2018 대한산부인과내분비학회
제 20차 학술 개회 및 연수강좌

비정상자궁출혈의 처치

가톨릭대학교
부천성모병원
산부인과 김민정

The FIG… Termin… …Normal and Ab…

Ian S. Fraser, … and Malcolm … er, M.D.,[3]

…9, NUMBER 5 2011

Table 1 Menstrual Terminologies That Recent Agreement Indicates Should Be Discarded[4]

Menorrhagia (all usages, including "essential menorrhagia," "idiopathic menorrhagia," "primary menorrhagia," "functional menorrhagia," "ovulatory or anovulatory menorrhagia")
Metrorrhagia
Hypermenorrhea
Hypomenorrhea
Menometrorrhagia
Polymenorrhea
Polymenorrhagia
Epimenorrhea
Epimenorrhagia
Metropathica hemorrhagica
Uterine hemorrhage
Dysfunctional uterine bleeding
Functional uterine bleeding

Table 2 Acceptable Abbreviations Describing Menstrual Symptoms Established by Popular Usage

AUB: Abnormal uterine bleeding (the overarching symptom)
HMB: Heavy menstrual bleeding
HPMB: Heavy and prolonged menstrual bleeding
IMB: Intermenstrual bleeding
PMB: Postmenopausal bleeding

AUB

HMB

HPMB

IMB

PMB

Table 3 Definitions of Bleeding Patterns That Can Be Used in Reference Period Analysis When Describing Patterns Experienced by Women Using Hormonal Contraceptive Systems

Bleeding: Any bloody vaginal discharge that requires the use of protection such as pads or tampons
Spotting: Any bloody vaginal discharge that is not large enough to require sanitary protection
Bleeding/spotting episode: One or more consecutive days on which bleeding or spotting has been entered on the diary card
Bleeding/spotting-free interval: One or more consecutive days on which no bleeding or spotting has been entered on the diary card
Bleeding/spotting segment: One bleeding/spotting episode and the immediately following bleeding/spotting-free interval
Reference period: The number of consecutive days on which the analysis is based (usually taken as 90 days for women using long-acting hormonal systems and 28 or 30 days for women using once-a-month systems, including combined oral contraception)
Different types of analysis that can be undertaken on bleeding patterns within a reference period:
Number of bleeding/spotting (B/S) days
Number of bleeding/spotting episodes
Mean, range of lengths of bleeding/spotting episodes (or medians and centiles for box-whisker plot analysis)
Mean, range (medians and centiles) of lengths of bleeding/spotting-free intervals
Number of spotting days and spotting-only episodes

Table 4 Revised Recommendations of Clinically Important Bleeding Patterns Based on an Analysis of Menstrual Data from >1000 Normal Women[13]

No bleeding: No days of bleeding/spotting entered throughout the reference period

Prolonged bleeding: ≥10 days in one episode

Frequent bleeding: >4 episodes in one 90-day reference period

Infrequent bleeding: <2 episodes in one 90-day reference period

Irregular bleeding: A range of varying lengths of bleeding-free intervals >17 days within one 90-day reference period

Table 5 Suggested "Normal" Limits for Menstrual Parameters in the Mid-Reproductive Years

Clinical Dimensions of Menstruation and Menstrual Cycle	Descriptive Terms	Normal Limits
Menstruation and menstrual cycle		(5–95th percentiles)
Frequency of menses (days)	Frequent	<24
	Normal	24–38
	Infrequent	>38
Regularity of menses, cycle to cycle		
Variation over 12 months (days)	Absent	No bleeding
	Regular	Variation ± 2–20 days
	Irregular	Variation >20 days
Duration of flow (days)	Prolonged	>8.0
	Normal	4.5–8.0
	Shortened	<4.5
Volume of monthly blood loss (mL)	Heavy	>80
	Normal	5–80
	Light	<5

Limits are based primarily on the data of Snowden and Chistian,[21] Belsey and Pinol,[24] Treloar et al,[25] and Hallberg et al[26]. Each of these studies provides somewhat different data.
Adapted from Fraser et al.[2,3]

Journal of Midwifery & Women's Health
www.jmwh.org
Brief Report
Volume 61, No. 3, May/June 2016

PALM-COEIN Nomenclature for Abnormal Uterine Bleeding

CEU

Angela Deneris, CNM, PhD

- **Chronic AUB**(menometrorrhagia and menorrhagia)

: abnormal uterine bleeding for at least **4 out of 6 months**, with abnormal bleeding expressed as **increased volume, regularity, and/or timing**.

- **Acute AUB**

:a **single episode** of severe uterine bleeding that is sufficient to **require immediate intervention to prevent further blood loss**.

Journal of Midwifery & Women's Health www.jmwh.org
Brief Report

PALM-COEIN Nomenclature for Abnormal Uterine Bleeding

CEU

Angela Deneris, CNM, PhD

- **Intermenstrual bleeding (AUB/IMB) (metrorrhagia)**

:uterine bleeding that **occurs between regular menstrual cycles**.
Intermenstrual bleeding may be either random or predictable.

- **Heavy menstrual bleeding (AUB/HMB)**

: the woman's description of increased menstrual volume that **interferes with her physical, emotional, and social quality of life.**

: objectively defined by **drop in hemoglobin and number of menstrual products used, such as tampons and/or pads per day**

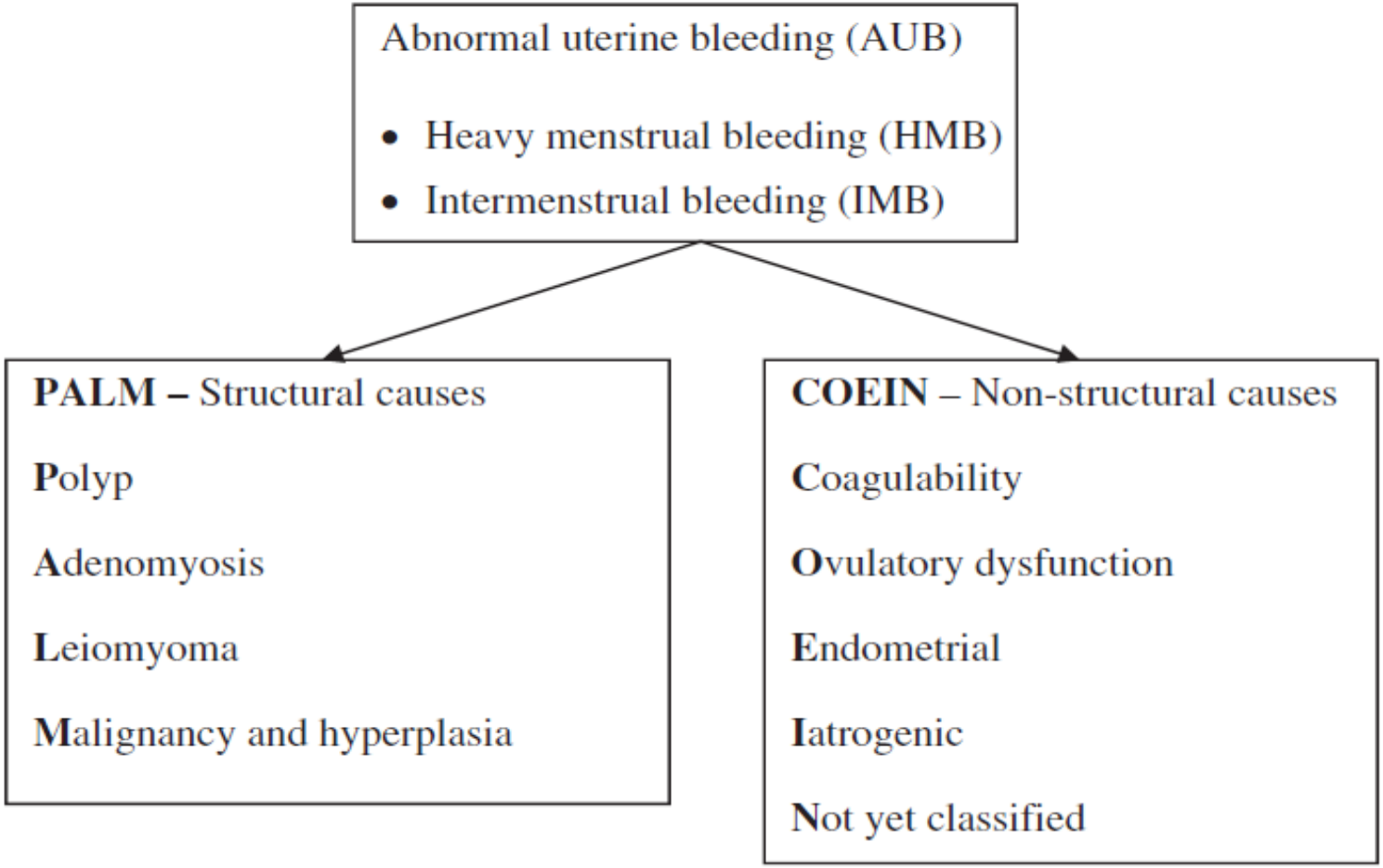


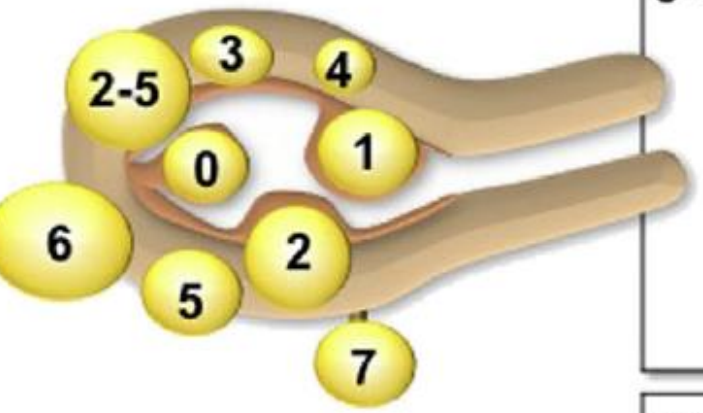
Figure 1. FIGO classification of abnormal uterine bleeding. Adapted from Munro M, *et al. Int J Gynaecol Obstet* 2011;113:3–13.

Polyp
Adenomyosis
Leiomyoma
Malignancy & hyperplasia

Submucous
Other

Coagulopathy
Ovulatory dysfunction
Endometrial
Iatrogenic
Not otherwise classified

Leiomyoma subclassification system



SM - Submucous	0	Pedunculated intracavitary
	1	<50% intramural
	2	≥50% intramural
O - Other	3	Contacts endometrium; 100% intramural
	4	Intramural
	5	Subserous ≥50% intramural
	6	Subserous <50% intramural
	7	Subserous pedunculated
	8	Other (specify e.g. cervical, parasitic)

Hybrid leiomyomas (impact both endometrium and serosa)	Two numbers are listed separated by a hyphen. By convention, the first refers to the relationship with the endometrium while the second refers to the relationship to the serosa. One example is below	
	2-5	Submucous and subserous, each with less than half the diameter in the endometrial and peritoneal cavities, respectively.

c) AUB-P, -L$_O$

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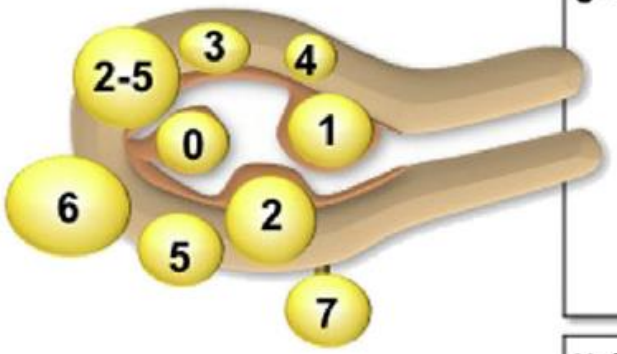
Polyp
Adenomyosis
Leiomyoma
Malignancy & hyperplasia

Submucous
Other

Coagulopathy
Ovulatory dysfunction
Endometrial
Iatrogenic
Not otherwise classified

Leiomyoma subclassification system



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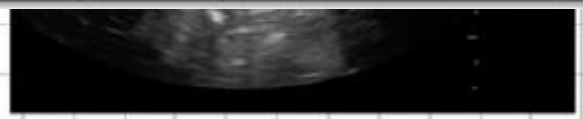
Hybrid leiomyomas (impact both endometrium and serosa)	Two numbers are listed separated by a hyphen. By convention, the first refers to the relationship with the endometrium while the second refers to the relationship to the serosa. One example is below	
	2-5	Submucous and subserous, each with less than half the diameter in the endometrial and peritoneal cavities, respectively.

I		X	
N		X	



Focused assessment of abnormal uterine bleeding

Laboratory

Beta hCG

Complete blood count with platelets

Other laboratory testing as clinically indicated

- TSH
- Free testosterone
- Prolactin
- PTT/PT/fibrinogen or thrombin time or von Willebrand diagnostic panel if available at your laboratory

Imaging

TVS or SIS

Office endometrial sampling (as clinically indicated)

Office hysteroscopy (as clinically indicated)

Initial screening for an underlying disorder of hemostasis in patients with excessive menstrual bleeding should be by a structured history:
1. Heavy menstrual bleeding since menarche
2. One of the following: a. Post-partum hemorrhage b. Surgical related bleeding c. Bleeding associated with dental work
3. Two or more of the following symptoms: a. Bruising 1-2 times/month b. Epistaxis 1-2 times/ month c. Frequent gum bleeding, d. Family history of bleeding symptoms

A positive screen comprises any of the following (1) heavy bleeding since menarche, one from list (2) or two or more from list (3). Patients with a positive screen should be considered for further evaluation including consultation with a hematologist and/or testing of von Willebrand factor and Ristocetin cofactor.

Kadir *et al. Lancet* 1998;351:485-9 Kouides *et al. Fertil Steril* 2005;84:1345-51

Figure 4. Screening for Coagulopathy.

MEDICAL MANAGEMENT OF ABNORMAL UTERINE BLEEDING

The medical management of abnormal uterine bleeding in reproductive-aged women

Linda D. Bradley, MD; Ndeye-Aicha Gueye, MD

JANUARY 2016 American Journal of Obstetrics & Gynecology

Medical options for treatment of abnormal uterine bleeding

Medication	Regimen	Efficacy	Contraindications (select list)	Side effects (select list)	Contraception
Hormonal					
Combined contraceptives	Acute: monophasic pill 35 μg estradiol 3 times daily for 1 week, then daily dosing for 3 wks HMB: cyclic monophasic or triphasic oral contraceptive pills, extended or continuous monophasic oral contraceptive pill, transdermal patch or vaginal ring	High	Pregnant, smoking (aged $\geq$ 35 years and $\geq$ 15 cigarettes/d), history of malabsorptive bariatric surgery, multiple risk factors for arterial cardiovascular disease (ie, older age, smoking, diabetes, and hypertension), hypertension (systolic $\geq$ 160 mm Hg or diastolic $\geq$ 100 mm Hg), active or previous venous or arterial thromboembolic disease, known thrombogenic mutations, current or past ischemic heart disease, stroke, complicated valvular heart disease, SLE with	Spotting, nausea, headache, breast tenderness, breakthrough bleeding, VTE, stroke, MI	Yes

Monophasic Ocs

3times daily for 1weeks+daily for 3weeks

Medical options for treatment of abnormal uterine bleeding

Medication	Regimen	Efficacy	Contraindications (select list)	Side effects (select list)	Contraception
Hormonal					
Conjugated equine estrogen	Acute: 25 mg IV every 4—6 h for 24 h	High	Pregnant, active or previous venous or arterial thromboembolic disease, breast cancer Use with caution in obese women	Spotting, nausea, headache, breast tenderness, breakthrough bleeding, VTE, stroke, MI	No
Oral progestins	Acute: MPA 20 mg 3 times a day for 7 days HMB: oral MPA (2.5—10 mg), norethindrone (2.5—5 mg), megestrol acetate (40—320 mg), or micronized progesterone (200—400 mg) Without ovulatory dysfunction, take 1 tablet daily starting day 5 for 21 d With ovulatory dysfunction, take 1 tablet daily for 2 wks every 4 wks	High	Pregnant, history of malabsorptive bariatric surgery, liver disease or tumor, breast cancer, current or past ischemic heart disease[a]	Irregular bleeding	No
LNG-IUS	HMB: intrauterine placement every 5 y, releases 20 μg/d	High	Pregnant, unexplained abnormal vaginal bleeding, untreated cervical or uterine cancer, large or distorted cavity should sound to a depth of 6—10 cm,[b] breast cancer, cervix or uterus abnormalities, pelvic inflammatory disease within 3 mo, STI such as chlamydia or gonorrhea within 3 mo, liver disease or tumor	Irregular bleeding and spotting, cramping, breast tenderness, mood changes, acne, nausea, decreased libido	Yes

Medical options for treatment of abnormal uterine bleeding

Medication	Regimen	Efficacy	Contraindications (select list)	Side effects (select list)	Contraception
Hormonal					
DMPA	HMB: 150 mg IM injection every 12 wks 	Low	Pregnant, multiple risk factors for arterial cardiovascular disease (ie, older age, smoking, diabetes, and hypertension), current or past ischemic heart disease, stroke, hypertension with vascular disease, CAD, CVD, current or previous history of breast cancer, liver disease or tumor[a]	Decreased bone mineral density, irregular (reversible) bleeding, weight gain, amenorrhea, bloating, breast tenderness, and fluid retention	Yes
Leuprolide acetate	HMB: 3.75 mg IM monthly or 11.25 mg IM every 3 mo	High	Pregnant	Hot flashes, sweating, and vaginal dryness (effects minimized with add-back therapy with estrogen and progestins), trabecular bone loss with use for longer than 6 mo (reversible)	No
Danazol	HMB: 100—400 mg orally daily (in divided doses)	Low	Pregnant, unexplained vaginal bleeding, impaired hepatic, renal, or cardiac function	Weight gain, acne, androgenic effects	No

Medical options for treatment of abnormal uterine bleeding *(continued)*

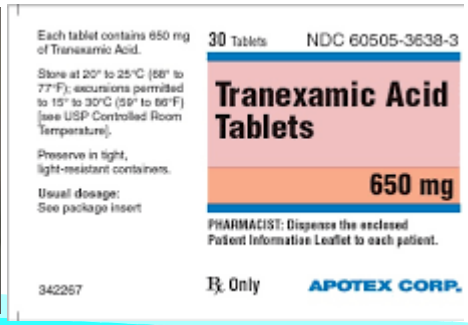
Medication	Regimen	Efficacy	Contraindications (select list)	Side effects (select list)	Contraception

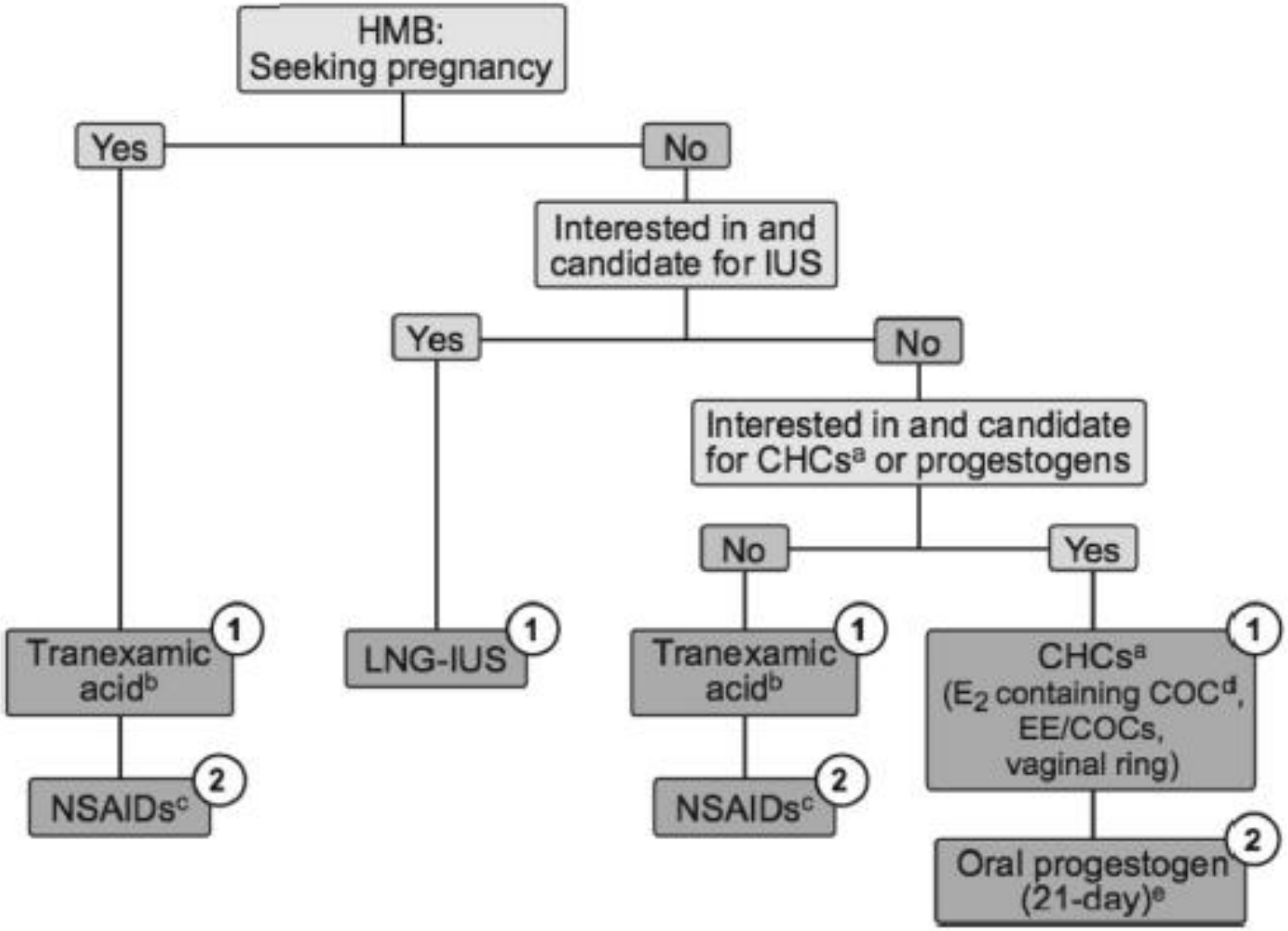
Meclomen 100mg every 8h daily x3-5days

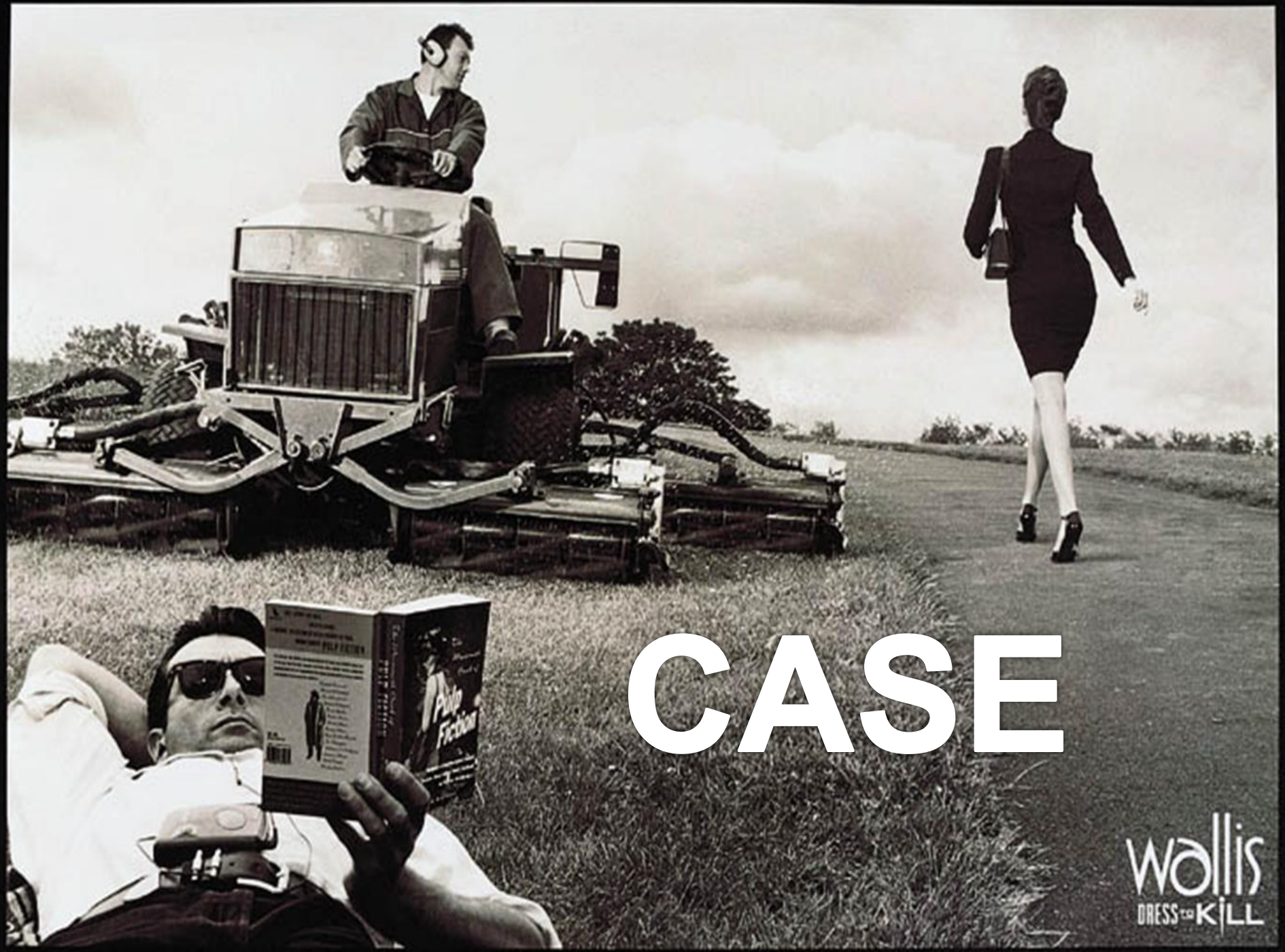
Mefenamic acid 500mg every 12h x4-5days

Ibuprofen 600-800mg every 6-8h

Tranexamic acid 1.3g every 8h x5d




HMB:
Seeking pregnancy
Yes
No
Interested in and candidate for IUS
Yes
No
Interested in and candidate for CHCs[a] or progestogens
No
Yes
Tranexamic acid[b]
1
NSAIDs[c]
2
LNG-IUS
1
Tranexamic acid[b]
1
NSAIDs[c]
2
CHCs[a] (E_2 containing COC[d], EE/COCs, vaginal ring)
1
Oral progestogen (21-day)[e]
2


CASE
Pulp Fiction
wallis
DRESS to KILL

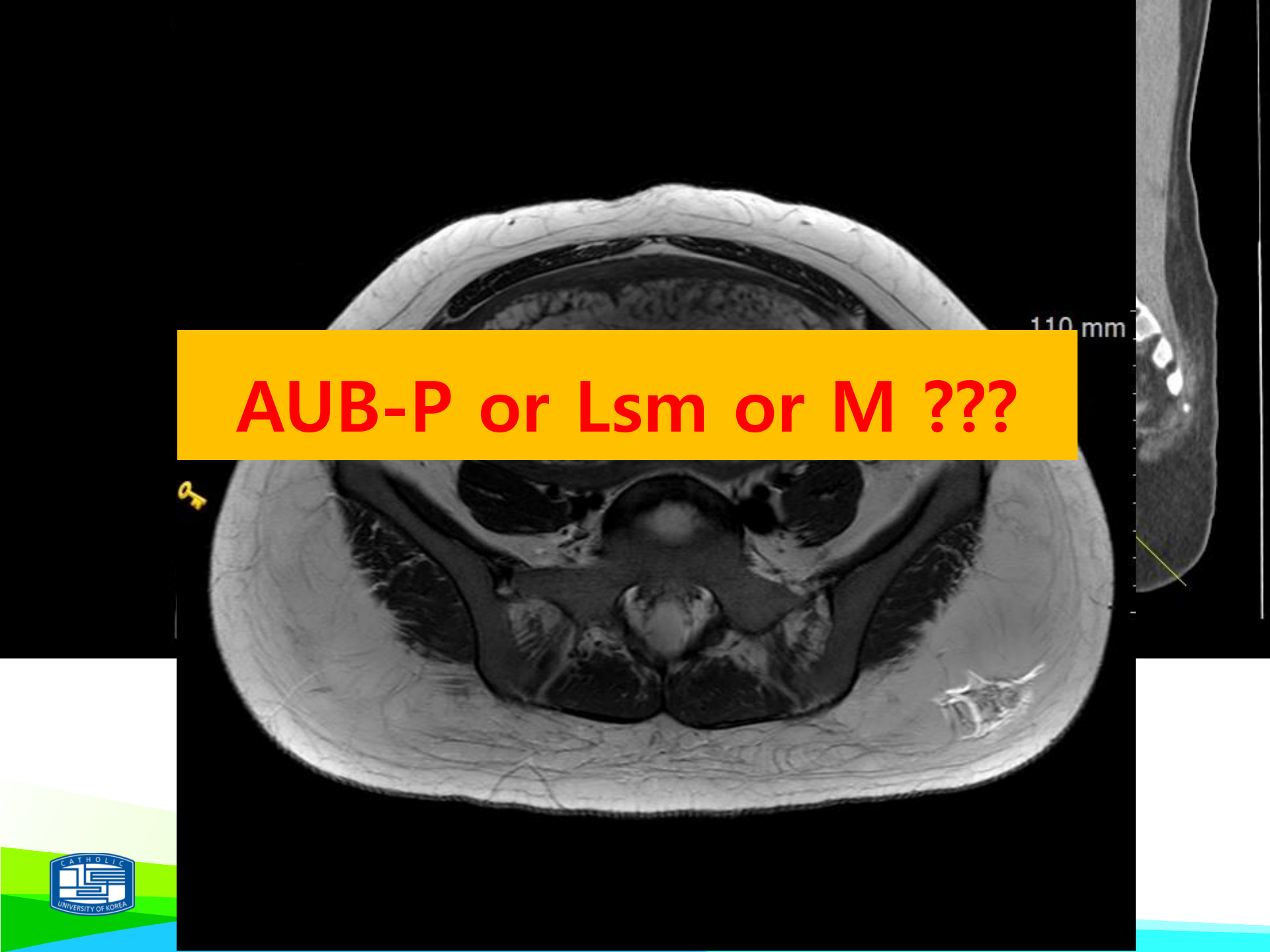
- 27세 여자환자 (미혼, parity 0-0-0-0, 155cm, 50kg)가 1주일간 질출혈을 주소로 내원하였다. 얼굴은 노란빛을 띄고 있었으며, 대형기저귀를 하루에 5장 이상 사용하였다고 하였다. 개인병원 초음파상 10cm이상의 자궁근종이 있다고 들어 병원에 전원 되었다.
- 가족력상 아버지가 적혈구 이상으로 검사 받은적이 있었다.
- 복부진찰상 배꼽부위에서 만져지는 종괴가 있었다.

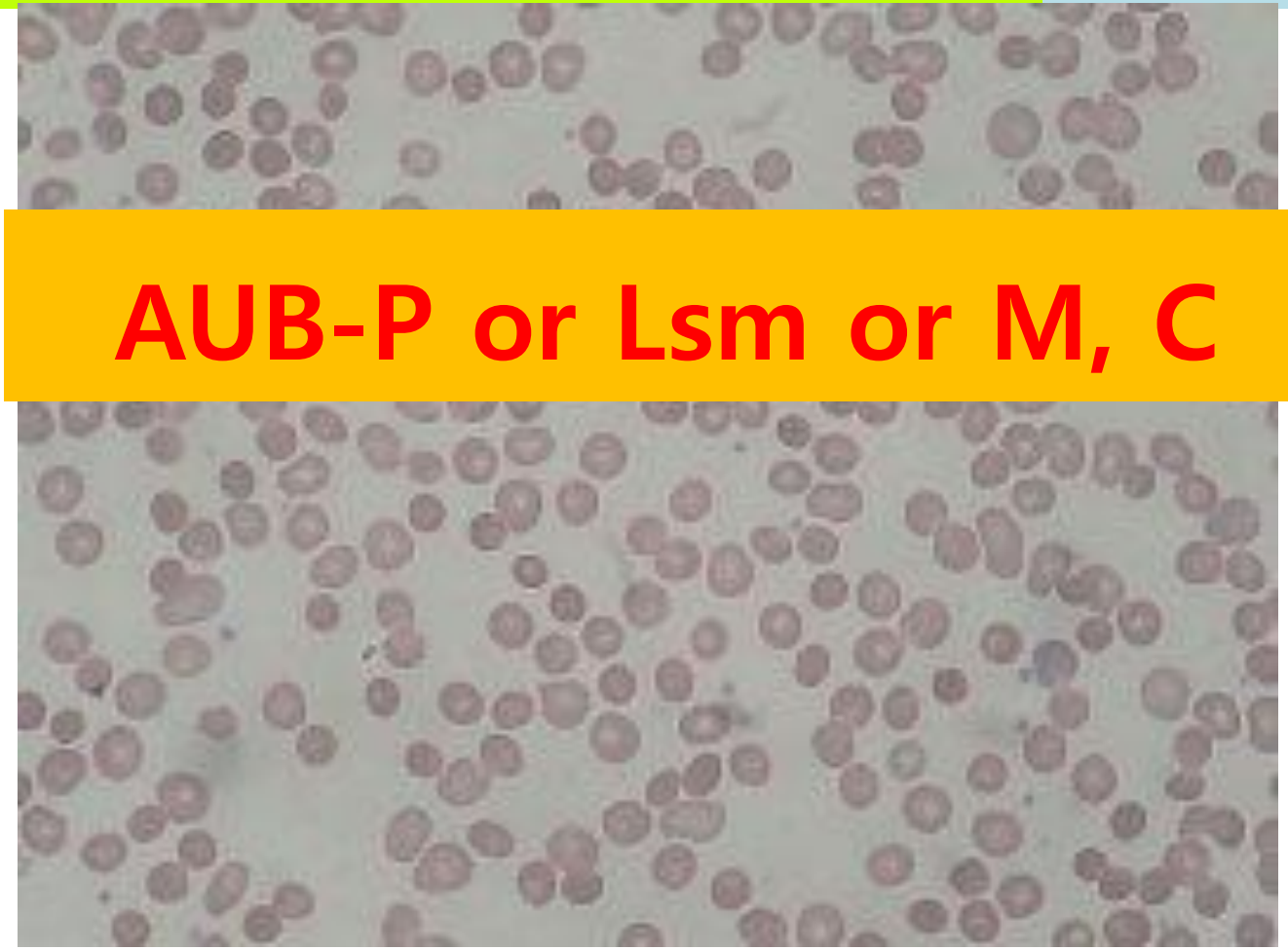
- 임신반응 검사상 음성이었으며 실행한 혈액학적 검사는 다음과 같다.

Hgb/Hct 5.7/17.3 g/dl

WBC: 17730/L, Plt: 223000/L, INR 1.17(↑)

AST/ALT 12/12 U/L


110 mm
AUB-P or Lsm or M ???



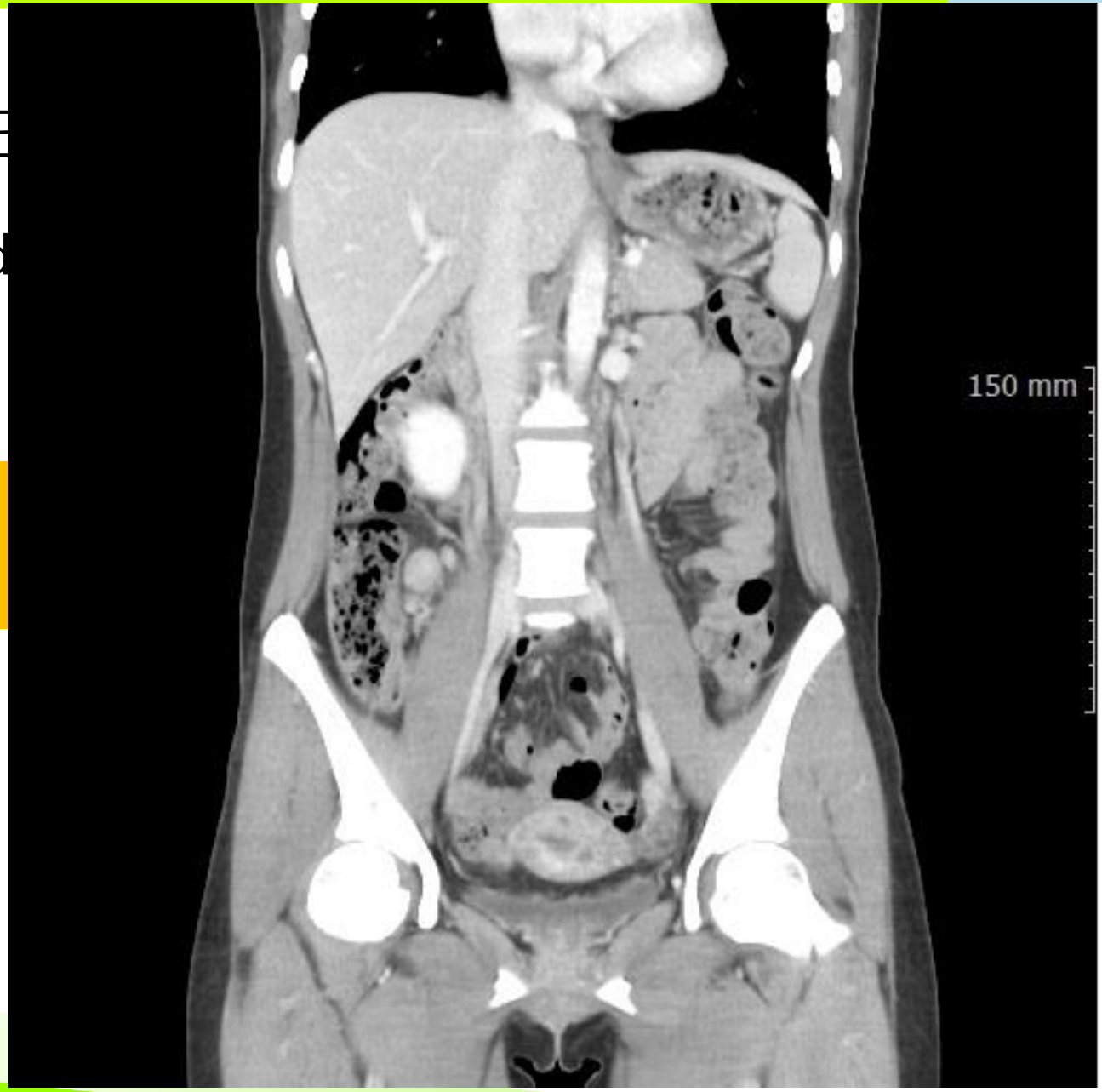
AUB-P or Lsm or M, C

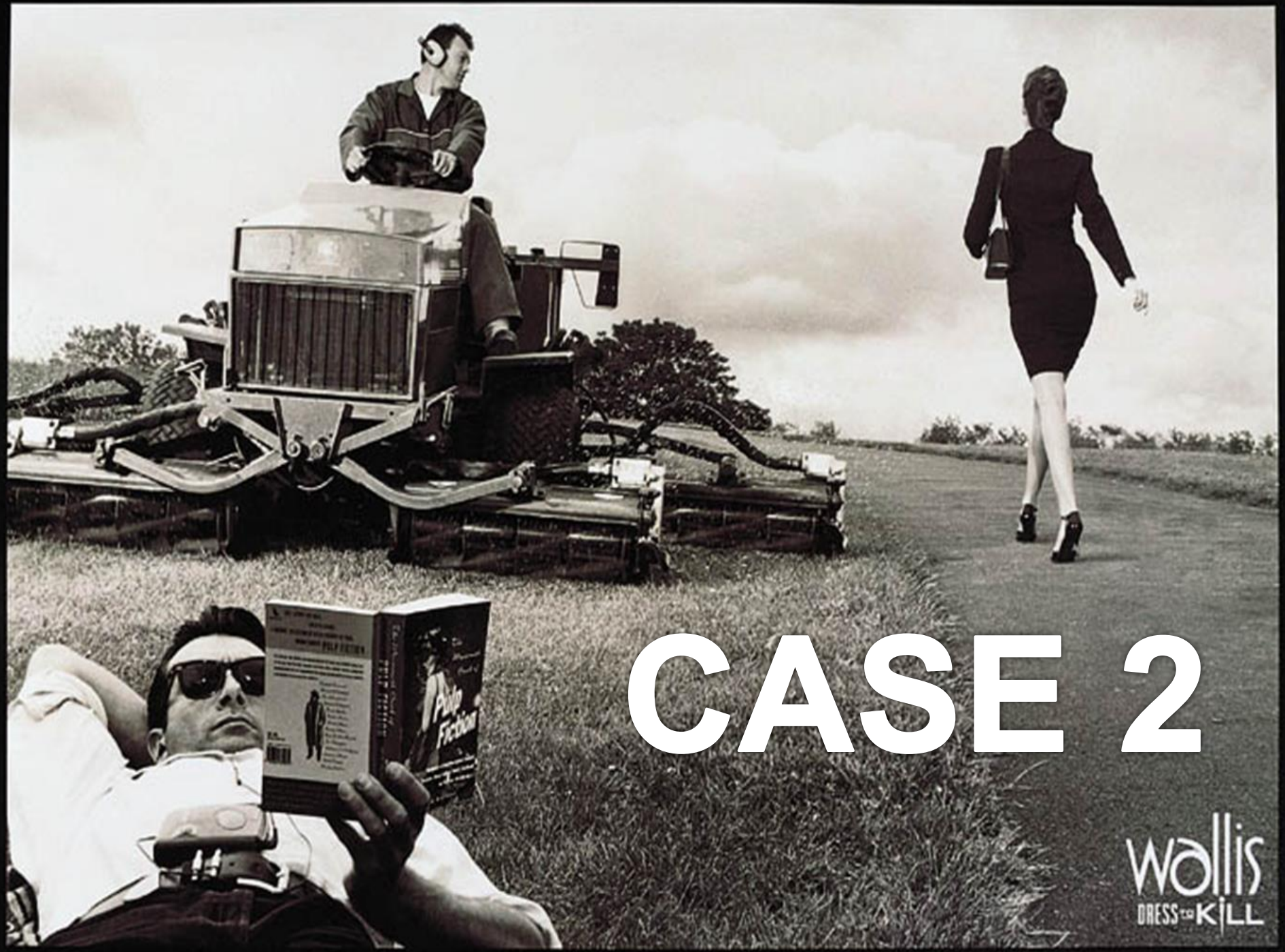
PB Smear: Anisocytosis(+++), Hypochromia(+), Microcytosis(++), Leukocytosis(slight), Neutrophilia (slight), Left shift maturation (+ a few myelocytes)

Total bilirubin 4.7

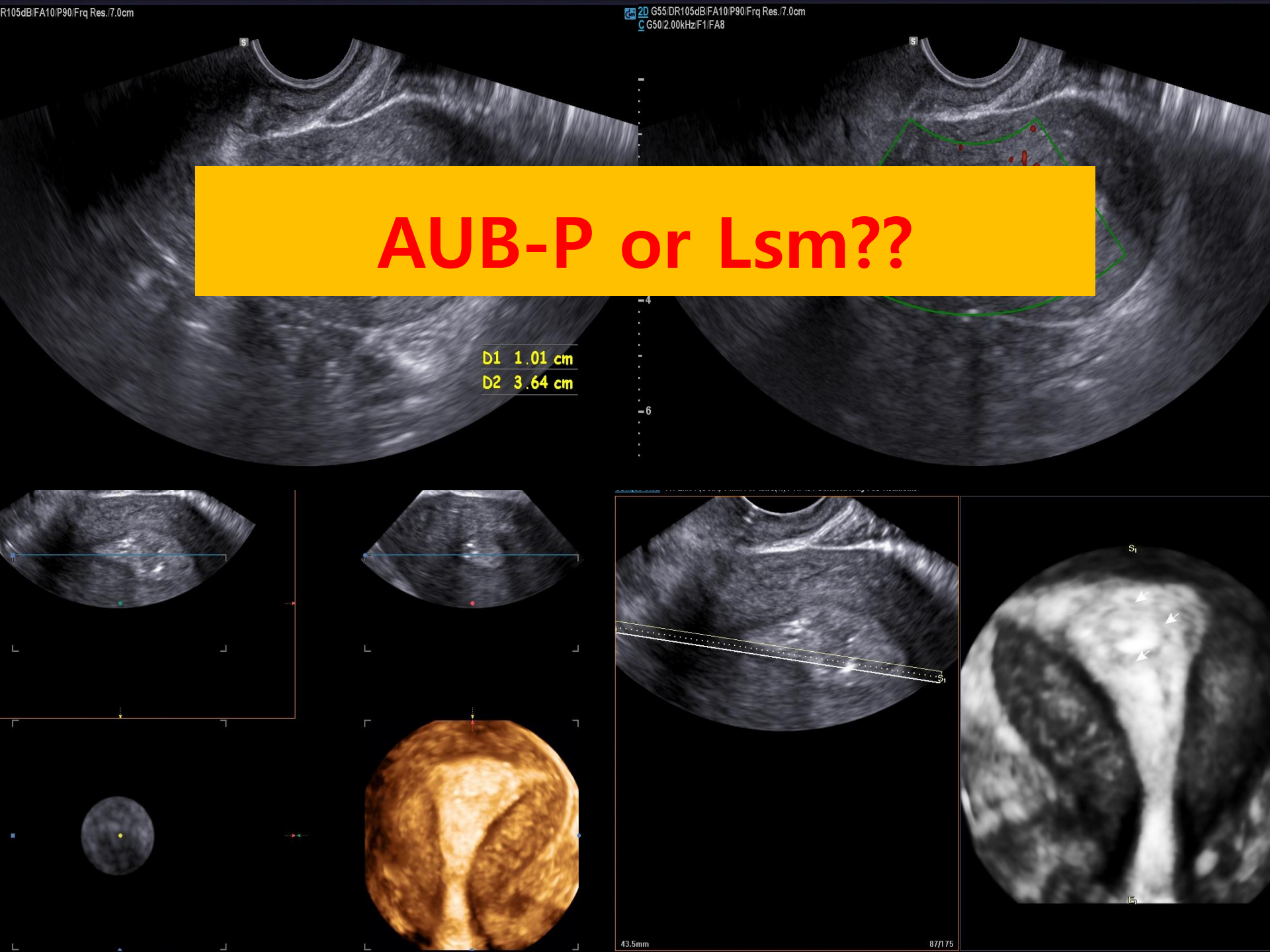
- 진단

—End

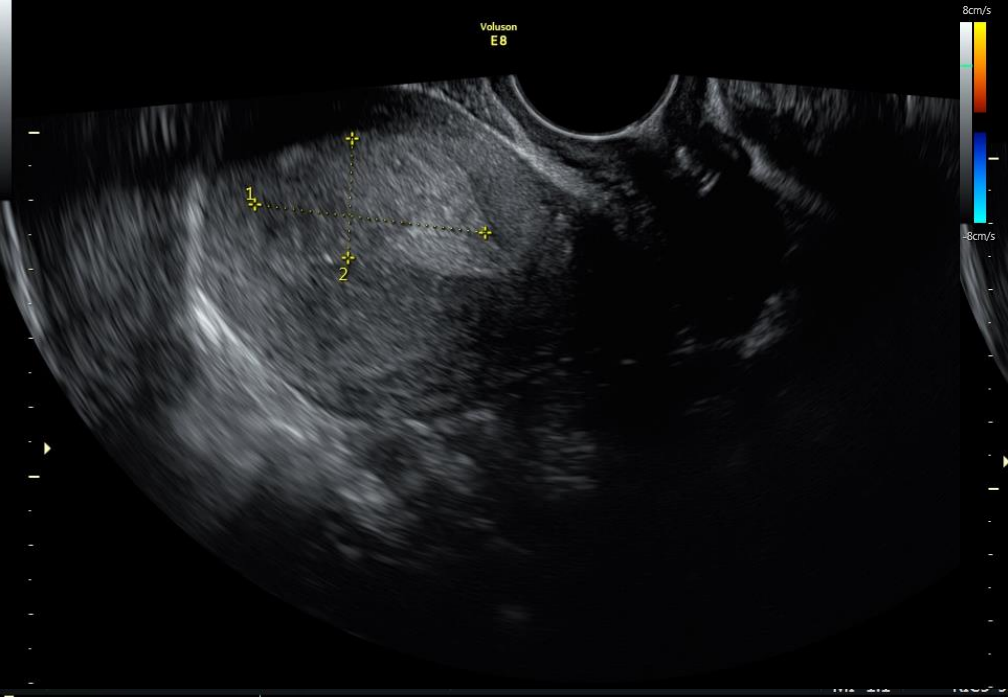


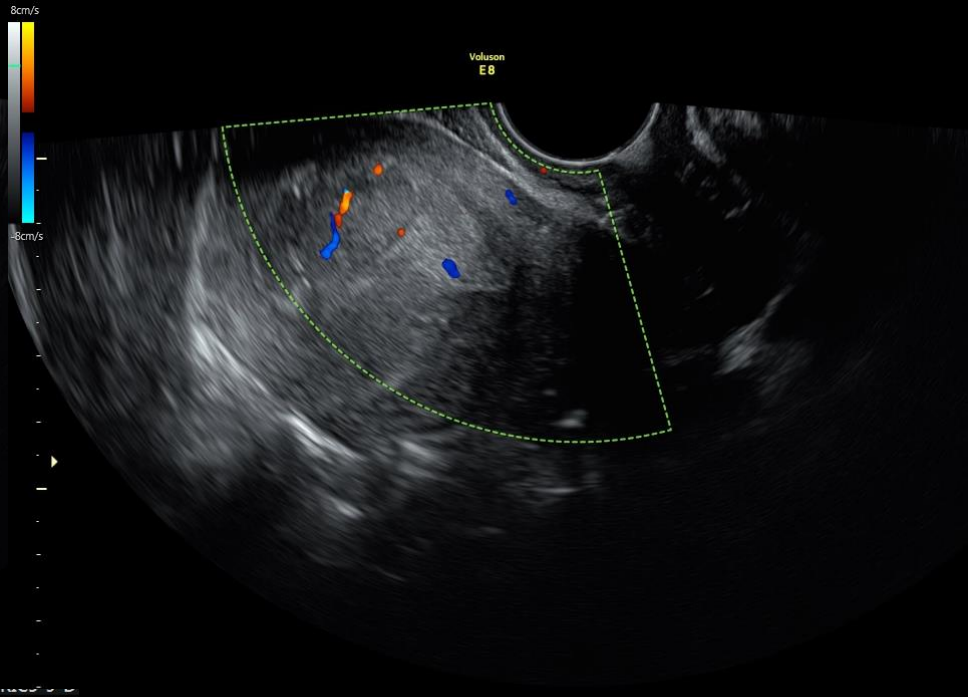

CASE 2
Pulp Fiction
wallis
DRESS to KILL

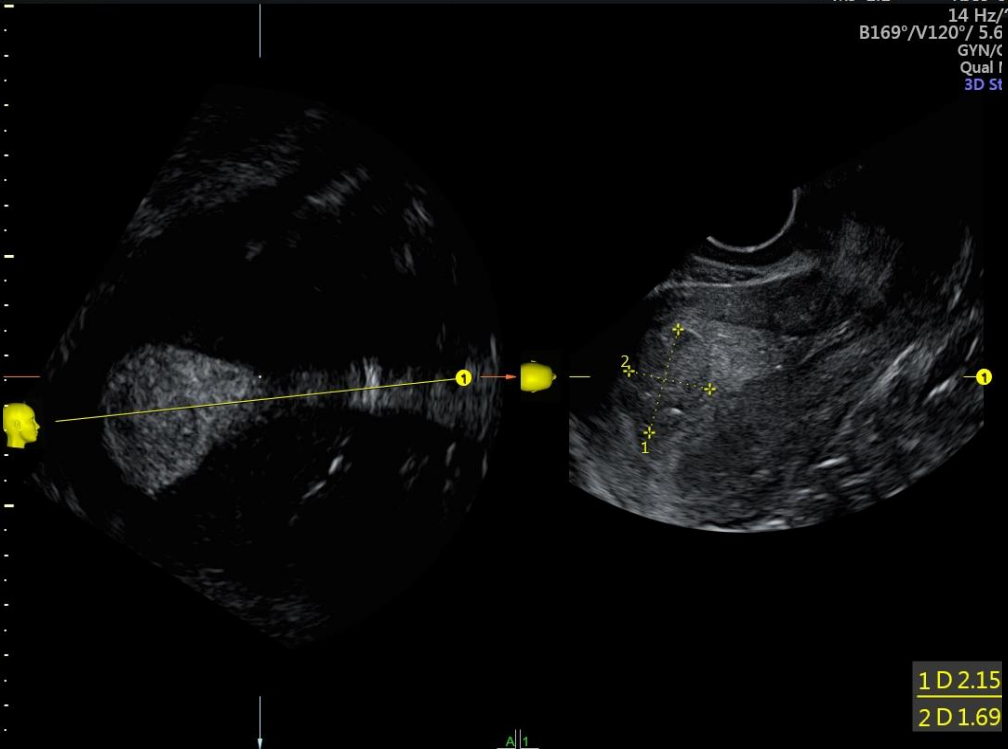
- 26세 여자 환자, parity 0-0-0-0
- 3년 전 질출혈로 endobiopsy (local)
- 내원 1개월 전 질출혈 ->endobiopsy: endometrial polyp
- 조직검사 후 지속적 질출혈 (2016.05)


AUB-P or Lsm??
D1 1.01 cm
D2 3.64 cm

- 3개월 동안 경구 피임제 복용 후 출혈 조절됨
- 1년 후 (2017.4) 생리양 증가, 개인병원에서 submucosal myoma가능성 있어 내원 (13.5/40.8)


Voluson
E8
8cm/s
-8cm/s
1
2


Voluson
E8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GYN/
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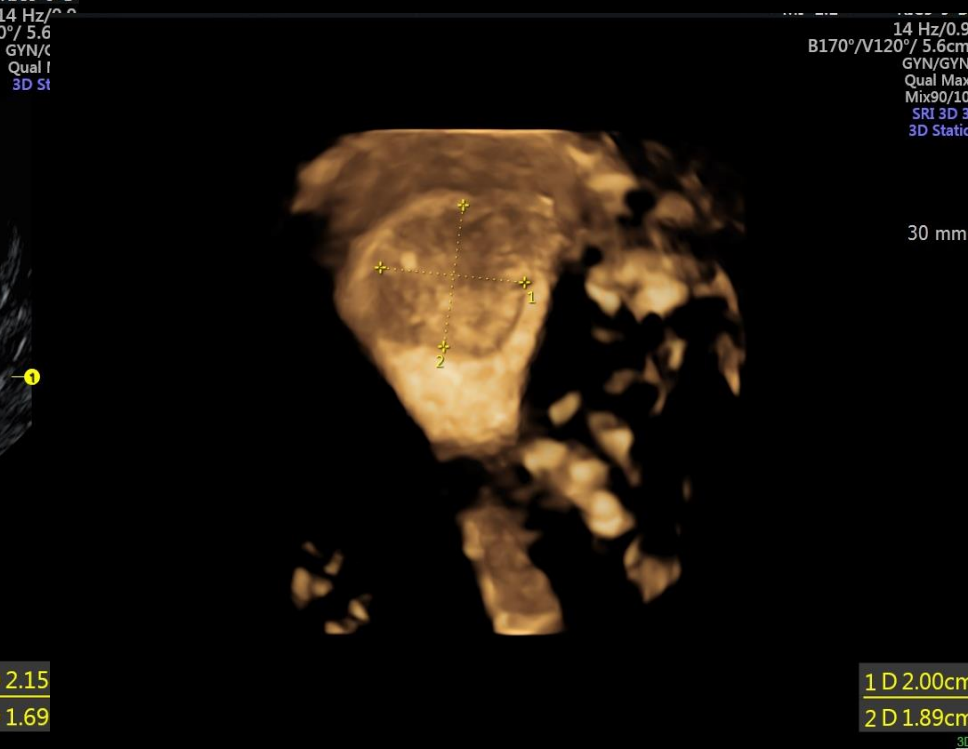
1 D 2.15
2 D 1.69


14 Hz/0.9
B170°/V120°/ 5.6cm
GYN/GYN
Qual Max
Mix90/10
SRI 3D
3D Static
30 mm
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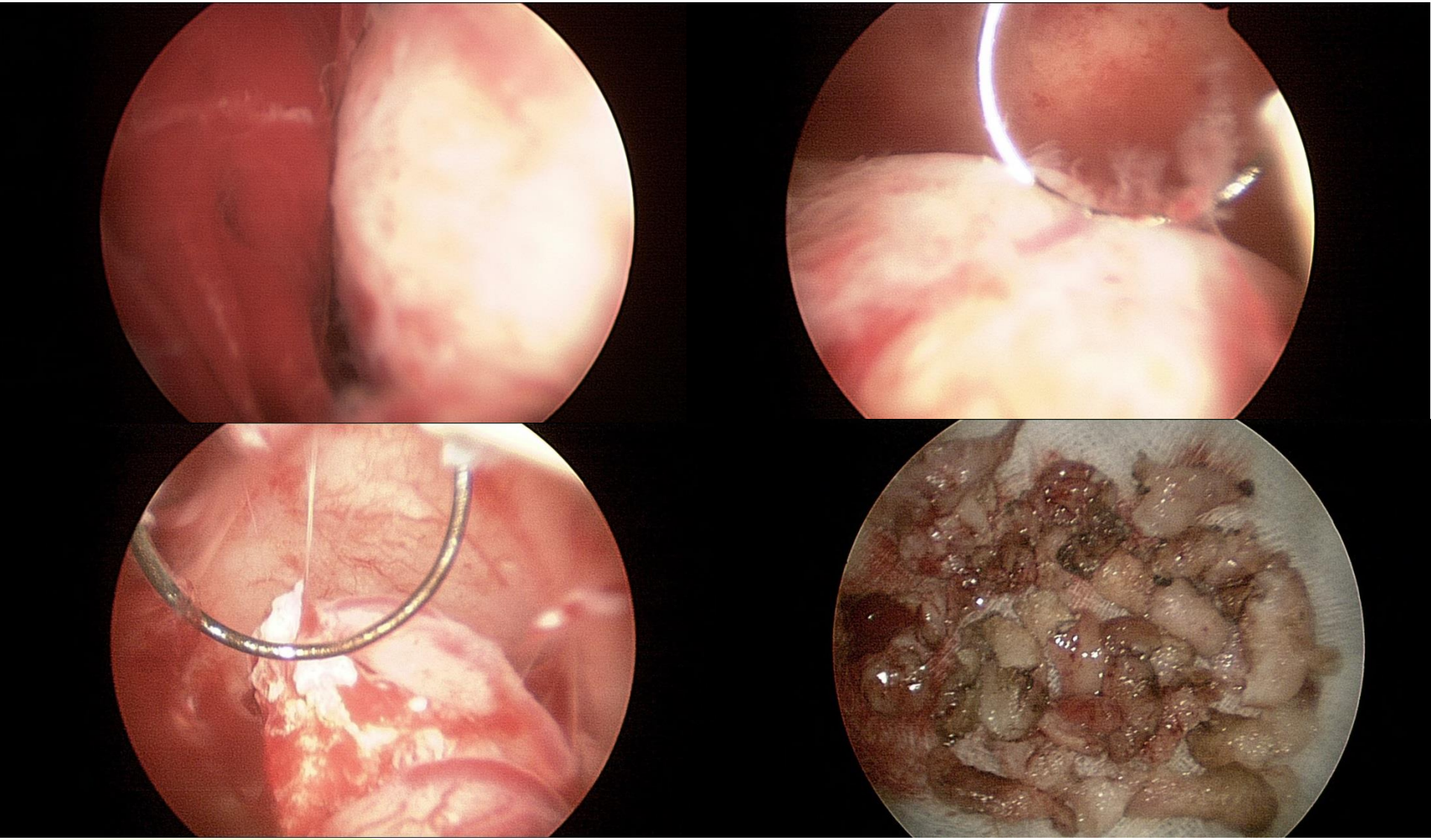
2
1 D 2.00cm
2 D 1.89cm

- Hysteroscopy (2017.6)



세부검체 : endometrium

[GROSS DESCRIPTION]

Several pale brown soft and rubbery tissue fragments, about 4.0 cc, are totally embedded.

[DIAGNOSIS]

"Endometrium"; Atypical glandular lesion.

[COMMENT]

악성의 가능성을 충분히 고려해볼수 있는 병변입니다. 다만, HIFU (High Intensity Focused Ultrasound) 치료 받은 후에 조직이 변화를 일으켜 상기와 유사한 이상소견을 보일 수 있으므로 환자에게 치료여부를 확인하고 반드시 Close follow-up 하시기 바랍니다.

[IMMUNOHISTOCHEMISTRY]

IH17-001723 Actin positive for stroma, IH17-001723 CD10 positive for gland
IH17-001723 Desmin patchy positive, IH17-001723 Ki-67 20%
IH17-001789 ER positive, IH17-001789 PR positive

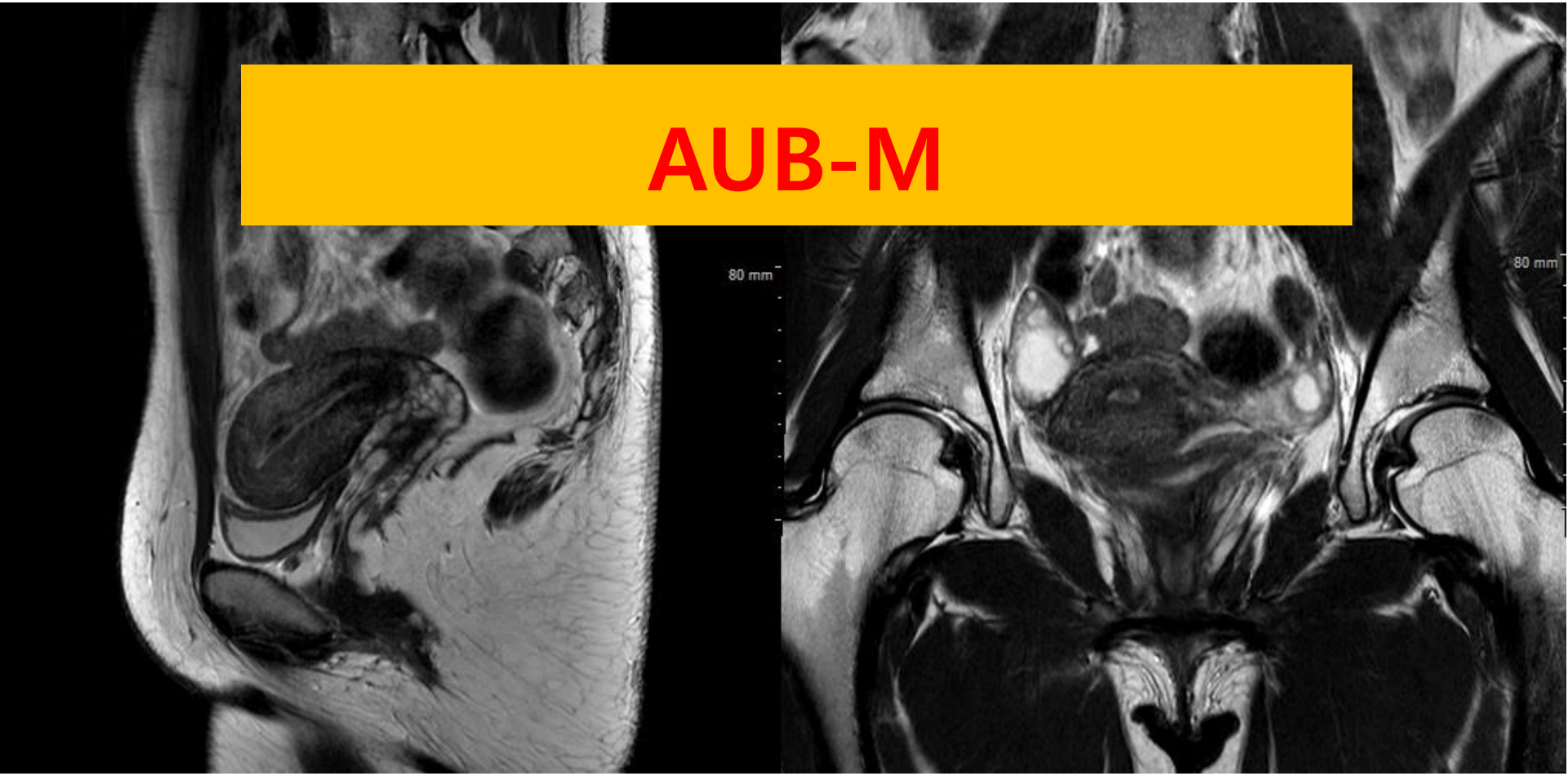
[COMMENT 1]

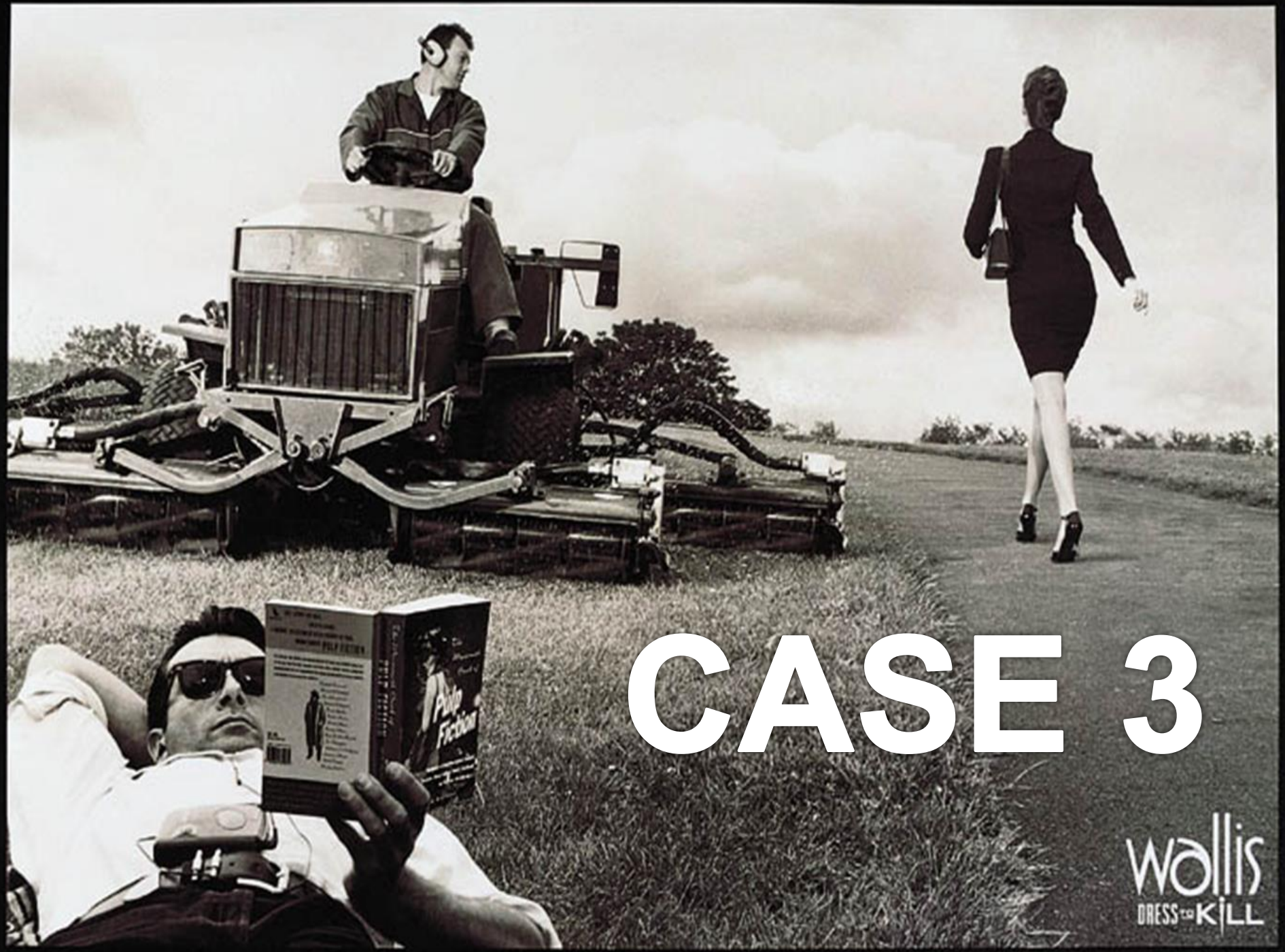
HIFU치료경험은 없다고 하므로 악성의 가능성을 의심해볼 수 있겠습니다. 감별진단으로 Endometriod carcinoma의 가능성을 먼저 고려해 보아야 할것으로 사료되며 MMMT의 가능성도 완전히 배제할 수는 없습니다.

[COMMENT 2]

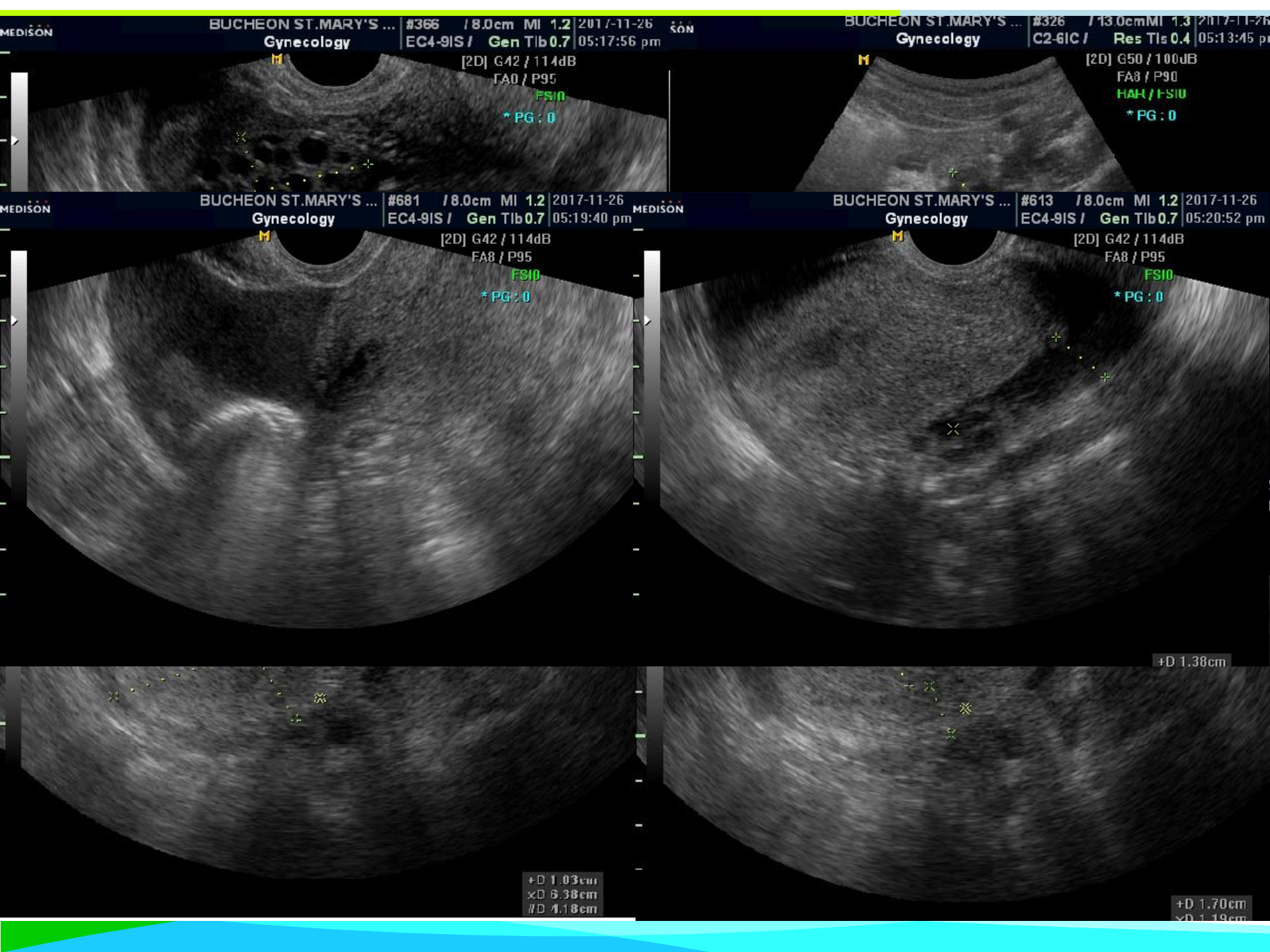
Endometriod carcinoma로 진단시 well-differentiated로 grading

AUB-M

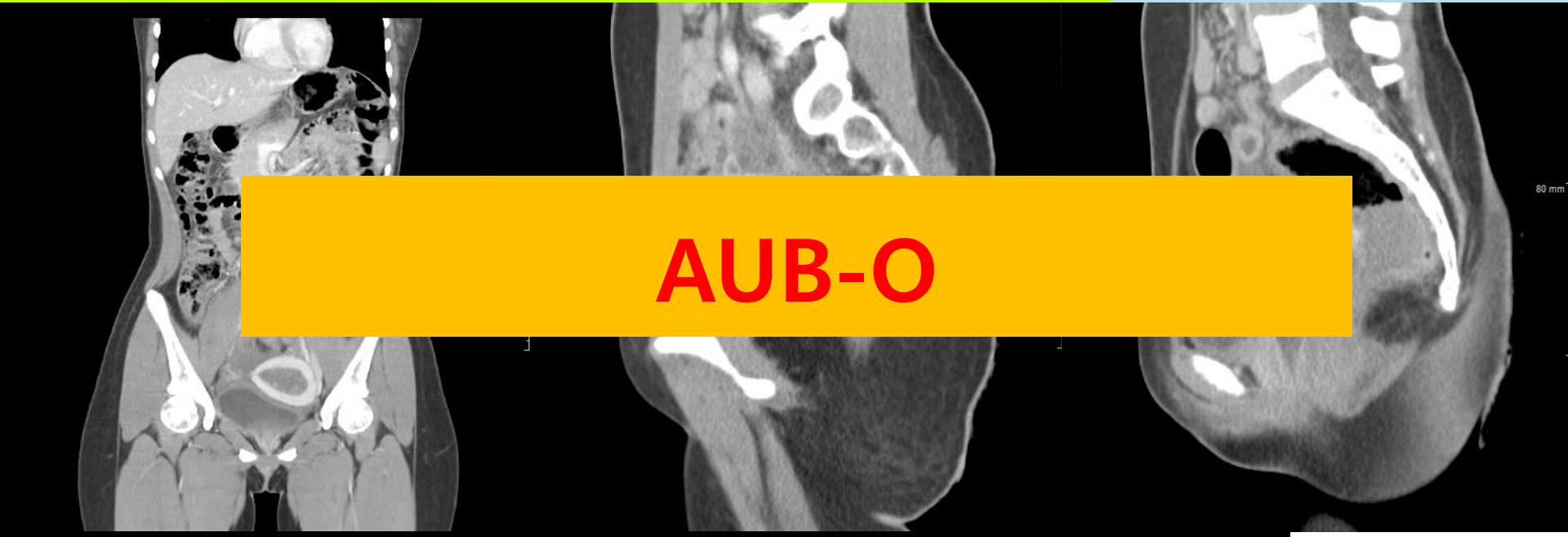



CASE 3
Pulp Fiction
wallis
DRESS to KILL

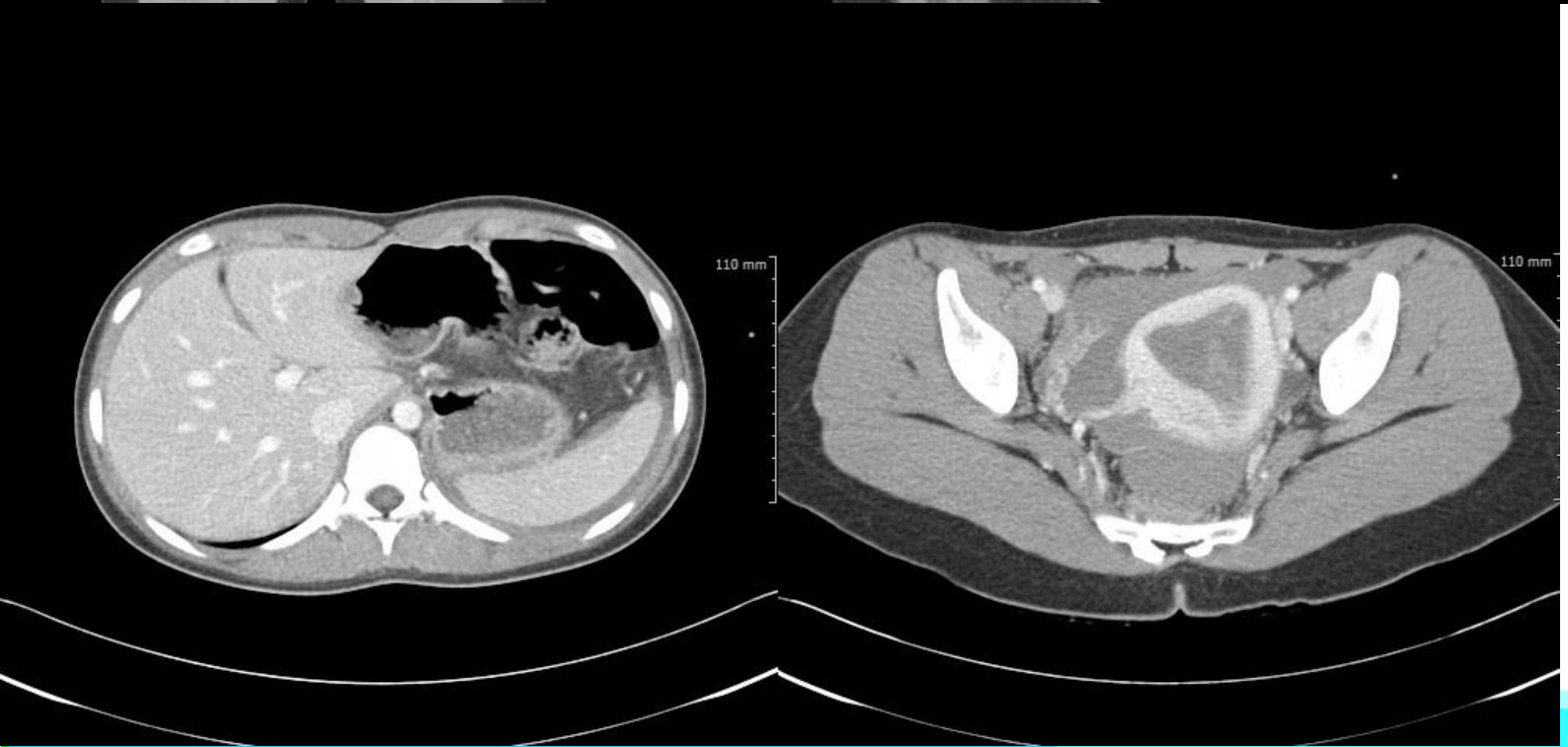
- 17세 parity 0-0-0-0
- 불규칙-10일-적음-경한 월경통
- 1개월전부터 월경통, 점상출혈→ 개인병원에서 초음파상 자궁내막 두꺼워져 생리 조절하는 약 먹음
- 1일전부터 기운이 없고, 생리양 증가, 어지럽고 생리통 심해져 내원


MEDISON
BUCHEON ST.MARY'S ...
Gynecology
#366 / 8.0cm MI 1.2
EC4-9IS / Gen TIb 0.7
2017-11-26
05:17:56 pm
[2D] G42 / 114dB
FA8 / P95
FSID
* PG : 0
#326 / 13.0cm MI 1.3
C2-6IC / Res TIs 0.4
[2D] G50 / 100dB
FA8 / P90
HAR / FSID
* PG : 0
#681 / 8.0cm MI 1.2
EC4-9IS / Gen TIb 0.7
2017-11-26
05:19:40 pm
#613 / 8.0cm MI 1.2
EC4-9IS / Gen TIb 0.7
2017-11-26
05:20:52 pm
+D 1.38cm
+D 1.03cm
xD 6.38cm
#D 1.18cm
+D 1.70cm

검사항목	참고치	2017-11-28 04:01	2017-11-27 06:00	2017-11-27 00:35	2017-11-26 19:41	2017-11-26 15:59
Routine CBC & WBC Diff. Count						
WBC Count	4.0~10.0	6.1	7.2	6.31	9.84	13.14
RBC Count	3.5~4.9	3.11	3.26	2.53	3.27	3.52
Hemoglobin	12.0~16.0	**9**	**9.2**	**7.1**	**9**	**9.9**
Hematocrit	36.0~45.0	**25.8**	**27.1**	**20.6**	**26.8**	**28.8**
Platelet count	**140~400**	**122**	**126**	**131**	**178**	**158**
WBC Diff. Count						
Seg.-neutrophils	45~75	57.8	92.3	77.3	86.7	81.4
Lymphocytes	20~50	30.7	5.4	17.6	8.3	12.3
Monocytes	2~9	7.9	2.1	4.6	4.7	5.6
Eosinophils	0~5	3.4	0.1	0.5	0.2	0.5
Basophils	0~2	0.2	0.1	0	0.1	0.2
ANC 계산		3.53	6.65	4.88	8.53	10.7
RDW (Red cell Distribution Width)	11.5~14.5	13.7	13.6	12.9	12.8	12.9
PDW (Platelet Distribution Width)	9.8~16.2	16.7	17.6	15.5	21.3	17
MPV (Mean platelet Volume)	9.4~12.5	12.2	12.1	12.2	13.3	12.3
PCT (Plateletcrit)	0.15~0.4	0.15	0.15	0.16	0.24	0.19
Mean Corp Index						
MCV	84~99	83	83.1	81.4	82	81.8
MCH	26~33	28.9	28.2	28.1	27.5	28.1
MCHC	31~35	34.9	33.9	34.5	33.6	34.4



AUB-O



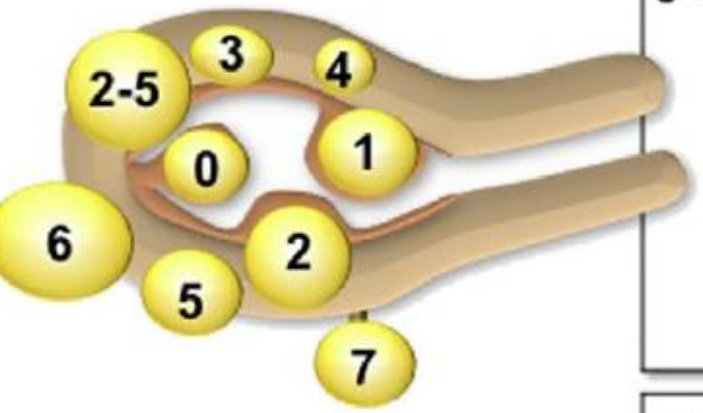
TAKE HOME MESSAGE

Polyp
Adenomyosis
Leiomyoma
Malignancy & hyperplasia

Submucous
Other

Coagulopathy
Ovulatory dysfunction
Endometrial
Iatrogenic
Not otherwise classified

Leiomyoma subclassification system



SM - Submucous	0	Pedunculated intracavitary
	1	<50% intramural
	2	≥50% intramural
O - Other	3	Contacts endometrium; 100% intramural
	4	Intramural
	5	Subserous ≥50% intramural
	6	Subserous <50% intramural
	7	Subserous pedunculated
	8	Other (specify e.g. cervical, parasitic)

Hybrid leiomyomas (impact both endometrium and serosa)	Two numbers are listed separated by a hyphen. By convention, the first refers to the relationship with the endometrium while the second refers to the relationship to the serosa. One example is below	
	2-5	Submucous and subserous, each with less than half the diameter in the endometrial and peritoneal cavities, respectively.

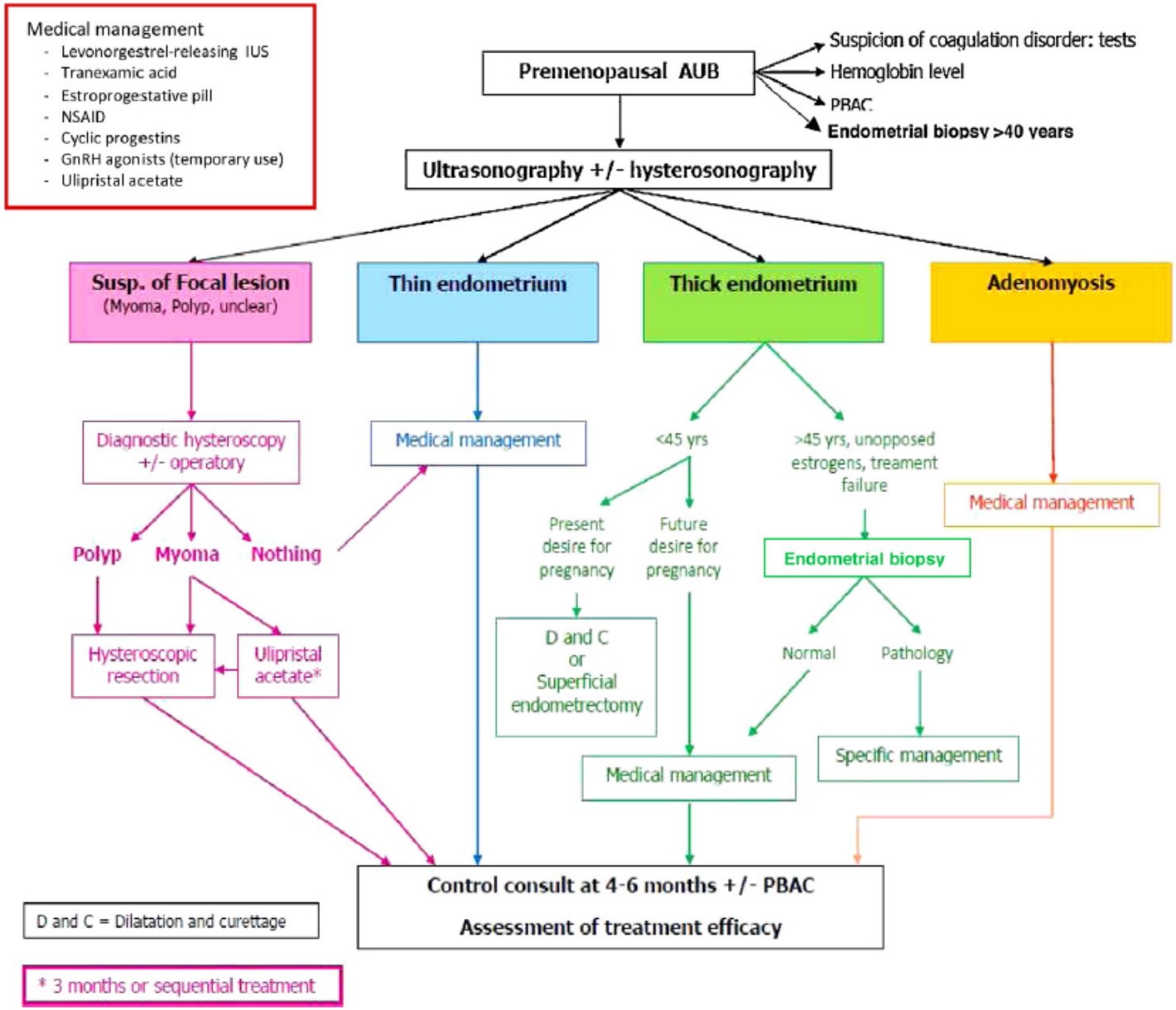


Fig. 4. Patient with further pregnancy project.

Nonsteroidal antiinflammatory drugs

Mefenamic acid 500 mg twice a day for 4 to 5 days

Naproxen 250 to 500 mg twice a day for 4 to 5 days

Ibuprofen 600 to 1200 mg daily for 4 to 5 days

Antifibrinolytics[a]

Tranexamic acid (650 mg) 3 tabs (1.3 g) 3 times a day for 5 days

Acute bleeding: 10 mg/kg intravenously (IV) if available (maximum 600 mg/dose)

Hormonal treatments

Conjugated estrogens

Acute bleeding: 25 mg IV every 4 to 6 hours for 24 hours (follow with combined oral contraceptive pills [OCPs])

Combined OCPs

Ethinyl estradiol combination pill (35 μg)[b]

Acute bleeding: 1 tablet 3 times a day for up to 7 days until bleeding decreases, then taper

Progestins

Medroxyprogesterone acetate 5 to 10 mg daily for 12 to 14 days[a]

Acute bleeding: 10 mg every 4 hours (up to 80 mg/d for acute bleeding) then every 6 hours for 4 days, then every 8 hours for 3 days, then every 12 hours for 2 days to 2 weeks, then daily

Norethindrone 5 mg daily for 5–10 days[a]

Acute bleeding: 5 to 10 mg every 4 hours until bleeding stops, then every 6 hours for 4 days, then every 8 hours for 3 days, then every 12 hours for 2 days to 2 weeks, then daily

Levonorgestrel intrauterine system (approved for use for 5 years)

[a]*Data from* James AH, Kouides PA, Abdul-Kadir R, et al. Evaluation and management of acute menorrhagia in women with and without underlying bleeding disorders: consensus from an international expert panel. Eur J Obstet Gynecol Reprod Biol 2011;158:124–34.

[b]*Data from* American College of Obstetricians and Gynecologists. ACOG committee opinion no. 557: management of acute abnormal uterine bleeding in nonpregnant reproductive-aged women. Obstet Gynecol 2013;121(4):891–6.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