Disorders of the Menstrual Cycle

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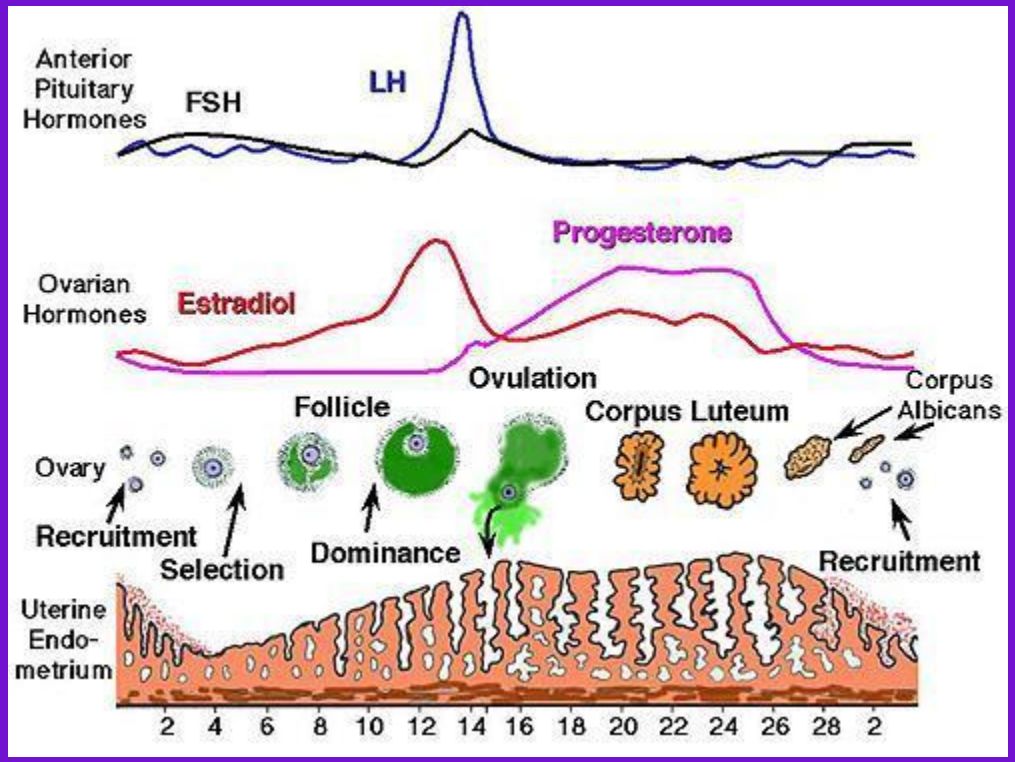
Background Menstrual Disorders

- 1 in 20 women aged 30-49 present to their GPs with this disorder per year.
- £7 Million per year spent on primary care prescription
- One of the most common reason for specialist referral
- Account for a third of gynae outpatients workload

Physiology of the Menstrual Cycle



Disorders of the Menstrual Cycle

- Menorrhagia Excessive uterine bleeding (>80ml) Prolonged (>7 days) regular
- DUB Abnormal Bleeding, no obvious organic cause usually anovulatory
- Oligomenorrhea Uterine bleeding occurring at intervals between 35 days and 6 months
- Amenorrhea No menses x at least 6 months

Disorders of the Menstrual Cycle

- Anovulatory
  - –Oligo or Amenorrhea +/- Menorrhagia
- Ovulatory
  - –Regular menstrual cycles (plus premenstrual symptoms such as dysmenorrhea and mastalgia

Dysfunctional Uterine Bleeding DUB

Excessively heavy, prolonged or frequent bleeding of uterine origin that is not due to pregnancy, pelvic or systemic disease

-Diagnosis of exclusion

- Anovulatory

-Usually extremes of reproductive life and in pts with PCOS

DUB Pathophysiology

- Disturbance in the HPO axis thus changes in length of menstrual cycle
- No progesterone withdrawal from an estrogen-primed endometrium
- Endometrium builds up with erratic bleeding as it breaks down
- Spiral arteries do not develop properly and are unable to undergo vasoconstriction at the time of shedding.

DUB Management

- Clinical examination
  - General appearance (? Pallor)
  - Abdominal examination (?Pelvic mass)
  - Speculum examination
    - Assess vulva, vagina and cervix
  - Bimanual examination
    - Elicit tenderness
    - Elicit uterine / adnexal masses

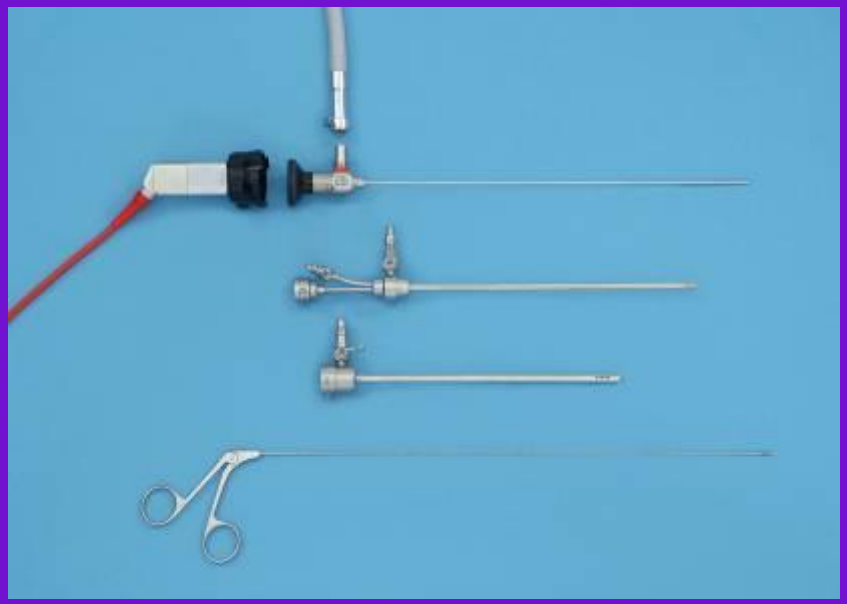
DUB Management

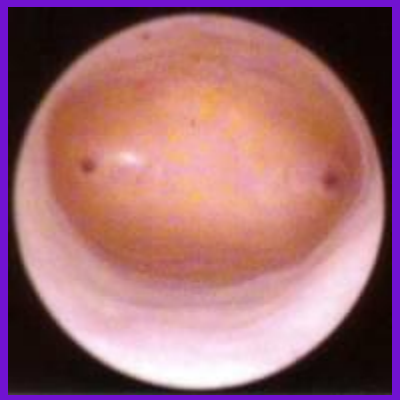
- Indicated if age > 40 years
- or failed medical treatment
  - FBC / Coagulation screen (Von Willebrand Disease)
    - The most common inherited bleeding disorders; prevalence 0.6-1.3%'
    - The overall prevalence is even greater among women with chronic heavy menstrual bleeding, and ranges from 5% to 24%, more prevalent among Caucasians (15.9%) than African.
  - Thyroid function (only if clinically indicated)

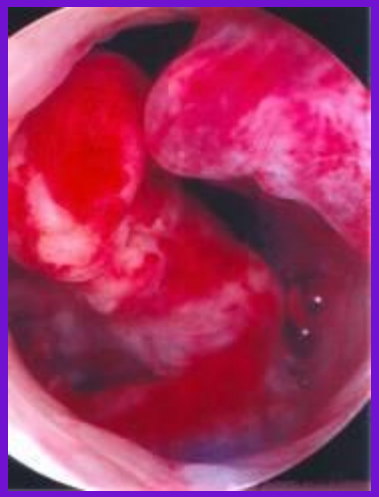
DUB Management

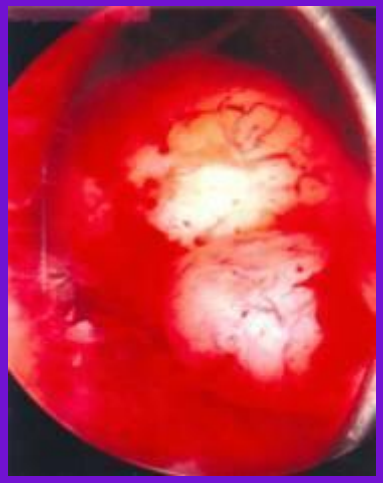
- Smear/endocervical swabs/High vaginal swabs
- Pelvic ultrasound scan (TV scan)
- Hysteroscopy
- Endometrial biopsy

Hysteroscopy





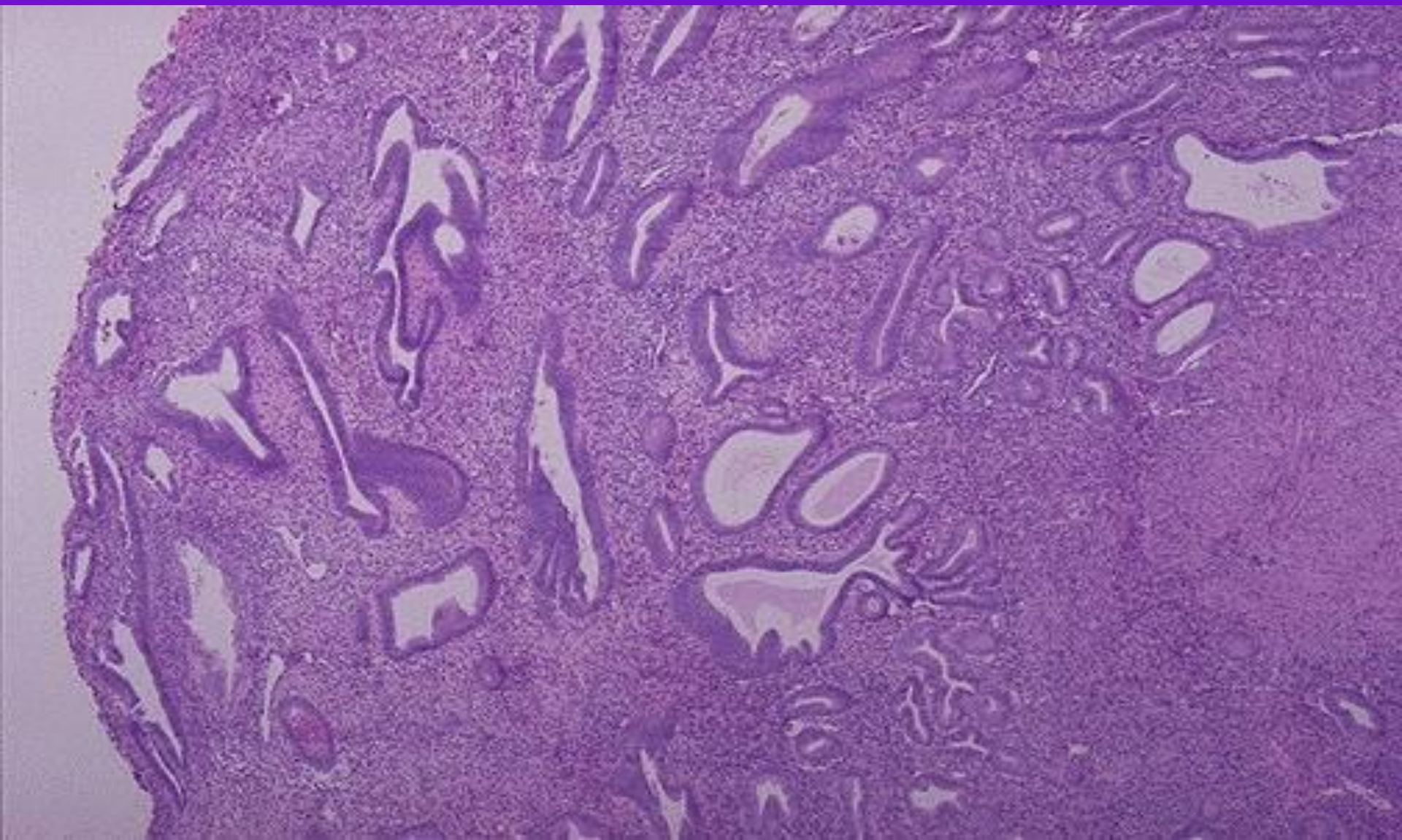




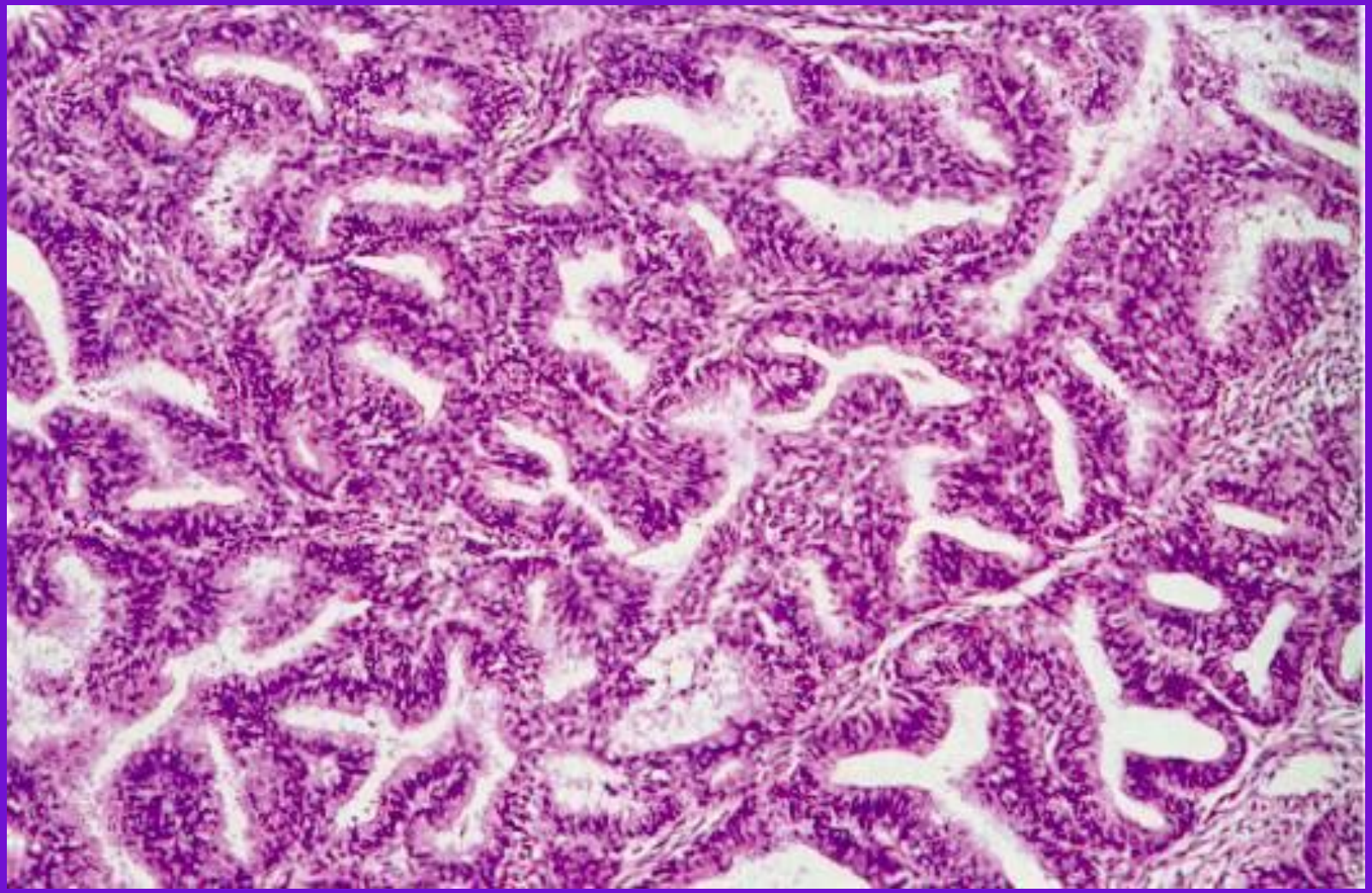
Menorrhagia

- Heavy vaginal bleeding that is not DUB
  - Usually secondary to distortion of uterine cavity
- Uterus unable to contract down on open venous sinuses in the zona basalis
  - Other causes organic, endocrinologic, hemostatic and iatrogenic
  - Usually ovulatory

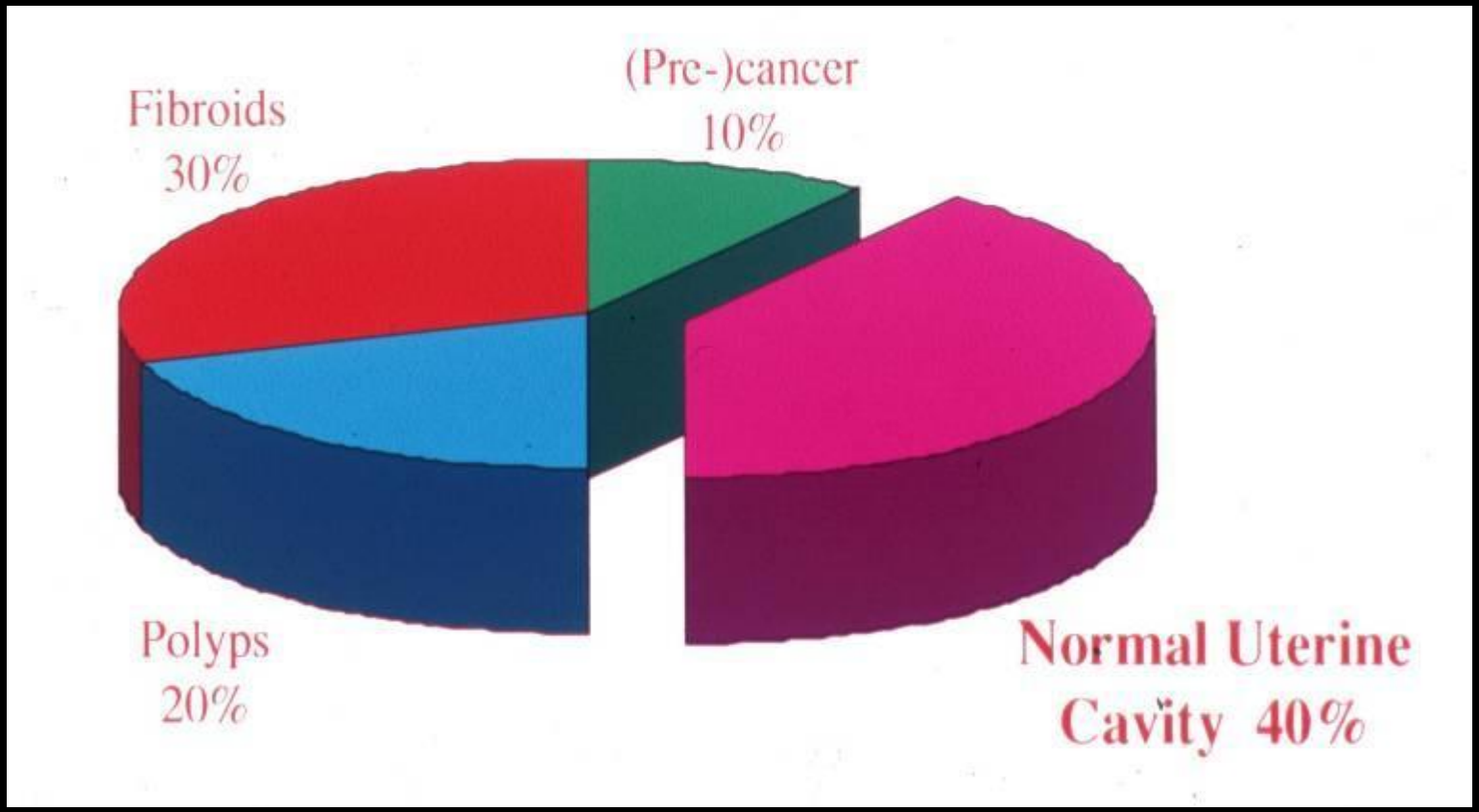
Simple Endometrial Hyperplasia



Complex Endometrial Hyperplasia



Causes of HMB



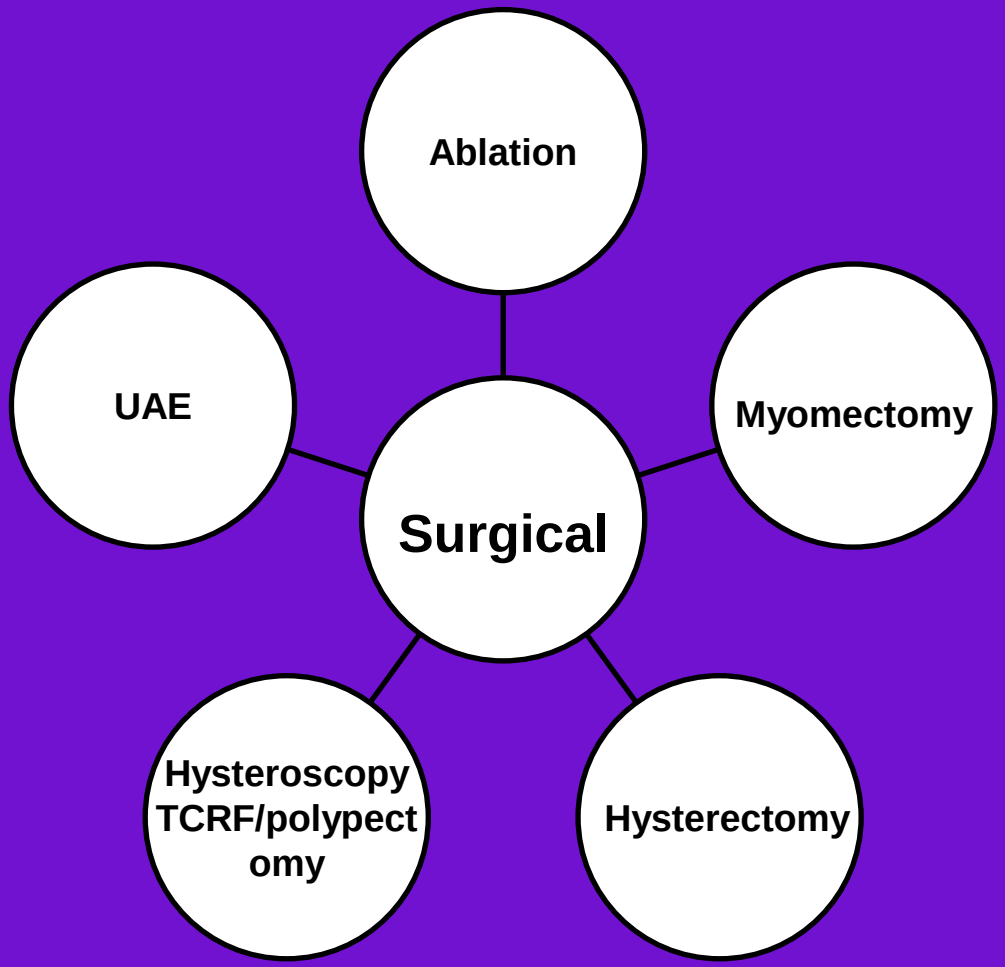
Endometrial Evaluation

Endometrial Biopsy	Sensitivity -91% False positive rate -2%	Well tolerated, anesthesia and cervical dilation usually not required
Transvaginal Ultrasound (TVS)	Sensitivity -88%	Good visualization of fibroids; may fail to identify other intracavitary abnormalities like polyps
Hysteroscopy	Sensitivity -100%	Gold standard perimenopausal women.

Menorrhagia- Medical Management

- **NSAID's**
  - –1st line, for days of heavy mens loss, decrease prostaglandins
- **OCP's**
  - –esp. if contraception desired, up to 60% dec. suppress HP axis
- **Continuous OCP's**
- **Oral continuous progestins (day 5 to 26)**
  - –anti-oestrogen, downregulates endormetrium
- **Levonorgestrel IUD (Mirena), High satisfaction rate**

Menorrhagia - Surgical Management



Menorrhagia - Management Summary

- Tailor treatment to individual patient
- Consider patients age, coexisting medical diseases, desire for fertility and adverse effects
- Surgical management reserved for organic causes (e.g fibroids) or when medical management fails to alleviate symptoms

Primary Amenorrhea

- **Absence of menses by age 14 with absence of SSC (e.g. breast development) or absence by age 16 with normal SSC**

- **Only 3 conditions unique to primary, other causes of amenorrhea can cause either**
    - Imperforated hymen
    - Vaginal agenesis
    - Androgen insensitivity syndrome
    - Turners syndrome (45, X0)

Amenorrhea

- **Generalized pubertal delay**
  - e.g. Turner syndrome
- **Normal puberty**
  - e.g. PCOS
- **Abnormalities of the genital tract**
  - e.g. Asherman's syndrome

Amenorrhea - Management

- History is probably the most important aspects in diagnosis
- Remember to always rule out pregnancy
- Ovarian-axis problem- TSH, prolactin, FSH, LH
- Hirsuitism-Testosterone, DHEAS, androstenedione and 17-OH progesterone
- Chronic ds.- ESR, LFT’s, cr and U&Es

Postmenopausal bleeding

- ALL WOMEN WITH PMB
  MUST BE INVESTIGATED
- Purpose of investigation:
  Exclude malignancy of endometrium and cervix

- Endometrial Ca in up to 4% of women with PMB
- Precursors of endometrial Ca
  (complex hyperplasia +/- atypia)

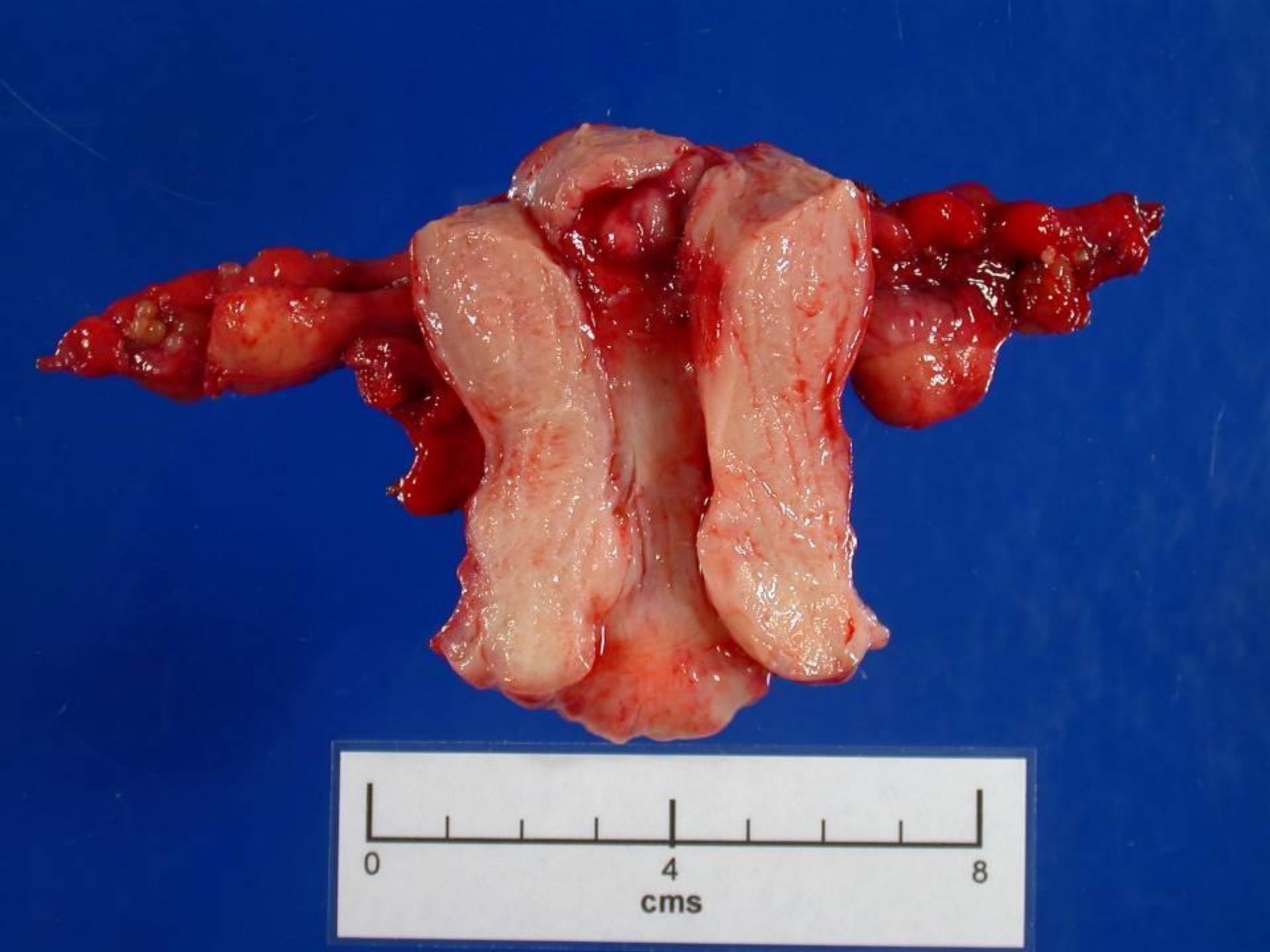
PMB – Exclude malignancy

- **History and assessment of risk factors**
  - Use of HRT / Tamoxifen / BMI
- **Clinical Examination**
  - R/O cervical carcinoma
- **Trans-vaginal USS**
  - Assessment of endometrial thickness (<3mm)
- **Endometrial sampling (+/- uterine evaluation)**
- **Treatment for endometrial Cancer**
  - Hysterectomy +/- radiotherapy

Endometrial Carcinoma

- **Type I**
  - Oestrogen dependent
  - 80%
  - Low grade
  - Assoc with obesity (40%), nulliparity, late menopause, tamoxifen

- **Type II**
  - Non-oestrogen dependent
  - Older postmenopausal women
  - High grade
  - Serous, clear cell and mixed histology
  - Tamoxifen; no association with hyperoestrogenism or hyperplasia
  - Aggressive behaviour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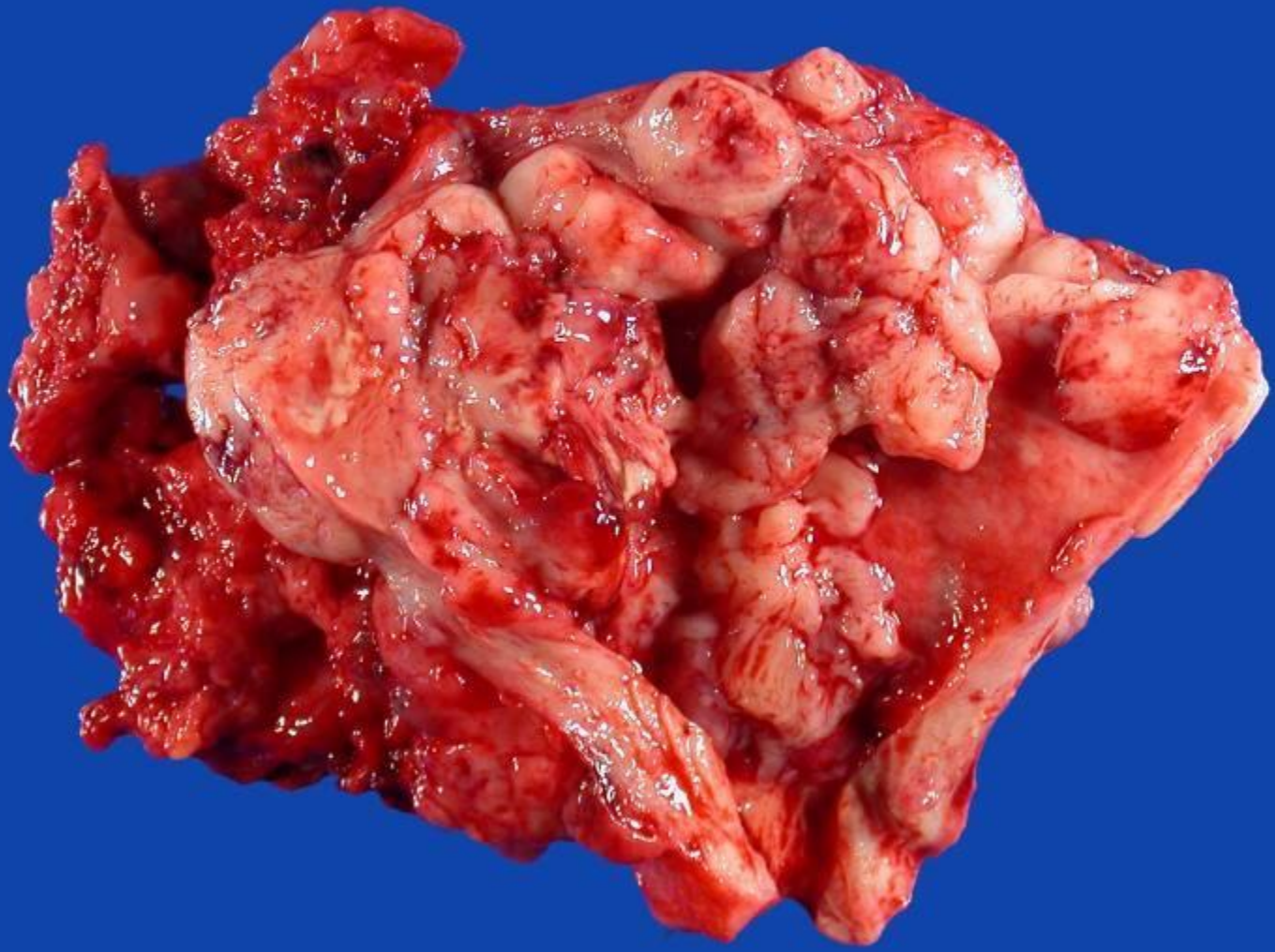


Endometrial Carcinoma

Prognostic Factors

- Histological type
- Histological grade
- Depth of myometrial invasion
- Lymphovascular space invasion
- FIGO stage

Case 1

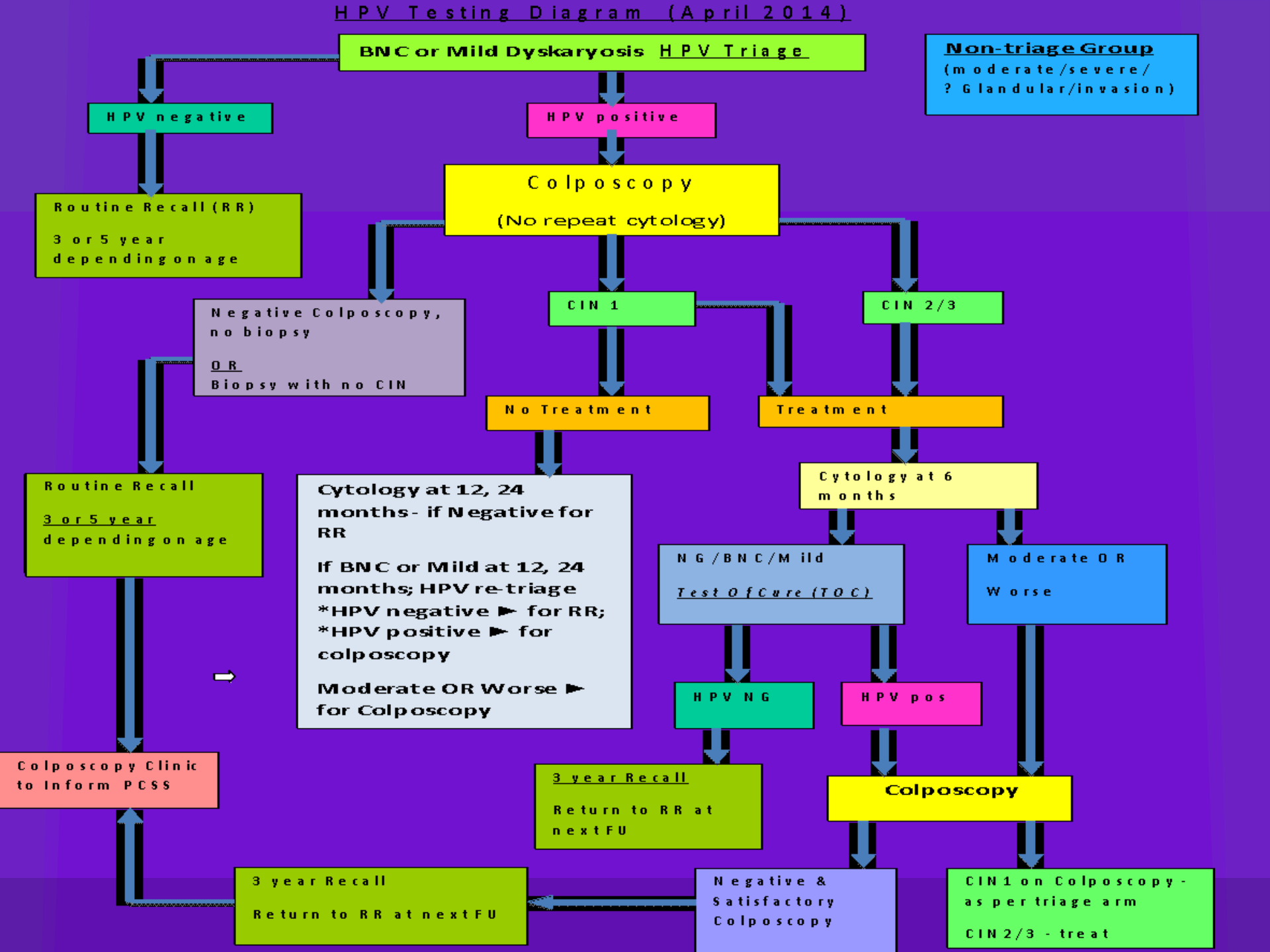
- 38 year old, para 2 + 0, company executive
- Presenting complaint
  - excessive menstrual blood loss
  - requirement for contraception
- History
  - Menarche aged 13 years
  - Used OC pill until 28 years
  - Smokes 15 / day
- Examination
  - Normal sized uterus and normal adnexae

Case 2

- 42 year old, para 0 + 0, primary school teacher
- Presenting complaint
  - excessive menstrual blood loss and dysmenorrhoea
- History
  - Menarche aged 12 years
  - Used OC pill until 32 years
  - Currently using tranexamic acid with unsatisfactory effect
- Examination
  - Uterus appears enlarged to 18/40 size

Case 3

- 59 year old, para 0 + 0, retired
- Presenting complaint
  - vaginal bleeding on two occasions over last 3 months
- History
  - Menopause aged 49 years
  - Polycystic ovarian syndrome
  - Infertility
  - BMI = 38 / Overweight for many years


HPV Testing Diagram (April 2014)
BNC or Mild Dyskaryosis HPV Triage
Non-triage Group
(moderate/severe/
? Glandular/invasion)
HPV negative
HPV positive
Routine Recall (RR)
3 or 5 year
depending on age
Colposcopy
(No repeat cytology)
Negative Colposcopy,
no biopsy
OR
Biopsy with no CIN
CIN 1
CIN 2/3
No Treatment
Treatment
Routine Recall
3 or 5 year
depending on age
Cytology at 12, 24
months - if Negative for
RR
If BNC or Mild at 12, 24
months; HPV re-triage
*HPV negative ► for RR;
*HPV positive ► for
colposcopy
Moderate OR Worse ►
for Colposcopy
Cytology at 6
months
NG/BNC/Mild
Test Of Cure (TOC)
Moderate OR
Worse
HPV NG
HPV pos
Colposcopy Clinic
to Inform PCSS
3 year Recall
Return to RR at
next FU
Colposcopy
3 year Recall
Return to RR at next FU
Negative &
Satisfactory
Colposcopy
CIN 1 on Colposcopy -
as per triage arm
CIN 2/3 - treat

Thank You