical assessment

The evaluation of PMB begins with taking a thorough clinical history and performing a pelvic examination (2).

Step 2: First-line imaging using TVUS with power Doppler

Following clinical assessment, transvaginal ultrasonography (TVUS) with power Doppler is used as a first-line screening tool (2,6). TVUS assesses endometrial thickness (ET), morphology, and vascularity (7). It is often considered a suitable alternative to endometrial sampling in patients with an initial episode of PMB, particularly since procedures like dilatation and curettage or in-office endometrial biopsy are invasive and not always well tolerated (8,9).

Doppler ultrasound, used to assess blood flow in vessels, is particularly valuable in imaging postmenopausal patients (8). It helps differentiate benign from malignant adnexal masses, with Power Doppler showing 100% sensitivity and 91.5% specificity for detecting malignancy in PMB (7,9)

For patients with inconclusive TVUS or elevated risk profiles, additional imaging, such as pelvic magnetic resonance imaging (MRI), can provide superior anatomical detail (4,10). MRI provides a more precise characterisation of all uterine lesions (3). It enhances the accuracy of site localisation, detection of the number of lesions, and evaluation of dimensions, lesion diameter, and any degenerative changes (11). In rare situations, MRI may be needed for further evaluation of a thickened endometrium seen on TVS, especially when hysteroscopy is not feasible or not advised (3).

Step 3: Interpretation of endometrial thickness

Interpretation of ET is essential for risk stratification (8). When ultrasound shows a thin endometrial echo of ≤4 mm, the likelihood of endometrial cancer is extremely low, with a negative predictive value exceeding 99% (8). However, if the endometrial echo is indistinct or exceeds 4 mm, further evaluation is warranted with endometrial sampling, sonohysterography, or office hysteroscopy (8).

Although an ET of 4 mm or less generally rules out malignancy, rare instances of endometrial carcinoma (particularly type II) may still occur with an ET of under 3 mm (8). Thus, in cases of persistent or recurrent uterine bleeding, histological evaluation of the endometrium should be pursued regardless of sonographic appearance (8).

Step 4: Histological evaluation and sampling

Endometrial sampling is typically done using a Pipelle biopsy or dilatation and curettage, and remains a standard first-line approach (12). However, it may miss focal lesions such as endometrial polyps or localised malignancies (12). If blind sampling does not identify endometrial hyperplasia or cancer, additional evaluation, such as hysteroscopy combined with dilatation and curettage, is recommended for women with ongoing or recurrent bleeding (8).

Step 5: Other evaluations for PMB patients

As part of the uterine evaluation, the Papanicolaou (Pap) smear remains a vital cervical screening tool (10). It can help with early identification of endometrial pathology, especially given its accessibility and ability to detect exfoliated malignant cells (10).

Moreover, emerging molecular tools, including microRNA biomarkers, circulating tumour DNA, and methylation markers, may support more refined malignancy risk stratification (4,10).

Figure 1 summarises the diagnostic pathway for PMB.

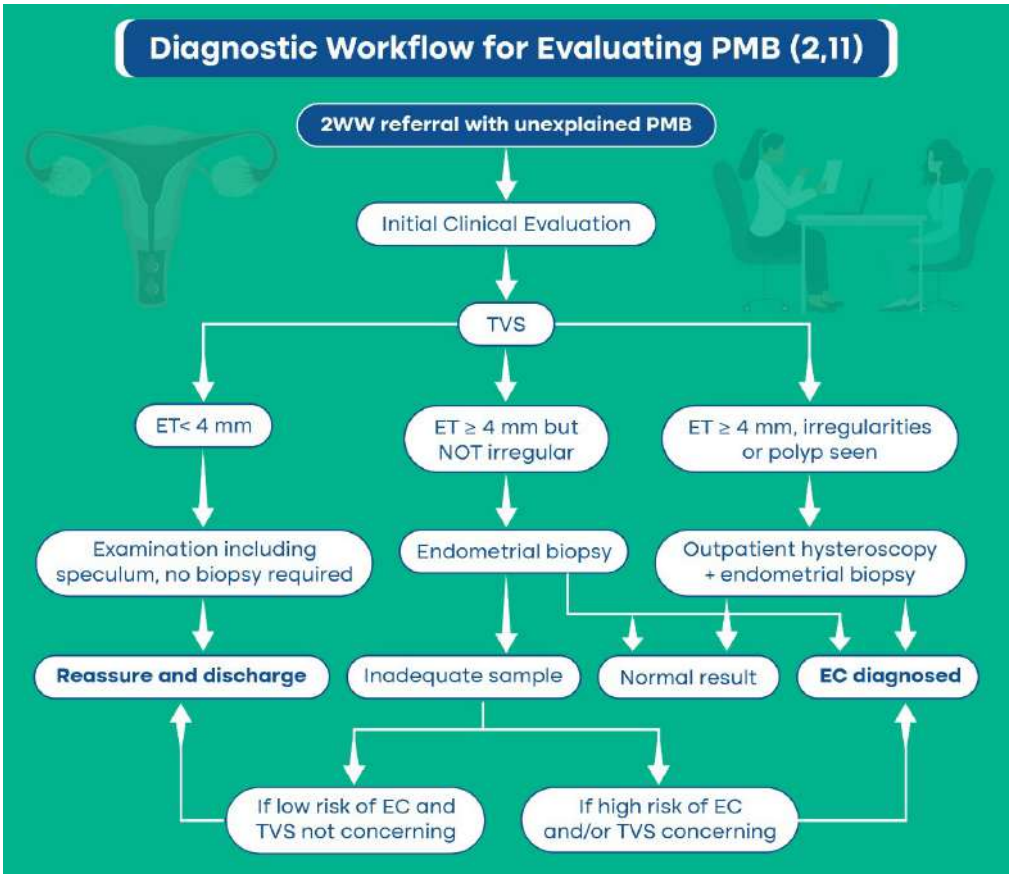


Figure 1. Structured Diagnostic Algorithm for the Evaluation of Postmenopausal Bleeding Based on Endometrial Risk Stratification (2,11)

(Abbreviation: PMB- postmenopausal bleeding; TVS- transvaginal Sonography; ET- endometrial thickness; EC- Endometrial Cancer)

Hysteroscopy involves direct visualisation of the uterine cavity using a thin scope, allowing identification of abnormalities, targeted biopsies, and therapeutic interventions like polypectomy (3). It is recommended for women presenting with a thickened or irregular endometrium, suspicious ultrasound findings, recurrent or prolonged bleeding, or when prior random endometrial sampling has been inconclusive (3).

Compared with traditional methods such as curettage, hysteroscopy offers the advantage of macroscopic visualisation of focal abnormalities and enables targeted biopsy (13). Outpatient hysteroscopy provides direct access to the uterine cavity, making it particularly valuable for ruling out endometrial polyps or fibroids (13). With the advancement of smaller-diameter hysteroscopic systems and the adoption of a 'vaginoscopic' approach, patient outcomes have improved, allowing the procedure to be performed in an outpatient setting without the need for anaesthesia (13).

Among these, hysteroscopy offers direct visualisation of the endometrial cavity and serves as both a diagnostic and therapeutic tool in the management of PMB (2,4).

Clinical utility of hysteroscopy in PMB –

- **Indications:** Inadequate or failed office biopsy, suspected focal lesions (e.g., polyps), or persistent/recurrent bleeding (2)
- **Advantages:** Enables targeted biopsy and treatment of lesions such as polyps (2).

- **Timing:** Ideally performed after histopathological review of initial biopsy findings (2).
- **Follow-up:** Repeat under general anaesthesia if outpatient hysteroscopy is inadequate (2).
- **Accuracy:** When visualisation is optimal, hysteroscopy demonstrates high diagnostic accuracy for endometrial cancer, with a reported sensitivity of 86.4% and specificity of 99.2% (4).
- **Approach:** If outpatient hysteroscopy is inconclusive or technically limited, it may be repeated under general anaesthesia (2).

MINIMALLY INVASIVE SURGICAL MANAGEMENT OF PMB

The choice of procedure for the management of PMB depends on the underlying aetiology– benign or malignant (2).

Hysterectomies are the most common gynaecological procedures performed for both benign and malignant pathologies (14). In recent years, the laparoscopic approach to hysterectomy has become increasingly popular among surgeons trained in laparoscopy (14).

Various studies have shown that laparoscopic surgery, when compared to open procedures, results in fewer postoperative adhesions, shorter hospitalisation, reduced complication rates, less postoperative pain, and better quality of life owing to quicker recovery (15). Furthermore, current evidence indicates that minimally invasive approaches offer comparable oncological outcomes with lower morbidity than conventional laparotomy (15).

The primary treatment for endometrial adenocarcinoma involves hysterectomy along with comprehensive surgical staging, which is essential for assessing prognosis and guiding further management (2). Clinical decision-making also considers patient comorbidities, bleeding severity, and personal preferences (2).

Uterine fibroids identified during the evaluation of postmenopausal bleeding may be managed with medical treatment using agents such as aromatase inhibitors or selective oestrogen receptor modulators, or with surgical procedures including myomectomy or hysterectomy (2).

Figure 2 outlines minimally invasive surgical approaches commonly used for both benign and malignant causes of postmenopausal bleeding.

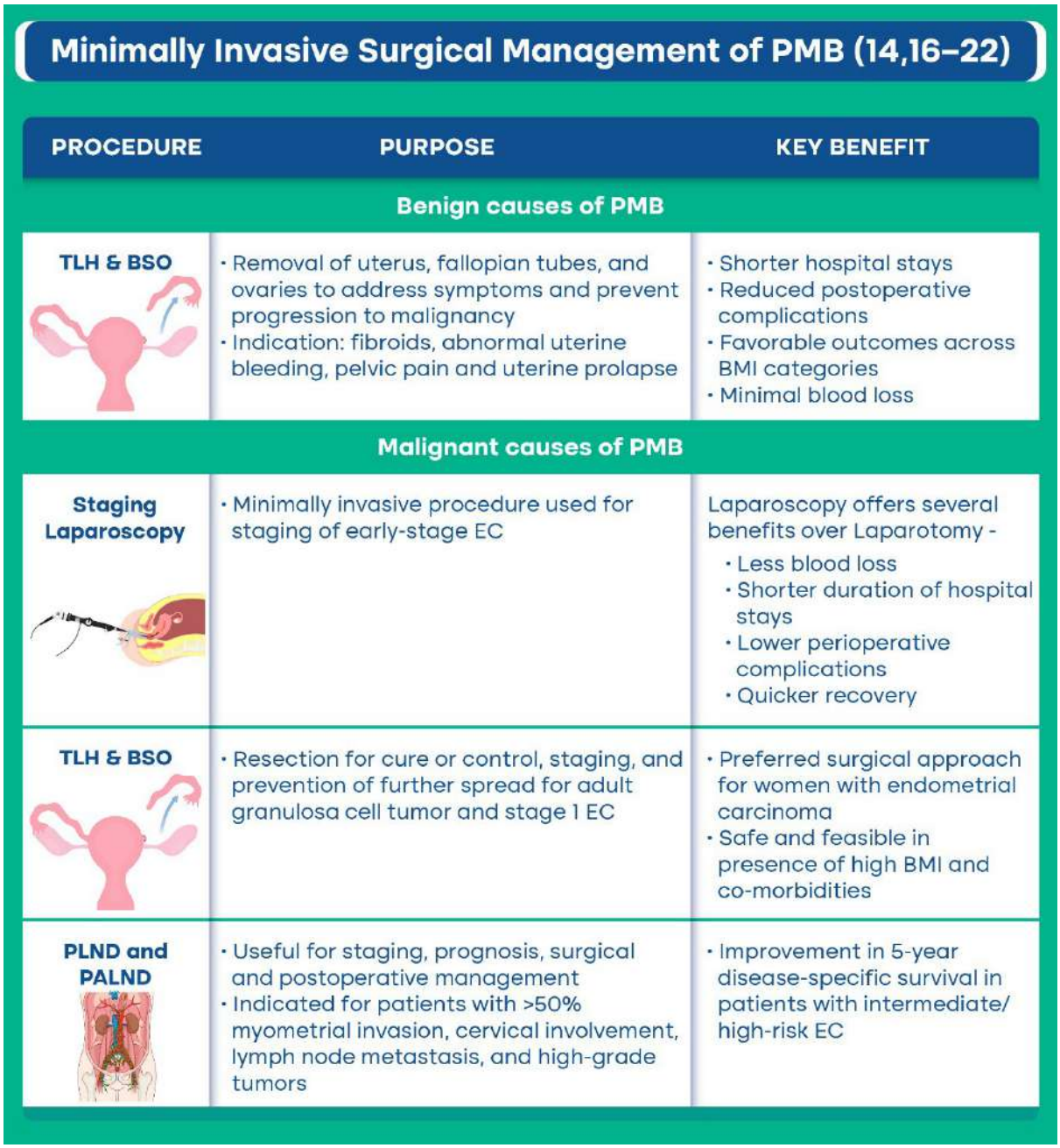


Figure 2. Minimally Invasive Surgical Approaches for Benign and Malignant Causes of Postmenopausal Bleeding (14,16–22)

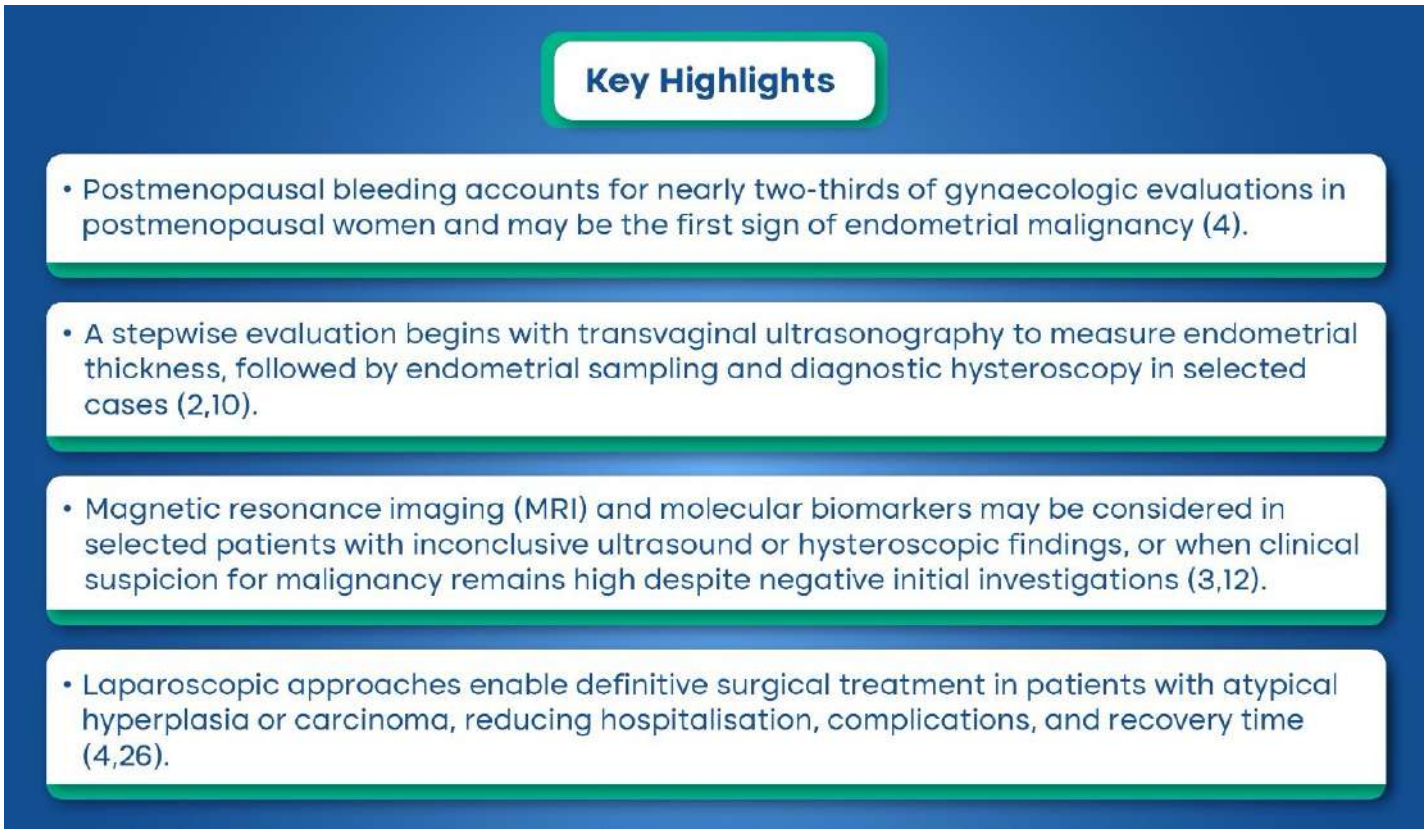
(Abbreviation: PMB – postmenopausal bleeding; TLH – total laparoscopic hysterectomy; BSO – bilateral salpingo-oophorectomy; EC – endometrial cancer; PLND – pelvic lymph node dissection; PALND – para-aortic lymph node dissection; BMI – body mass index)

Cytoreductive Surgery (CRS) with HIPEC is a form of localised chemotherapy heated to improve penetration and cytotoxicity against tumour cells (23). It is recommended for EC-derived peritoneal metastases and higher-stage uterine cancer (23). On the other hand, Secondary cytoreductive surgery involves the removal of recurrent endometrial cancer tumours after initial treatment (24). It is associated with improved prognosis in cases of lower tumour grades, single, smaller recurrent tumours (≤6 cm), and no peritoneal dissemination (24). Maximal debulking surgery is an open procedure aimed at complete disease resection, followed by adjuvant platinum-based chemotherapy and is primarily indicated for high-grade serous endometrial cancer (25). This approach shows good results in terms of survival (25).

Laparoscopic surgery has consistently demonstrated clinical effectiveness, safety, and favourable recovery profiles (26). Reported operative times range between 53 and 97 minutes, with no significant intraoperative complications noted in appropriately selected patients (26).

CONCLUSION

PMB requires a systematic and multidisciplinary evaluation due to its diverse underlying causes (4). Endometrial hyperplasia and polyps are the most frequent causes and can be accurately assessed through uterine curettage, biopsy, or hysteroscopy, which are established as safe and dependable techniques (26). Most patients undergoing surgical treatment experience favourable outcomes with minimal complications (26). Education on abnormal bleeding and risk factors, such as unopposed oestrogen exposure, should be routinely offered (4). In cases where malignancy is suspected, timely referral to gynaecological oncologists significantly improves prognosis and facilitates specialised, coordinated care (4).



REFERENCES

1. Bazyar N, Moradi Z, Khani Jeihooni A, Dehghan A. Trends in age at natural menopause and menarche and related factors in Iran: results from a population-based study. Sci Rep [Internet]. 2025 May 26 [cited 2025 Jul 21];15(1). Available from: https://www.nature.com/articles/s41598-025-03435-4
2. Gupta S, Kalwaniya DS. Strategies for managing postmenopausal bleeding: a clinician's perspective. Int J Res Med Sci. 2024 May 31;12(6):2192–9.
3. Jones ER, O'Flynn H, Njoku K, Crosbie EJ. Detecting endometrial cancer. The Obstetric & Gynaecologis. 2021 Apr;23(2):103–12.
4. Sung S, Carlson K, Abramovitz A. Postmenopausal Bleeding. In: StatPearls [Internet] [Internet]. StatPearls Publishing; 2025 [cited 2025 Jun 12]. Available from: https://www.ncbi.nlm.nih.gov/books/NBK562188/
5. Epstein E. The use of new and old ultrasound techniques in the assessment of women with postmenopausal bleeding. Australas J Ultrason Med. 2009 Feb;12(1):24–7.

6. Maherunnessa -, Shermin S, Rahman S, Naher N, Jahan M. The Role of Transvaginal Ultrasonography in the Evaluation of Postmenopausal Bleeding. Delta Med Col J. 2024 Jul 14;9(2):91–5.
7. Department of Radiodiagnosis, Rajah Muthiah Medical College and Hospital, Chidambaram, Bharathi B. Role of Ultrasound in Women with Postmenopausal Bleeding. jmscr [Internet]. 2020 Nov 3 [cited 2025 Jul 15];08(11). Available from: http://jmscr.igmpublication.org/v8-i11/25%20jmscr.pdf
8. Committee on Gynecologic Practice. The Role of Transvaginal Ultrasonography in Evaluating the Endometrium of Women With Postmenopausal Bleeding. the American College of Obstetricians and Gynecologists. 2018 May;
9. Buckley E. Sonography Postmenopausal Assessment, Protocols, and Interpretation. StatPearls. 2023 Jan 16;
10. Asaturova A, Zaretsky A, Rogozhina A, Tregubova A, Badlaeva A. Advancements in Minimally Invasive Techniques and Biomarkers for the Early Detection of Endometrial Cancer: A Comprehensive Review of Novel Diagnostic Approaches and Clinical Implications. JCM. 2024 Dec 11;13(24):7538.
11. Uhasai K, Naik D, P R. Efficacy of MRI Over Ultrasound in Evaluation of Abnormal Uterine Bleeding With Histopathological Correlation. Cureus [Internet]. 2023 May 4 [cited 2025 Jul 21]; Available from: https://www.cureus.com/articles/126894-efficacy-of-mri-over-ultrasound-in-evaluation-of-abnormal uterine-bleeding-with-histopathological-correlation
12. Vitale SG, Buzzaccarini G, Riemma G, Pacheco LA, Di Spiezio Sardo A, Carugno J, et al. Endometrial biopsy: Indications, techniques and recommendations. An evidence-based guideline for clinical practice. Journal of Gynecology Obstetrics and Human Reproduction. 2023 Jun;52(6):102588.
13. Bakour SH, Timmermans A, Mol BW, Khan KS. Management of women with postmenopausal bleeding: evidence-based review. The Obstetric & Gynaecologis. 2012 Oct;14(4):243–9.
14. Fayyad A, Said M, Hasan M, Saleh M. Total laparoscopic hysterectomy and bilateral salpingo-oophrectomy for stage 1 endometrial carcinoma under regional anaesthesia. Gynecologic Oncology Reports. 2023 Aug;48:101222.
15. Baum S, Alkatout I, Proppe L, Kotanidis C, Rody A, Laganà AS, et al. Surgical treatment of endometrioid endometrial carcinoma - laparotomy versus laparoscopy. J Turkish German Gynecol Assoc. 2022 Dec 1;23(4):233–40.
16. O'Hanlan KA, Emeney PL, Frank MI, Milanfar LC, Sten MS, Uthman KF. Total Laparoscopic Hysterectomy: Making It Safe and Successful for Obese Patients. JSLS. 2021;25(2):e2020.00087.
17. Ashfaq S, Samina M, Jabeen M, Zafar S. Outcomes of Total Laparoscopic Hysterectomy: A Single-Surgeon Experience of Initial 50 Cases. Cureus [Internet]. 2021 Jan 12 [cited 2025 Jul 21]; Available from: https://www.cureus.com/articles/49312-outcomes-of-total-laparoscopic-hysterectomy-a-single-surgeon-experience-of-initial-50-cases
18. Fıratlıgil FB, Akdaş Reis Y, Akay A, Kalaycı Öncü A, Erturun AG, Pay RE, et al. Analysis of total laparoscopic hysterectomies for benign disease: The experience of a tertiary center: A retrospective cross-sectional study. Jinekoloji-Obstetrik ve Neonatoloji Tıp Dergisi. 2025 Mar 22;22(1):62–8.
19. Cakmak Y, Comert DK, Sozen I, Oge T. Comparison of Laparoscopy and Laparotomy in Early-Stage Endometrial Cancer: Early Experiences from a Developing Country. Journal of Oncology. 2020 Apr 30;2020:1–5.
20. Kunnath NP, Nanda S, Mohapatra J. Three Different Ways to Miss a Granulosa Cell Tumor – A Lesson to be Learne. Asian Pac J Cancer Care. 2021 Jul 28;6(3):345–8.
21. Kostov S, Selçuk I, Yordanov A, Kornovski Y, Yalçın H, Slavchev S, et al. Paraaortic Lymphadenectomy in Gynecologic Oncology—Significance of Vessels Variations. JCM. 2022 Feb 11;11(4):953.
22. Neubauer NL, Lurain JR. The Role of Lymphadenectomy in Surgical Staging of Endometrial Cancer. International Journal of Surgical Oncology. 2011;2011:1–7.
23. Psilopatis I, Damaskos C, Garmpis N, Vrettou K, Garmpi A, Sarantis P, et al. The Role of Hyperthermic Intraperitoneal Chemotherapy in Uterine Cancer Therapy. IJMS. 2023 Aug 2;24(15):12353.
24. Fang C, Zhang Y, Zhang P, Zhu T. Prognostic factors of patients with recurrent uterine malignancies undergoing secondary cytoreductive surgery. BMC Women's Health [Internet]. 2024 Jan 2 [cited 2025 Jul 21];24(1). Available from: https://bmcwomenshealth.biomedcentral.com/articles/10.1186/s12905-023-02708-2
25. Pinelli C, Guerrisi R, Brusadelli C, Artuso V, Majd HS, Bogani G, et al. Interval debulking surgery for advanced ovarian cancer: when, how and why? Gynecol Pelvic Med. 2021 May;4:16–16.
26. Tran DT, Nguyen PH, Hoang NT, Le SPA, Chau KT. Evaluation of the surgical treatment outcomes for abnormal uterine bleeding in menopausal women. HUEJMP. 2024 Jun 25;14(4):130.

Emergency Snippet in the OPD: Supraventricular Tachycardia (SVT) in a Chronic Smoker managed successfully at Aster Clinic, Business Bay, Dubai

Dr. Rohit Jacob
Internal Medicine (Specialist)

PRESENTATION

- 52-year-old male, chronic smoker
- History of S/P ASD Closure (1996)
- Presented with:
  - Chest discomfort
  - Palpitation
  - Increased sweating

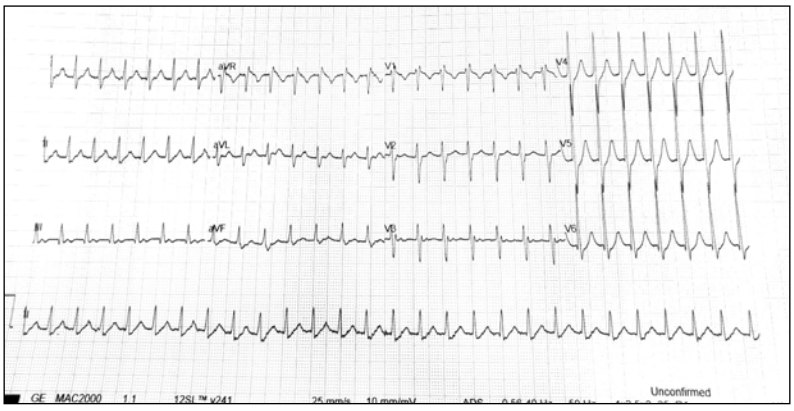
FINDINGS

Initial Evaluation:

- Pulse: 166 beats per minute (regular)
- BP: 114/60 mm Hg
- SpO2: 94% on room air

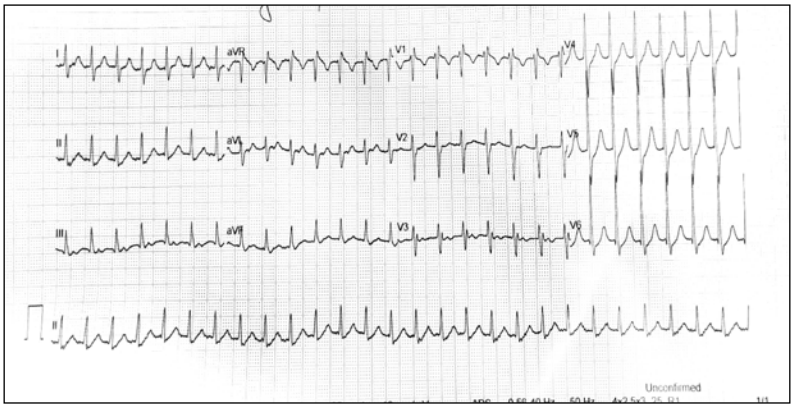
ECG showed:

- Narrow Complex Tachycardia – s/o Supraventricular Tachycardia



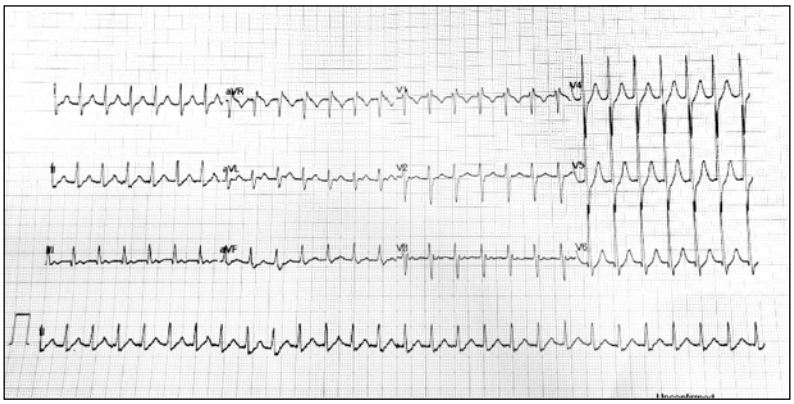
MANAGEMENT

- Vagal Manoeuvre was initiated.
- He was given Intravenous Adenosine 6 mg, following which a repeat ECG was taken.



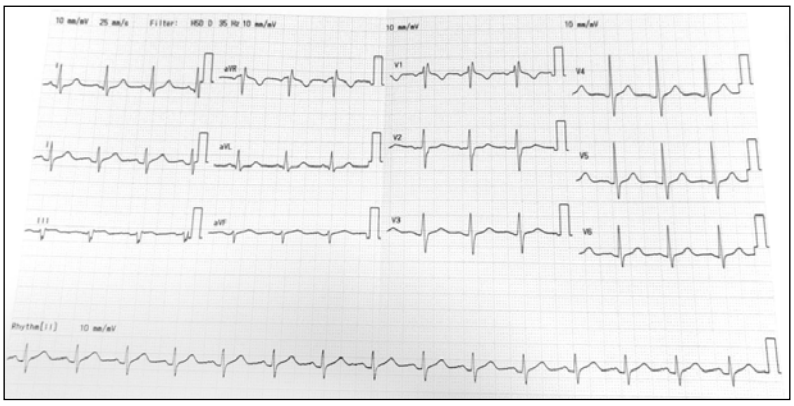
Repeat ECG after IV Adenosine (1st dose)

- Due to persistent symptoms and rising heart rate, IV Adenosine 12 mg was given twice sequentially and closely observed.
- Troponin was tested bedside - negative.
- Blood samples were sent for evaluation to rule out electrolyte imbalance.



Repeated ECG after IV Adenosine (2nd dose)

- Due to persistent symptoms and unavailability of second-line medications, IV Amiodarone 150 mg was given and closely observed.
- He gradually improved with the given line of treatment and was haemodynamically stabilised.



Final ECG after IV Amiodarone

He was later referred to a tertiary care hospital for further management.

DISCUSSION

Managing Supraventricular Tachycardia (SVT) in an outpatient department (OPD) presents unique challenges, particularly when emergency care must be delivered amidst resource constraints and heavy patient flow typical of busy clinics. The optimal approach must balance prompt intervention, patient safety and judicious allocation of available resources.

Treating SVT in an OPD is complicated by the real-world limitations. Essential resources for advanced cardiac life support, including defibrillators and monitoring equipment, may not be readily available in OPDs, making complex interventions such as cardioversion difficult to perform [1]. secondly, outpatient settings often suffer from staff shortages, time constraints, and variable provider training in acute arrhythmia management compared to emergency departments [2,3]. Finally, high patient volumes, long waiting times, and multitasking demands decrease provider attentiveness and the speed with which emergencies can be identified and managed, sometimes resulting in delays or incomplete assessment of acute presentations [4,5].

In summary, managing SVT in OPD settings demands rapid clinical acumen, a structured approach, and practical awareness of the unique limitations inherent to busy, resource-limited environments. Preparedness, clear protocols, and effective team communication remain critical for optimising outcomes in such scenarios.

CONCLUSION

Ultimately, this case reinforces an essential lesson for all physicians: the development and maintenance of basic clinical and resuscitation skills, coupled with a disciplined, methodical approach during emergencies, are indispensable-regardless of speciality. Such preparedness is pivotal for optimal patient safety and outcomes when time is of the essence.

REFERENCES

1. McKenna P, Heslin SM, Viccellio P, et al. Emergency department and hospital crowding: causes, consequences, and cures. Clin Exp Emerg Med. Jul 12;6(3):189–195. doi: 10.15441/ceem.18.022.
2. Rasouli HR, Esfahani AA & Abbasi Farajzadeh MA. Challenges, consequences, and lessons for way–outs to emergencies at hospitals: a systematic review study. BMC Emerg Med 19, 62 (2019). doi: 10.1186/s12873-019-0275-9
3. Savioli G, Ceresa IF, Gri N, et al. Emergency Department Overcrowding: Understanding the Factors to Find Corresponding Solutions. J Pers Med. 2022 Feb 14;12(2):279. doi: 10.3390/jpm12020279.
4. Sartini M, Carbone A, Demartini A, et al. Overcrowding in Emergency Department: Causes, Consequences, and Solutions-A Narrative Review. Healthcare (Basel). 2022 Aug 25;10(9):1625. doi: 10.3390/healthcare10091625.
5. Patti L, Horenstein MS, Ashurst JV. Supraventricular Tachycardia. [Updated 2025 Feb 18]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK441972.

Aster HOSPITAL
We'll Treat You Well

Center of Advanced Cardiac Sciences

NO HEART TOO TOUGH

Over 15,000 Cardiac Patients

restored to vitality

At Aster Hospitals, our unwavering commitment to exceptional cardiac care has ensured the best outcomes for our patients. Join the thousands who have trusted us with their heart health.

We DON'T TAKE NO for an answer!

5 Hospitals | Advanced Heart Clinic | Invasive Cardiology | Non-Invasive Cardiology | Interventional Cardiology | Cardiac Surgeries

044 400 500 | Download | asterhospitals.ae