

Abnormal Uterine Bleeding

Kelly Menge, DO, FACOOG

Objectives

- ▶ Review what is normal bleeding and what is not normal
- ▶ Discuss various etiologies of uterine bleeding
- ▶ What to expect during a work-up
- ▶ Review management options

Why do we care?

- ▶ May reveal structural or systemic pathology.
- ▶ Has an impact of quality of life.

When is it normal to start and stop periods?

- ▶ Menarche

- ▶ Average age = 12 years old

- ▶ Menopause

- ▶ Average age = 51 years old

Normal Cycle

- ▶ 28 days +/- 7 days
- ▶ Occurs at regular intervals
- ▶ Volume of blood $\leq 80\text{mL}$
- ▶ Duration 4-6 days

Abnormal Uterine Bleeding Definitions

- ▶ Menstrual flow outside of normal volume, duration, regularity, or frequency
 - ▶ Heavy Menstrual Bleeding
 - ▶ Intermenstrual Bleeding

Sources of Abnormal Uterine Bleeding

Anatomic Source

- ▶ Polyp
- ▶ Adenomyosis
- ▶ Leiomyoma
- ▶ Malignancy

Physiologic Source

- ▶ Coagulopathy
- ▶ Ovulatory
- ▶ Endometrial
- ▶ Iatrogenic
- ▶ Not otherwise specified

POLYPS

The background features a complex, abstract design of overlapping, semi-transparent geometric shapes in various shades of pink, magenta, and purple. The shapes are primarily triangles and polygons, creating a layered, crystalline effect. The colors transition from light, pale pinks to deep, rich purples, with some areas appearing as darker, more saturated tones. The overall composition is dynamic and modern, with sharp lines and a sense of depth created by the overlapping layers.

Polyps

- ▶ Endocervical / Cervical
 - ▶ Benign (malignant degeneration rare)
 - ▶ Intermenstrual bleeding / contact bleeding
- ▶ Endometrial
 - ▶ Benign (malignant transformation 0.5%)
 - ▶ Possible increased risk of endometrial carcinoma
 - ▶ Heavy menstrual bleeding, spotting



www.beautifulcervix.com



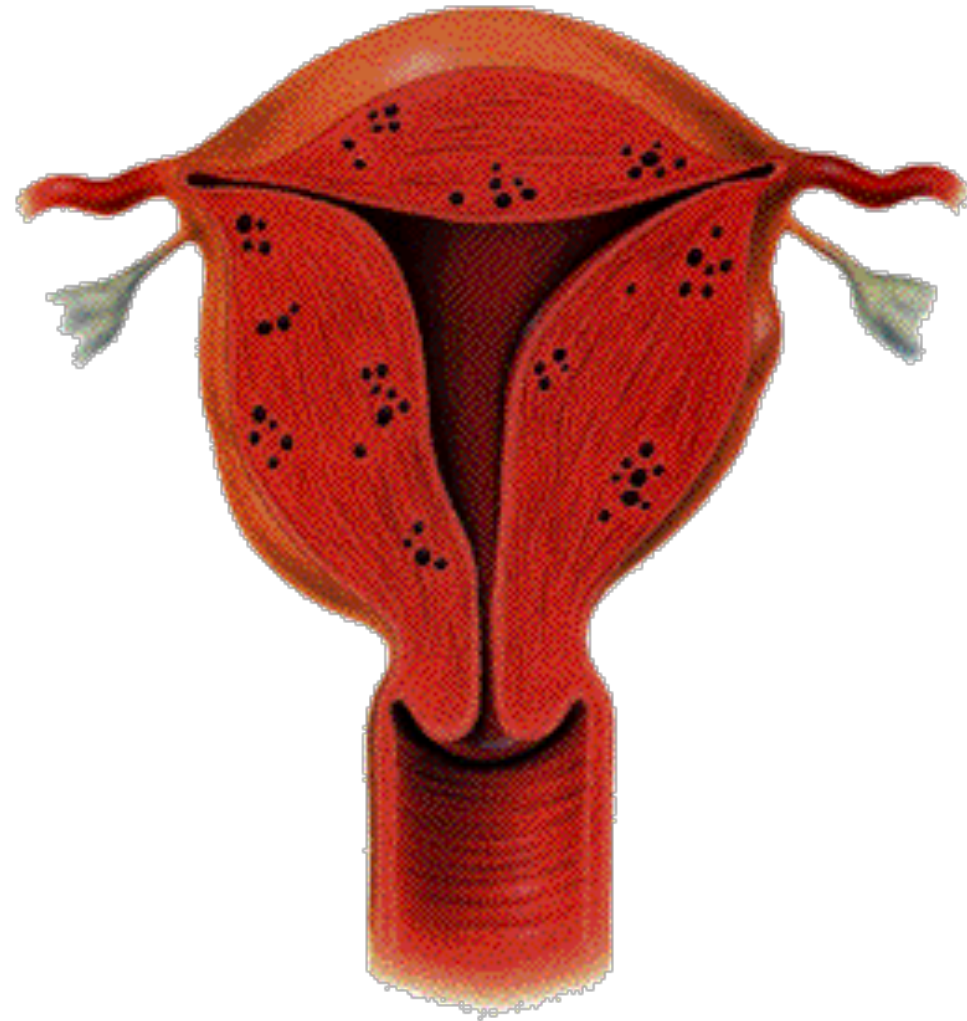
www.fertilitytexas.com

ADENOMYOSIS

The background features abstract, overlapping geometric shapes in various shades of pink and purple, creating a modern and artistic aesthetic.

Adenomyosis

- ▶ Endometrial glands and stroma of the basalis layer of the endometrium into the myometrium
- ▶ Heavy menstrual bleeding and dysmenorrhea
- ▶ Uterus may be diffusely enlarged



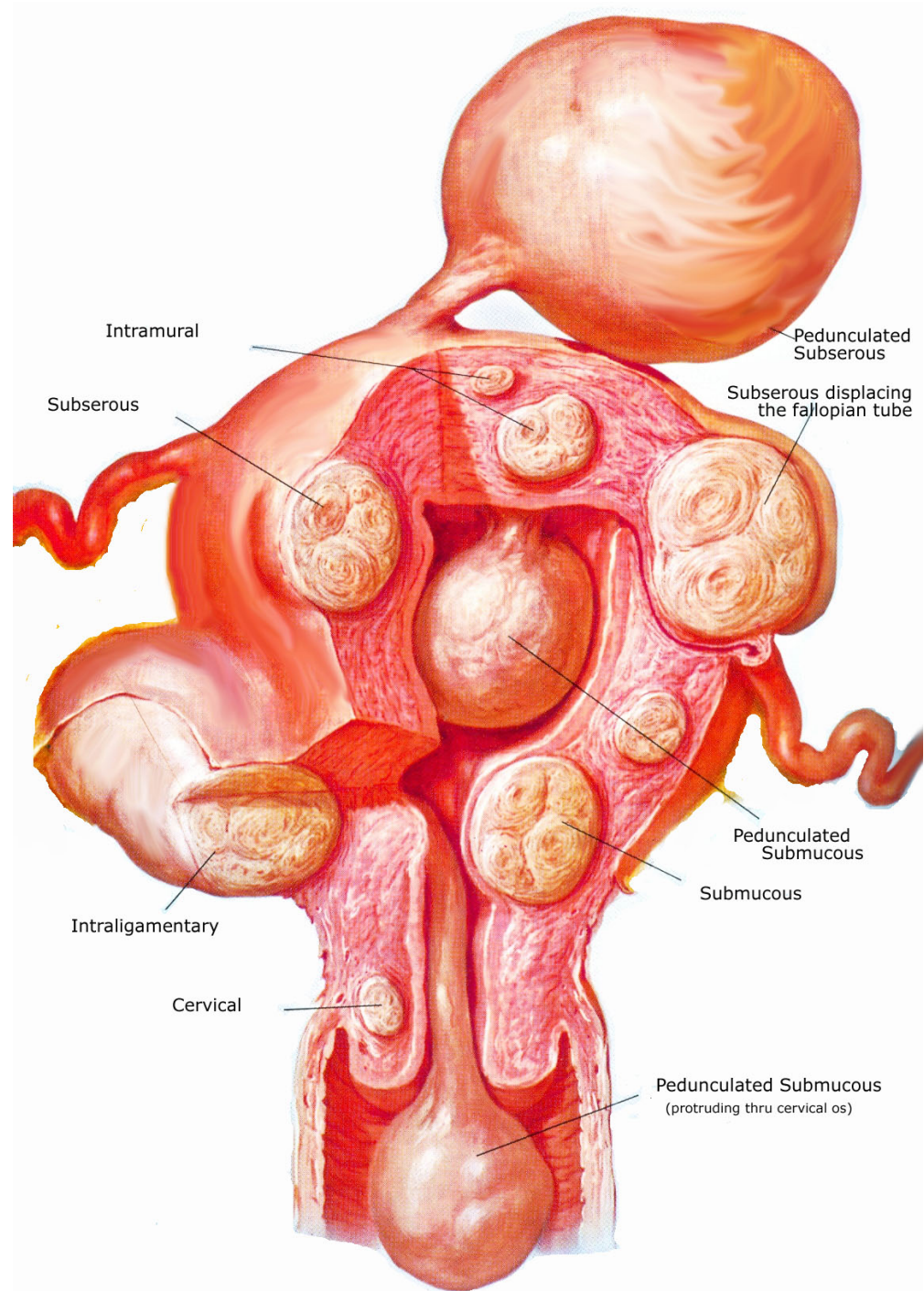
www.fibroid.com

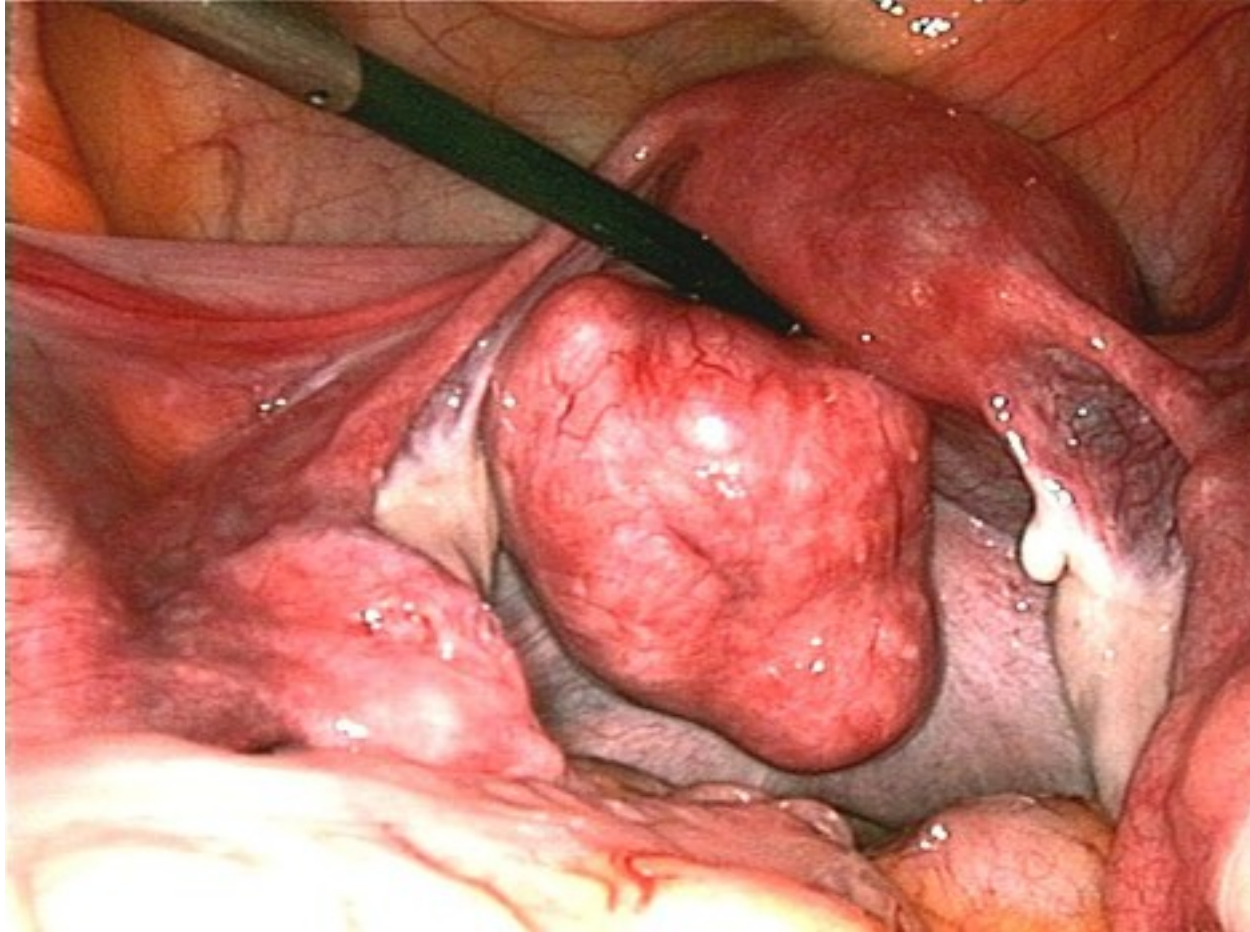


LEIOMYOMA (FIBROIDS)

Leiomyoma (Fibroids)

- ▶ Most common tumor in women
- ▶ Smooth muscle cell tumors
- ▶ Contain estrogen and progesterone receptors
- ▶ Abnormal microvascular growth and abnormal function of vessels in the adjacent endometrium





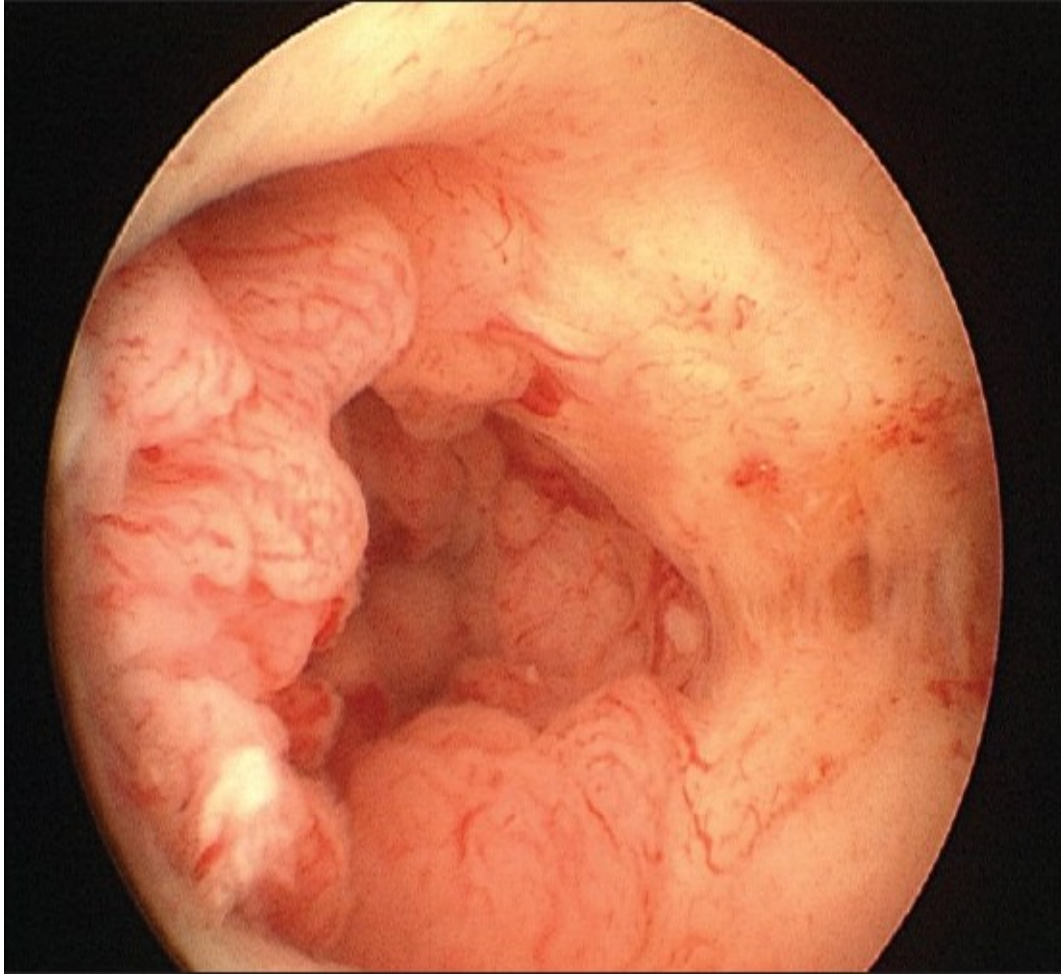
www.examiner.com

MALIGNANCY

The background features abstract, overlapping geometric shapes in various shades of pink and purple, primarily concentrated on the right side of the frame. The shapes are semi-transparent, creating a layered effect. The overall aesthetic is modern and minimalist.

Malignancy

- ▶ Vaginal
- ▶ Cervical
- ▶ Uterine
- ▶ Fallopian tube
- ▶ Ovarian



gynecendoscopy.org

COAGULOPATHY

The background features abstract, overlapping geometric shapes in various shades of pink and purple, creating a modern, layered effect. The shapes are primarily triangles and polygons, some with soft gradients and others with solid colors. The overall composition is clean and professional, suitable for a medical or scientific presentation.

Coagulopathy

- ▶ Up to 20% of adolescent females who require hospitalization for heavy bleeding will have a coagulopathy
- ▶ Von Willebrand's disease
- ▶ Platelet deficiency
- ▶ Leukemia
- ▶ Liver disease

OVULATORY DYSFUNCTION

The background features abstract, overlapping geometric shapes in various shades of pink and purple, primarily concentrated on the right side of the frame. The shapes are semi-transparent, creating a layered effect. The overall aesthetic is clean and modern.

Ovulatory Dysfunction

- ▶ Anovulation
 - ▶ Continuous estradiol production without corpus luteum formation and progesterone production
 - ▶ Proliferative endometrium, may outgrow blood supply with variable necrosis
 - ▶ No uniform slough of basalis layer
 - ▶ Excessive bleeding
- ▶ Postmenarchal / premenopausal
- ▶ PCOS
- ▶ Endocrinopathies
 - ▶ Thyroid disorders
 - ▶ Hyperprolactinemia

Ovulatory Dysfunction - Amenorrhea

- ▶ Pregnancy
- ▶ Obesity
- ▶ Anorexia, mental stress

ENDOMETRIAL SOURCE

Endometrial

- ▶ Endometritis - Infection / inflammation of the lining of the uterus
 - ▶ Prolonged menses or intermenstrual spotting
 - ▶ *Chlamydia trachomatis*

IATROGENIC

Iatrogenic

- ▶ Medication related (Breakthrough Bleeding)
 - ▶ IUD
 - ▶ Oral/ Injectable Hormones
 - ▶ Psychotropics (eg TCAs)
 - ▶ Impact dopamine metabolism by reducing serotonin uptake
 - ▶ Reduced inhibition of prolactin disrupts H-P-O axis leading to anovulation
 - ▶ Anticonvulsants
 - ▶ Antibiotics
- ▶ Procedure induced

WORK UP - PATIENT HISTORY

Medical History

- ▶ Menstrual bleeding patterns
 - ▶ Frequency
 - ▶ Duration
 - ▶ Flow
 - ▶ Pain
- ▶ Other issues with bleeding...
 - ▶ Postpartum hemorrhage
 - ▶ Surgical hemorrhage
 - ▶ Epistaxis (bloody nose)
- ▶ Family history of bleeding disorders, cancer

Medical History

- ▶ Meds

- ▶ Coumadin
- ▶ Lovenox
- ▶ NSAIDs
- ▶ Hormones
- ▶ Psychotropics
- ▶ Ginkgo, Ginseng, Motherwort

PHYSICAL EXAM

The background features abstract, overlapping geometric shapes in various shades of pink and purple, primarily concentrated on the right side of the frame. The shapes are semi-transparent, creating a layered effect. The overall aesthetic is clean and modern.

Physical Exam

- ▶ Evidence of PCOS
 - ▶ Obesity, hirsutism
- ▶ Evidence of Unopposed Estrogen
 - ▶ Obesity
- ▶ Thyroid enlargement
- ▶ Bruising, petechiae
- ▶ Speculum
 - ▶ Lacerations, polyps, cervical cancer
- ▶ Bimanual
 - ▶ Uterine enlargement, fibroids, ovarian masses

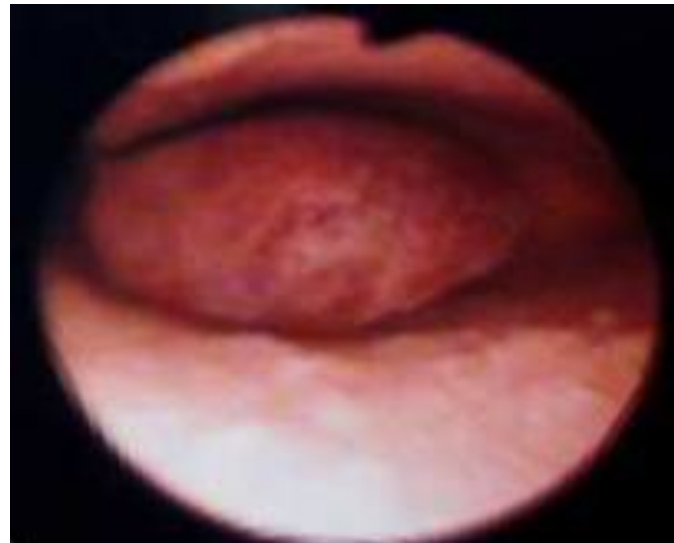
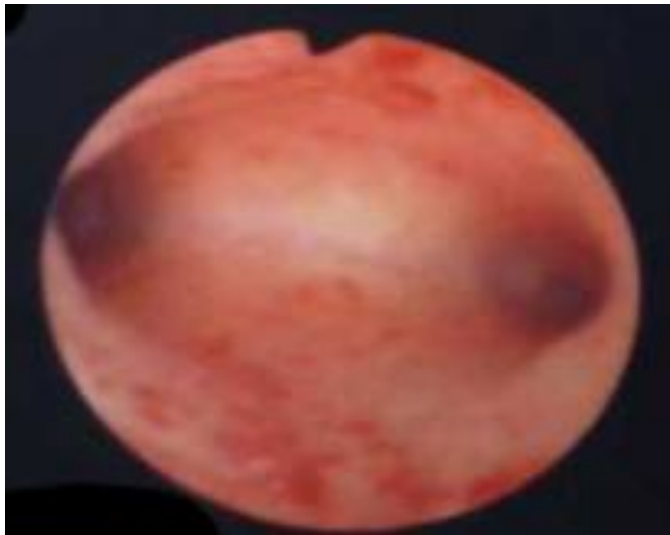
EVALUATION

Labs

- ▶ Pregnancy testing
- ▶ Pap smear
- ▶ Chlamydia testing
- ▶ Endometrial Biopsy
- ▶ CBC, PT/PTT/INR, TSH, Prolactin, Liver Function
- ▶ Testing for von Willebrands Disease
 - ▶ Ristocetin cofactor activity, Factor VIII, von Willebrand factor antigen

Hysteroscopy

- ▶ Further evaluate the cavity
- ▶ Diagnostic and potentially curative when done with a dilation & curettage or polypectomy / myomectomy
 - ▶ Not curative for ovulatory dysfunctions



Age Related Considerations

- ▶ Adolescents
 - ▶ Immature Hypothalamic-Pituitary-Ovarian Axis
 - ▶ Coagulopathy
 - ▶ Hormonal Contraceptives
 - ▶ Pregnancy

Age Related Considerations

- ▶ Adulthood
 - ▶ Pregnancy
 - ▶ Structural lesions
 - ▶ Ovulatory dysfunction
 - ▶ Hormonal contraceptives
 - ▶ Cancer

Age Related Considerations

- ▶ Postmenopausal
 - ▶ Atrophy
 - ▶ Hyperplasia / Cancer
 - ▶ Meds

MANAGEMENT

The background features a complex, abstract design of overlapping, semi-transparent geometric shapes in various shades of pink, magenta, and purple. These shapes are primarily located on the right side of the frame, creating a dynamic, layered effect against the white background.

Management

- ▶ Weight loss
- ▶ Birth Control Pills -continuous use may help
- ▶ IV Estrogen
- ▶ Progestins
 - ▶ Provera, Nexplanon, Mirena
- ▶ Lysteda (prevent fibrin degradation)
- ▶ Operative Hysteroscopy
- ▶ Hysterectomy
- ▶ Interventional Radiology - Uterine Artery Embolization, MRI-Guided Focused US Surgery

QUESTIONS?

References

- ▶ De Silva, NK. Abnormal uterine bleeding in adolescents: Evaluation and approach to diagnosis. In: UpToDate, Torchia, MM (Ed), UpToDate, 2016.
- ▶ Diagnosis of Abnormal Uterine Bleeding In Reproductive-Aged Women, ACOG Practice Bulletin #128, July 2012.
- ▶ Kaunitz, AM. Approach to abnormal uterine bleeding in nonpregnant reproductive-age women. In: UpToDate, Falk, SJ (Ed), UpToDate, 2016.
- ▶ Management of Abnormal Uterine Bleeding Associated With Ovulatory Dysfunction, ACOG Practice Bulletin #136, July 2013
- ▶ Management of Acute Abnormal Uterine Bleeding In Nonpregnant Reproductive-Aged Women, ACOG Committee Opinion, #557, April 2013
- ▶ FIGO classification system (PALM-COEIN) for causes of abnormal uterine bleeding in nongravid women of reproductive age. International Journal of Gynecology and Obstetrics 113, 2011, 3-13.