

Pearl

Women's Hospital



INSTITUTE OF INFERTILITY, IVF CENTER, LAPROSCOPIC SURGERY,
FETAL MEDICINE AND PREGNANCY CARE.



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Endometrial Cancer

Early Diagnosis & Treatment

BY : DR. PRAVIN KANANI
(LAPAROSCOPIC SURGEON)

Epidemiology

- Most common gynecologic malignancy in developed countries
- Rising incidence in India
- Peak: 55–65 years
- Early stage diagnosis common

Risk Factors

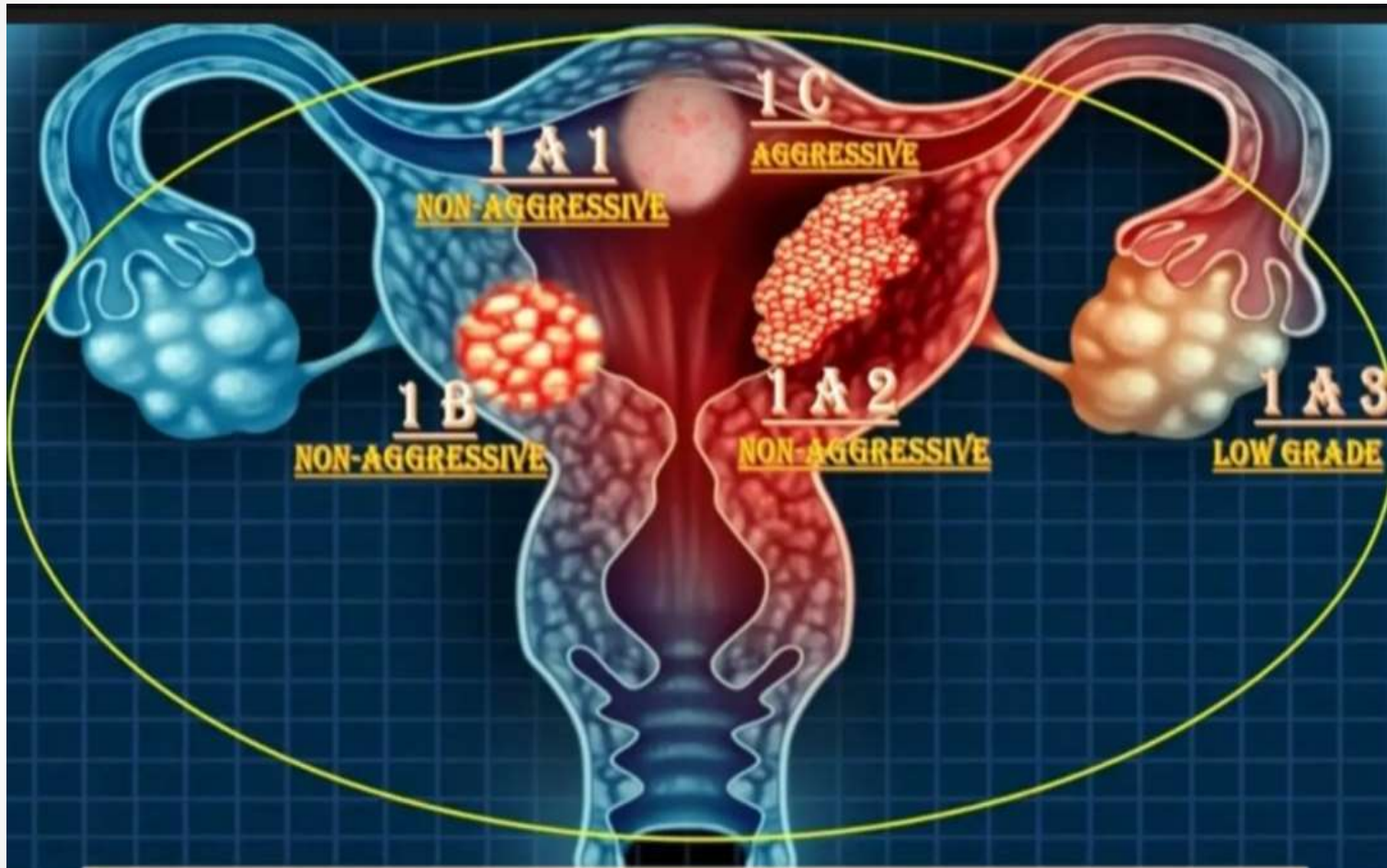
- Unopposed estrogen (obesity, PCOS)
- Nulliparity
- Early menarche / Late menopause
- Tamoxifen
- Lynch syndrome

Clinical Presentation

- Postmenopausal bleeding (key symptom)
- Intermenstrual bleeding
- Watery discharge

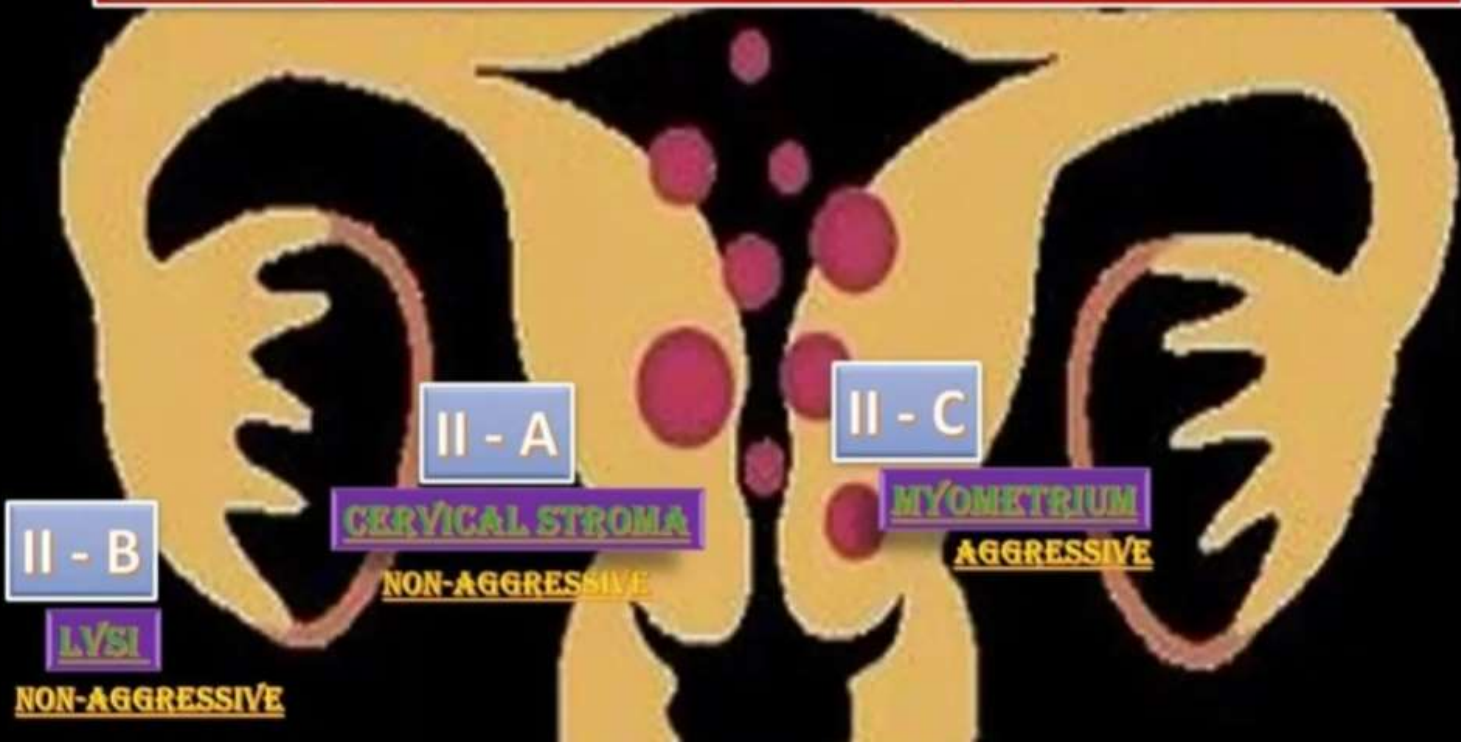
Diagnostic Algorithm

- TVS → Endometrial thickness
>4 mm
- Endometrial biopsy (gold standard)
- Hysteroscopy for focal lesions

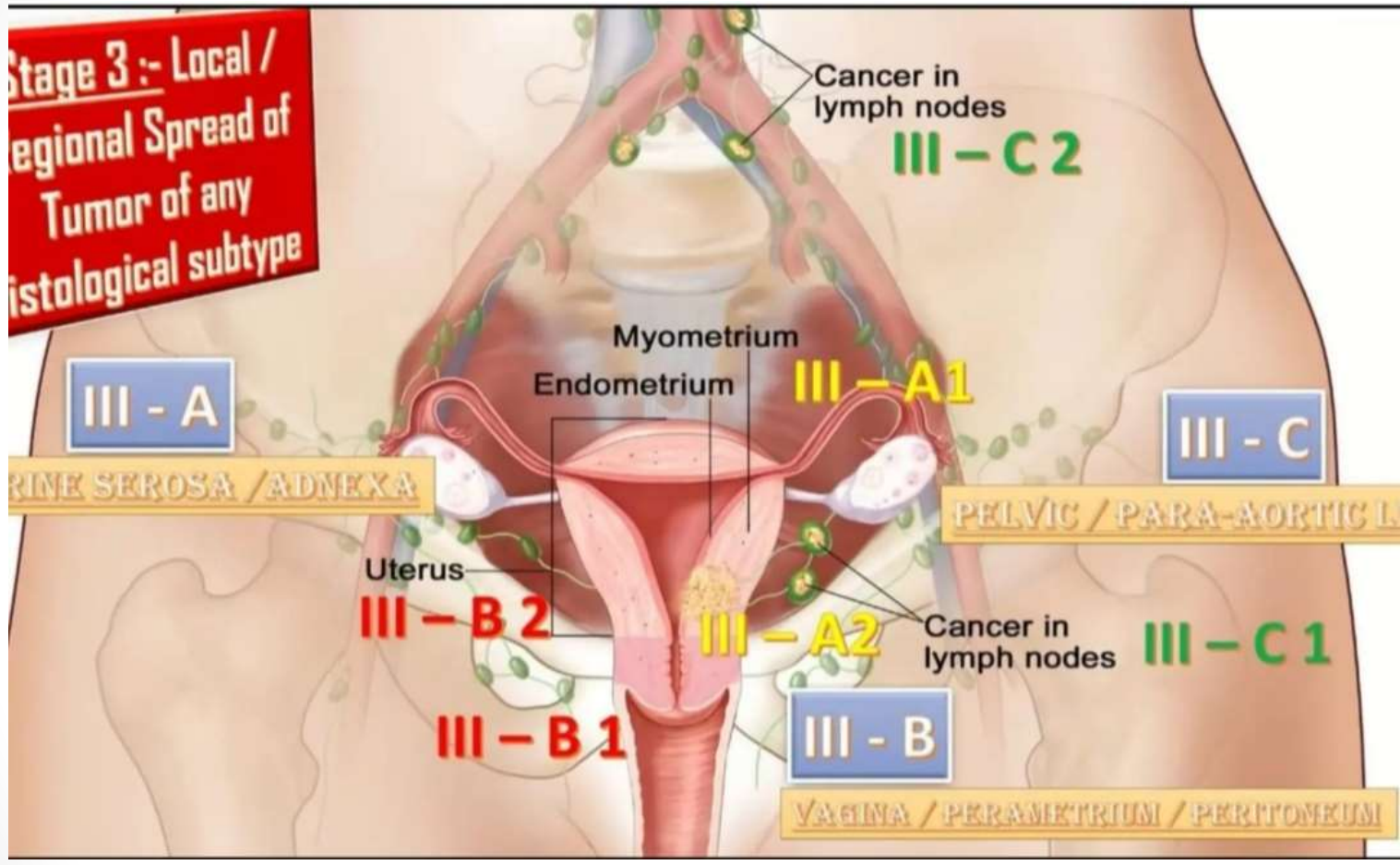


Stage 1 :- Tumor confined to uterine Corpus and Ovary

Stage 2 :- Cervical Stroma / LVSI / Myometrium invasion

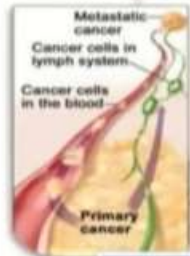


Stage 3 :- Local / Regional Spread of Tumor of any histological subtype



Stage 4

Bladder Mucosa / Intestinal Mucosa / Distant Metastasis



ABDOMINAL PERITONEAL METASTASIS

IV - C

DISTANT METASTASIS

IV - B

Endometrium

IV - A

BLADDER / BOWEL MUCOSA

Uterus

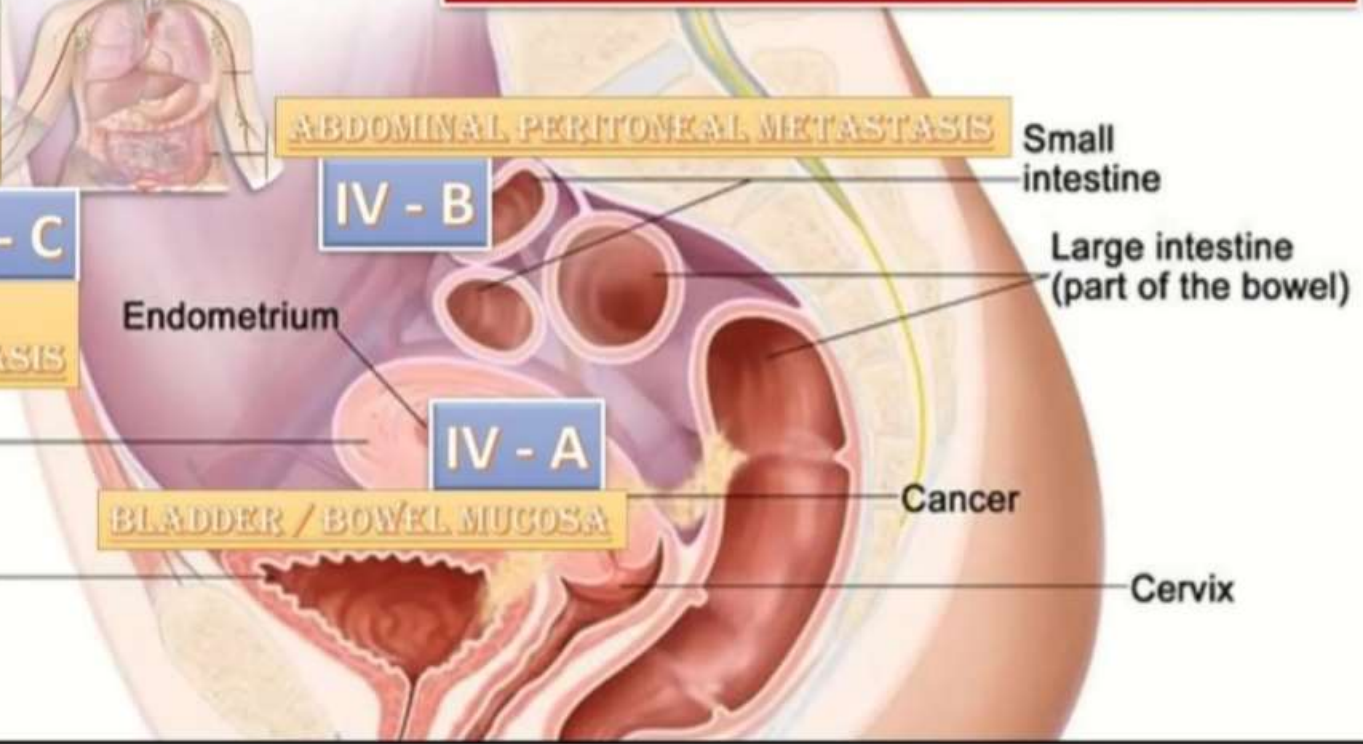
Bladder

Small intestine

Large intestine (part of the bowel)

Cancer

Cervix



FIGO Staging 2023

Stage	Description	Treatment	5-yr Survival
IA1	Endometrium only	TAH+BSO	92–95
IA2	<50% myometrial	TAH+BSO ± VBT	88–92
IA3	Low grade + ovary	Surgery ± adj	80–85
IB	≥50% invasion	Surgery + RT ± CT	75–85
IC	Aggressive histology	Surgery + CT ± RT	65–75
IIA	Cervical stromal	Radical surg + RT	70–75
IIB	Substantial LVSI	Surg + CT + RT	60–70
IIC	Aggressive + invasion	Surg + CT + RT	55–65
IIIA1	Adnexa	Surg + CT ± RT	50–60
IIIA2	Serosa	Surg + CT ± RT	45–55
IIIB	Vagina/parametrium	Surg + CT + RT	35–50
IIIC1	Pelvic LN	Surg + CT ± RT	40–50

Stage	Description (FIGO 2023)	Standard Treatment Approach	Approx Survival (5-year OS)
Stage I (confined to uterus)	Tumor limited to uterus with molecular & histological risk stratification (IA1–IC based on invasion, LVSI, aggressive histology)	Primary: Total hysterectomy + BSO ± SLN mapping Adjuvant: • Low risk: observation • Intermediate: vaginal brachytherapy • High-risk histology: chemo ± RT	~80–95% <small>PubMed</small>
Stage II	Cervical stromal invasion OR uterine-confined disease with substantial LVSI or aggressive biology	Surgery (TH + BSO + staging) + Adjuvant radiotherapy ± chemotherapy	~70–80% <small>PubMed</small>
Stage III (local/regional spread)	Spread beyond uterus but confined to pelvis: adnexa, vagina, parametrium, or lymph nodes (IIIA–IIIC)	Surgery + combined modality therapy: • Chemotherapy (carboplatin + paclitaxel) • External beam RT ± brachytherapy	~50–65% <small>PubMed</small>
Stage IV (advanced disease)	IVA: bladder/bowel mucosa IVB: distant metastasis (lung, liver, peritoneum) IVC (new): extensive metastasis with poor biology	Systemic therapy dominant: • Chemotherapy ± immunotherapy (e.g. pembrolizumab) • Palliative RT/surgery if needed	~15–25% overall <small>PubMed</small>

Imaging

- MRI: Myometrial invasion
- CT: Metastasis
- PET-CT: Selected cases

Surgical Management

- TLH + BSO
- TLH + BSO + PLND
- TLH + BSO + Para aortic lymphadectomy
- Sentinel lymph node mapping preferred
- Minimally invasive surgery standard

Evidence based practise

➤ Indications for Pelvic Lymph Node Mapping in Endometrial Cancer

1. Apparent uterine-confined disease

- Clinical stage I–II
- No obvious extrauterine spread on imaging
- This is the MOST common indication

2. Low-risk and Intermediate-risk disease

- Grade 1–2 endometrioid carcinoma
- <50% or ≥50% myometrial invasion

3. Selected high-risk histology

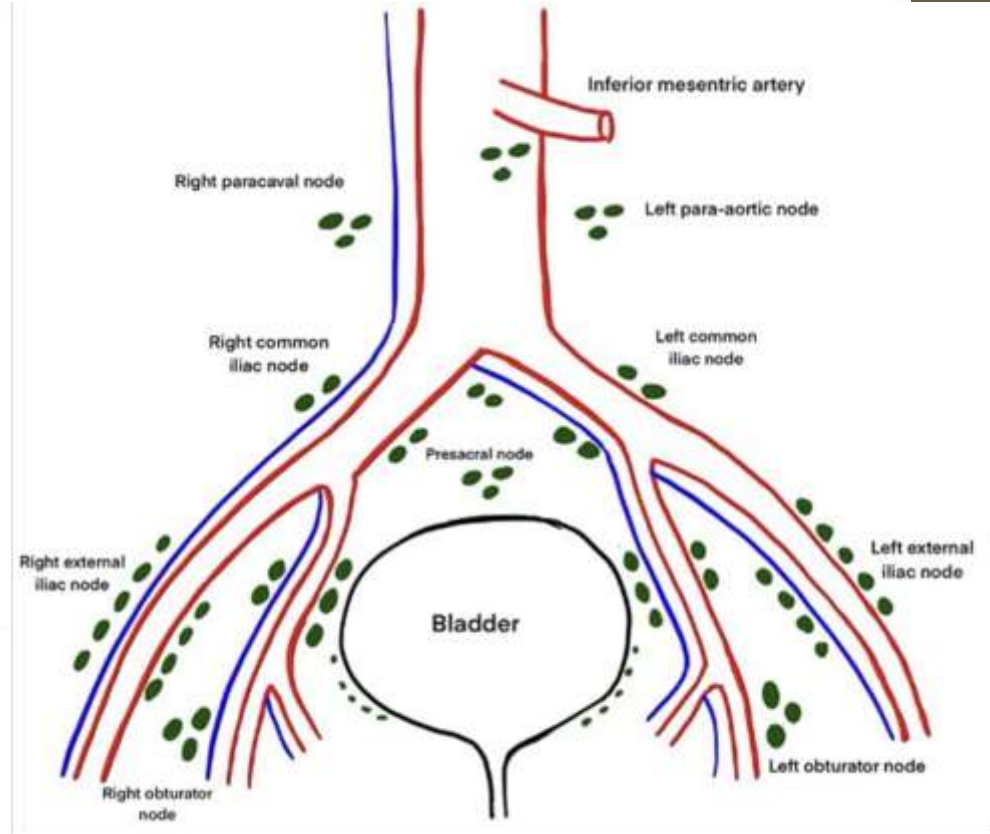
- Serous
- Clear cell
- Carcinosarcoma

PELVIC LYMPHADENECTOMY BOUNDARIES

- **Cranial (Upper):**
 - Bifurcation of common iliac artery
- **Caudal (Lower):**
 - Deep circumflex iliac vein / inguinal ligament
- **Lateral:**
 - Genitofemoral nerve on psoas muscle
- **Medial:**
 - Obliterated umbilical artery / superior vesical artery
- **Posterior (Deep):**
 - Obturator nerve (within obturator fossa)

Nodal Groups Removed

- External iliac nodes
- Internal iliac (hypogastric) nodes
- Obturator nodes
- Common iliac nodes (sometimes included)



Video of laparoscopic pelvic lymphedectomy

➤ Indications for Para-aortic Lymph Node Mapping

1. High-risk histology

- Serous carcinoma
- Clear cell carcinoma
- Carcinosarcoma
- Undifferentiated carcinoma
- These have a higher tendency for skip metastasis to para-aortic nodes

2. High-grade tumors

- Grade 3 endometrioid carcinoma

3. Deep myometrial invasion

- ≥50% myometrial invasion on imaging or intraoperative assessment

4. Large tumor size

- 2 cm (some guidelines use >4 cm as higher risk)

5. Cervical stromal involvement

- Suggests higher stage → increased nodal spread risk

6. Positive pelvic sentinel lymph node

- If pelvic SLN is positive → consider para-aortic mapping/dissection

7. Suspicious para-aortic nodes on imaging

Enlarged nodes on:

- CT
- MRI
- PET-CT

8. LVSI (Lymphovascular space invasion)

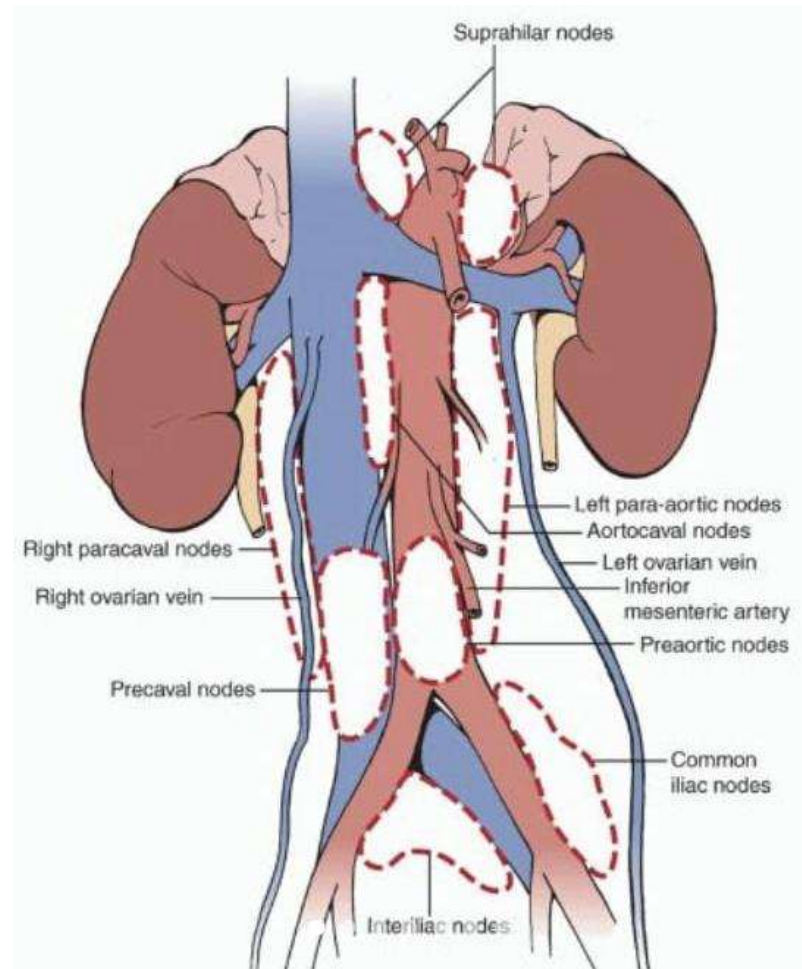
- Especially substantial LVSI

PARA AORTIC LYMPHADENECTOMY BOUNDARIES

- **Cranial (Upper):**
 - Left renal vein (gold standard upper limit)
- **Caudal (Lower):**
 - Mid common iliac vessels / aortic bifurcation
- **Right lateral:**
 - Inferior vena cava (IVC)
- **Left lateral:**
 - Left ureter & psoas muscle
- **Posterior:**
 - Vertebral bodies

📍 Nodal Groups Removed

- Precaval
- Paracaval
- Interaortocaval
- Para-aortic (left side)



Video of lap. Para aortic lymphadenectomy

➤ Indications of Sentinel Lymph Node (SLN) Mapping in Endometrial Carcinoma

- **Primary Indication**

1. Apparent early-stage (Stage I–II) disease
2. Tumor confined to uterus
3. No radiologic evidence of lymph node metastasis

- **Histological Types**

1. Endometrioid carcinoma (Grade 1–3)
2. Selected high-risk histologies:
3. Serous
4. Clear cell
5. Carcinosarcoma

- **Risk-Based Indications**

1. High-intermediate risk features:
2. Deep myometrial invasion (>50%)
3. LVSI positive
4. Grade 2–3 tumors

Video of lap. Sentinel lymphadectomy

Adjuvant Therapy

- Radiotherapy
- Chemotherapy (advanced/high risk)
- Hormonal therapy

Recent Advances

- Molecular classification (TCGA)
- Immunotherapy (PD-1 inhibitors)
- Targeted therapy

Take Home Messages

- Postmenopausal bleeding = evaluate urgently
- Early diagnosis → excellent survival
- Surgery remains cornerstone
- Laparoscopic surgery is evidence based practice in cases of endometrial carcinoma
- Proper staging is necessary for further management

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