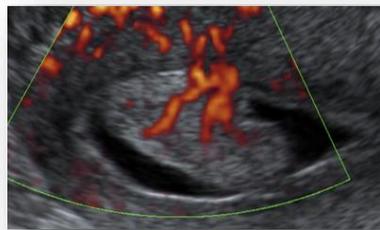


# Ultrasound features of endometrial pathology in women with and without abnormal uterine bleeding

Thierry VAN DEN BOSCH

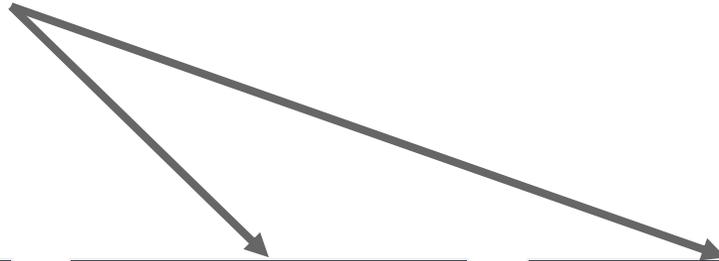
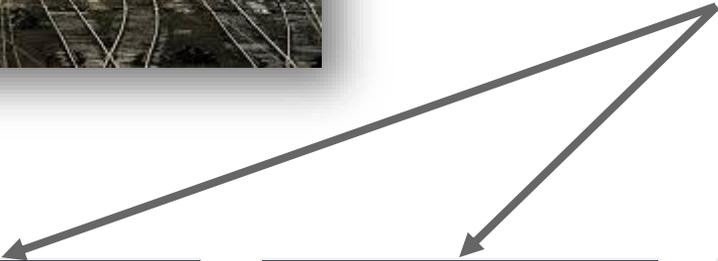




ABNL BLEEDING



ULTRASOUND



OVARIES

MYOMETRIUM

ENDOMETRIUM

BLADDER

RECTUM

UTERINE				EXTRA-uterine			
INTRA-cavitory		EXTRA- cavitory		GYNECOLOGICAL		NON-gynecological	
FOCAL	DIFFUSE	CERVIX	MYOMETRIUM	LOWER GEN TR	INTRA-ABDOM	URO	INTESTINAL

**Terms, definitions and measurements to describe the sonographic features of the endometrium and intrauterine lesions: a consensus opinion from the International Endometrial Tumor Analysis (IETA) group**

F. P. G. LEONE<sup>°</sup>, D. TIMMERMAN<sup>†</sup>, T. BOURNE<sup>‡</sup>, L. VALENTIN<sup>§</sup>, E. EPSTEIN<sup>¶</sup>,  
S. R. GOLDSTEIN<sup>\*\*</sup>, H. MARRET<sup>††</sup>, A. K. PARSONS<sup>‡‡</sup>, B. GULL<sup>§§</sup>, O. ISTRE<sup>¶¶</sup>,  
W. SEPULVEDA<sup>\*\*\*</sup>, E. FERRAZZI<sup>†††</sup> and T. VAN DEN BOSCH<sup>†</sup>

Diagnostic algorithm

ABNL BLEEDING\*

ULTRASOUND



OVARIES

MYOMETRIUM

ENDOMETRIUM

BLADDER

RECTUM

Proliferative

Secretory

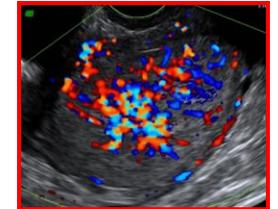
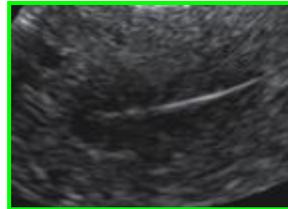
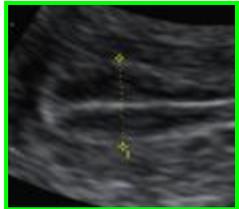
Atrophy

Hyperplasia

Polyp

Myoma

Carcinoma



\* NOT pregnancy related

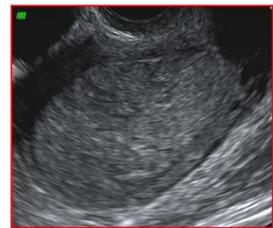
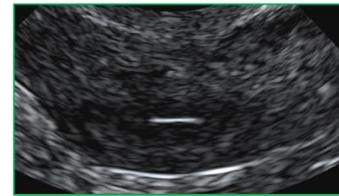
# Combining Vaginal Ultrasonography and Office Endometrial Sampling in the Diagnosis of Endometrial Disease in Postmenopausal Women

T. VAN DEN BOSCH, MD, A. VANDENDAEL, MD, D. VAN SCHOUBROECK, MD,  
P. A. B. WRANZ, MD, AND C. J. LOMBARD, PhD

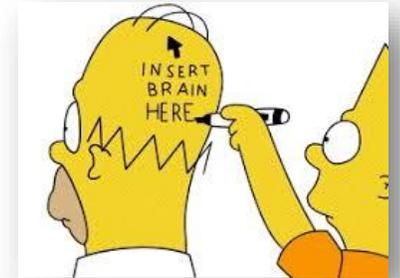
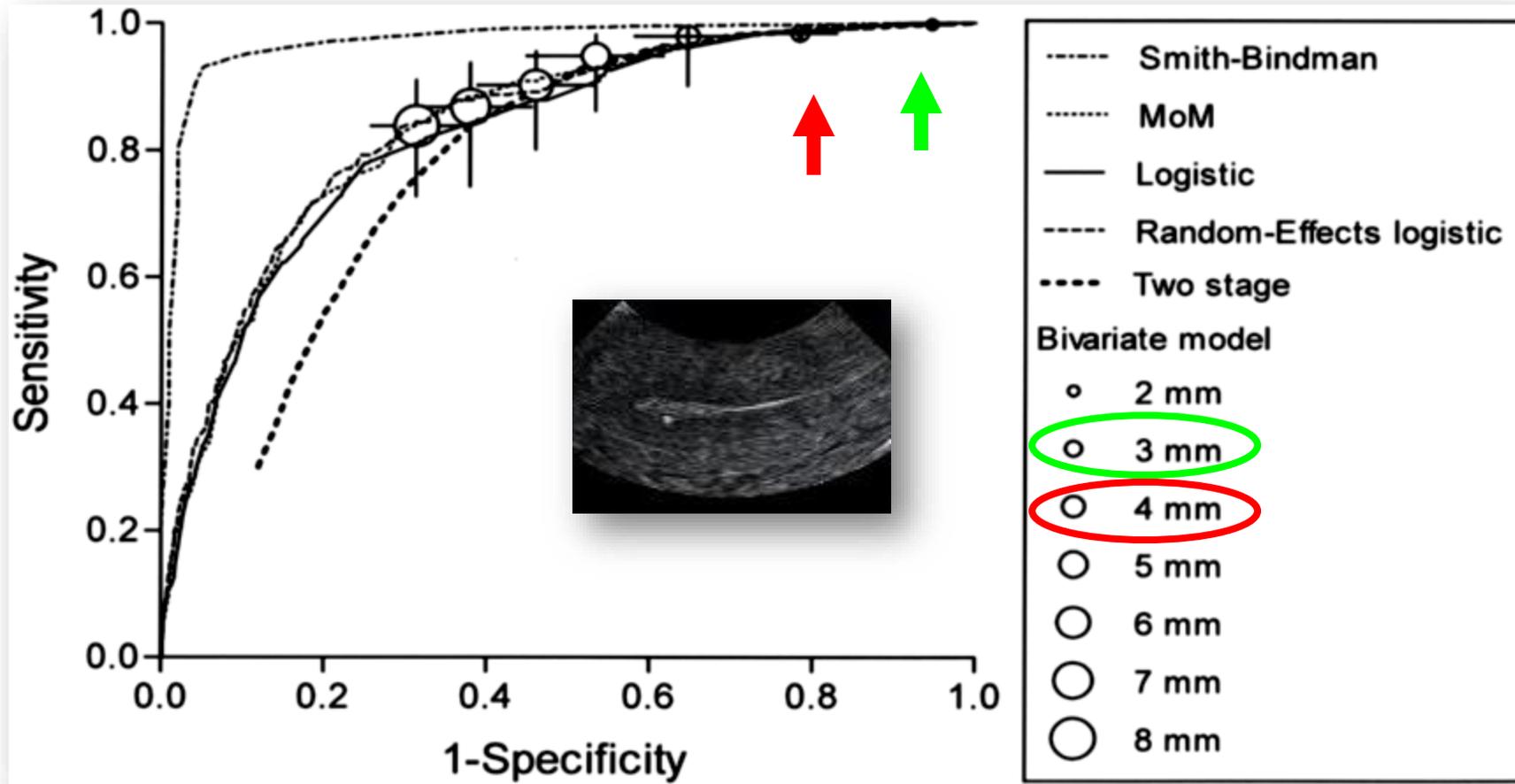
Obstet Gynecol 1995;85:349-52



## Endometrial thickness !



# Endometrial thickness



**Endometrial Thickness Measurement for Detecting Endometrial Cancer in Women With Postmenopausal Bleeding: A Systematic Review and Meta-Analysis**

Timmermans, Anne MD; Opmeer, Brent C. PhD; Khan, Khalid S. MD, PhD; Bachmann, Lucas M. PhD; Epstein, Elisabeth MD, PhD; Clark, T. Justin MD, PhD; Gupta, Janesh K. MD, PhD; Bakour, Shagaf H. MD, PhD; van den Bosch, Thierry MD, PhD; van Doorn, Helena C. MD, PhD; Cameron, Sharon T. MD; Giusa, M. Gabriella MD; Dessole, Stefano MD, PhD; Dijkhuizen, F. Paul H. L. J. MD, PhD; ter Riet, Gerben MD, PhD; Mol, Ben W. J. MD, PhD

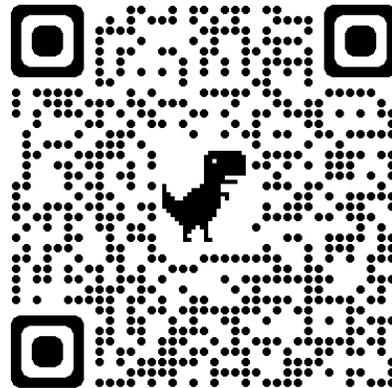
*Ultrasound Obstet Gynecol* 2010; 35: 103–112

Published online 15 December 2009 in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/uog.7487

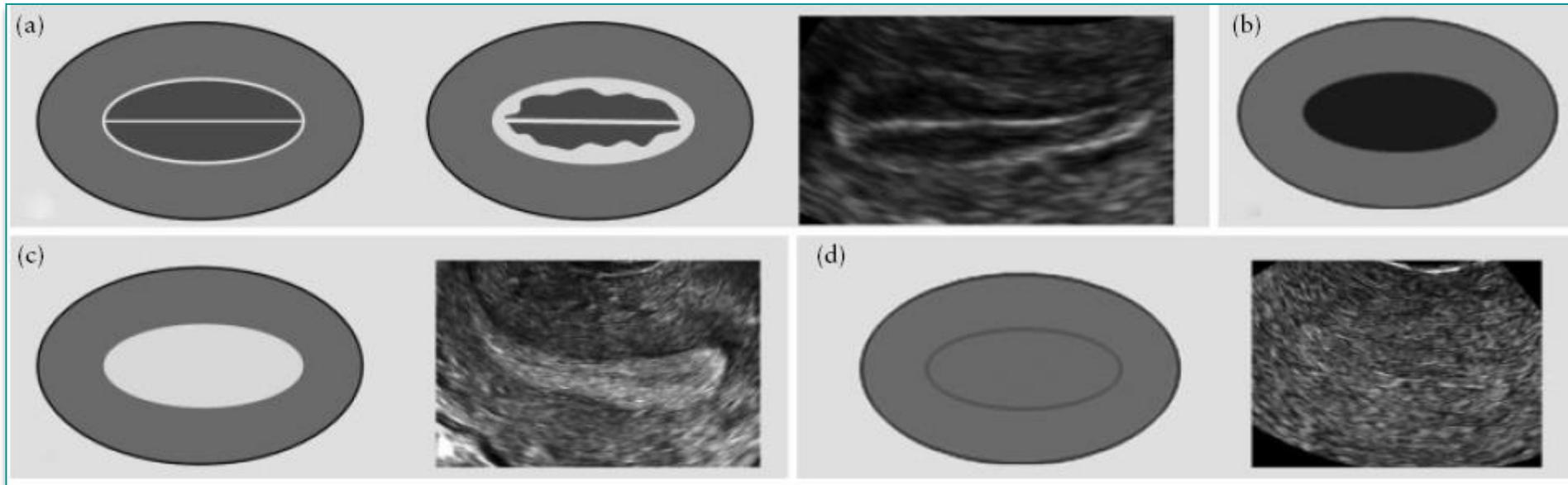


# Terms, definitions and measurements to describe the sonographic features of the endometrium and intrauterine lesions: a consensus opinion from the International Endometrial Tumor Analysis (IETA) group

F. P. G. LEONE\*, D. TIMMERMAN†, T. BOURNE‡, L. VALENTIN§, E. EPSTEIN¶,  
S. R. GOLDSTEIN\*\* , H. MARRET††, A. K. PARSONS‡‡, B. GULL§§, O. ISTRE¶¶,  
W. SEPULVEDA\*\*\*, E. FERRAZZI††† and T. VAN DEN BOSCH†



# Qualitative assessment 'uniform' endometrial echogenicity



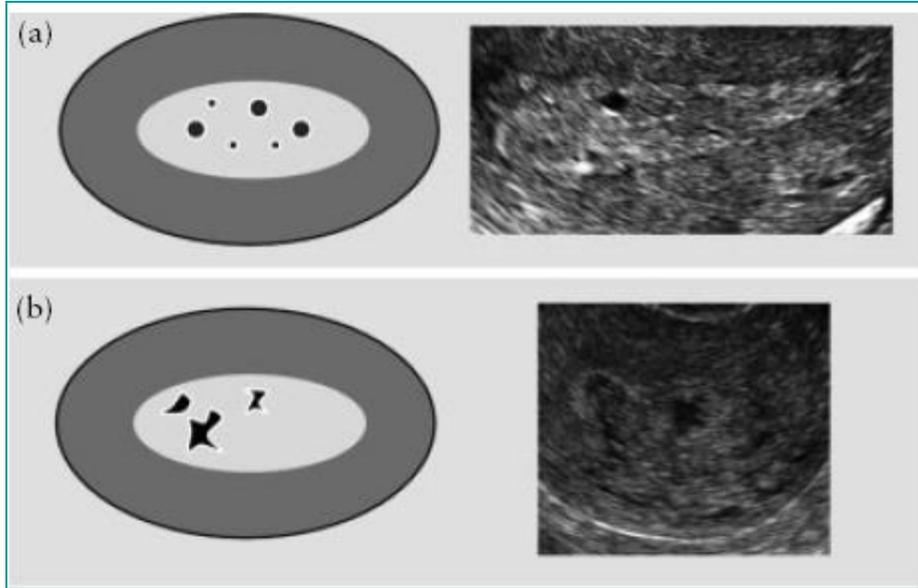
a. Three-layer pattern

b. Hypoechogenic

c. Hyperechogenic

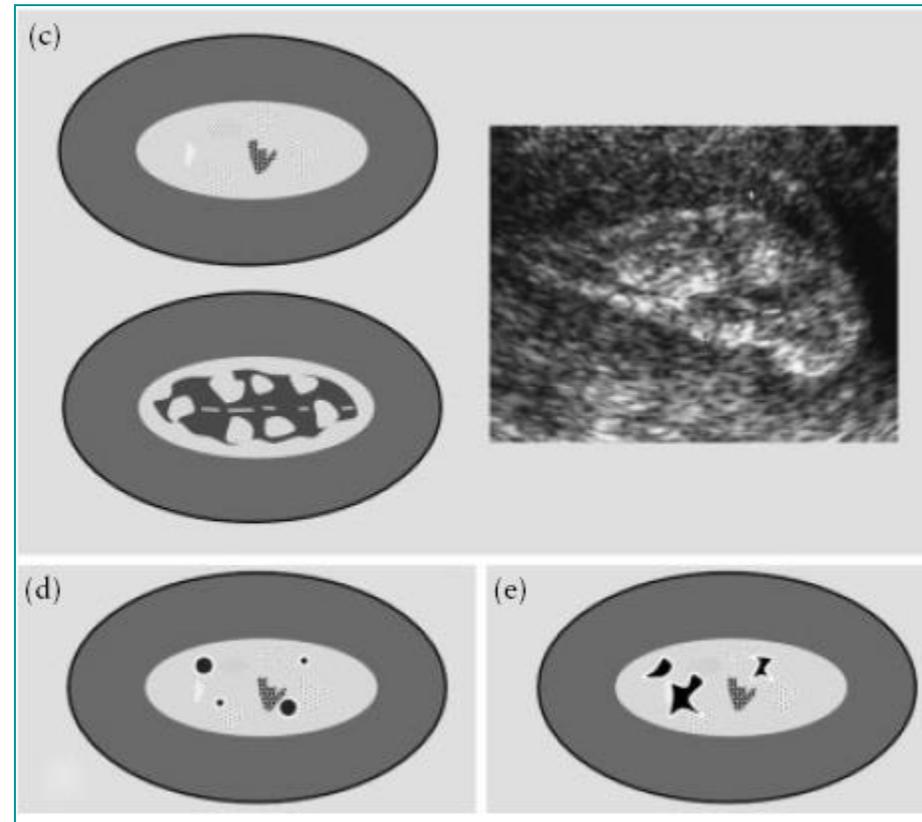
d. Isoechogenic

# Qualitative assessment 'Non-uniform' endometrial echogenicity



## Homogenous background

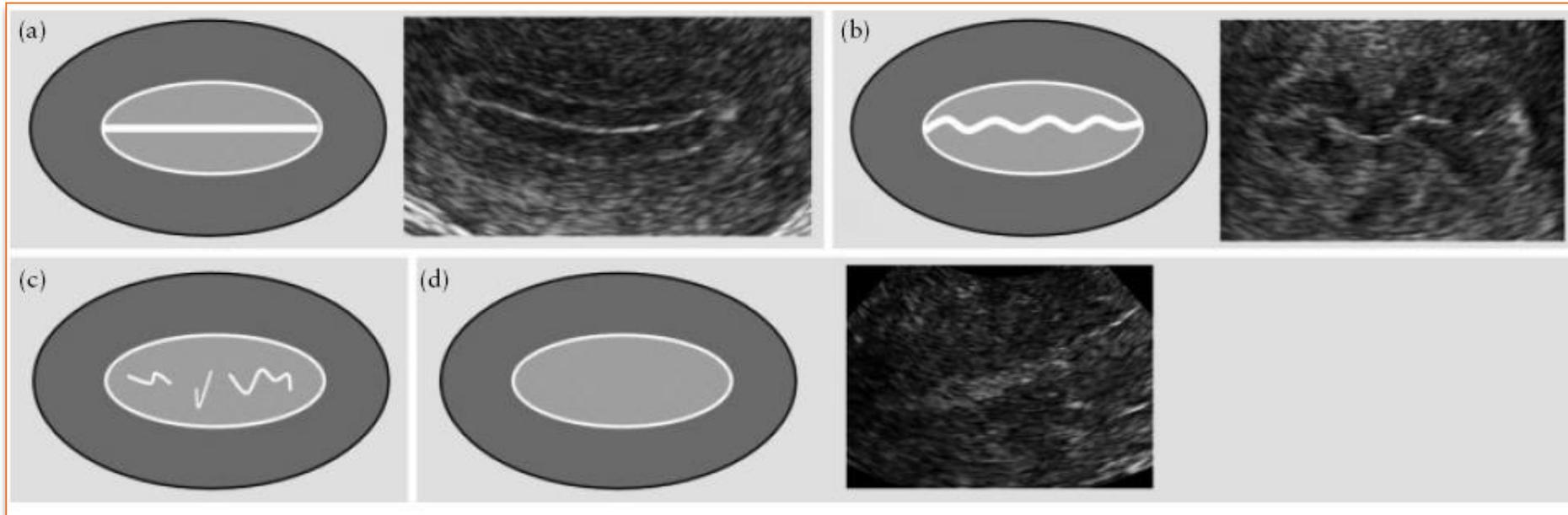
- (a) with regular **cystic** areas
- (b) with irregular **cystic** areas



## Heterogenous background

- (c) **without** cystic areas
- (d) with regular **cystic** areas
- (e) with irregular **cystic** areas

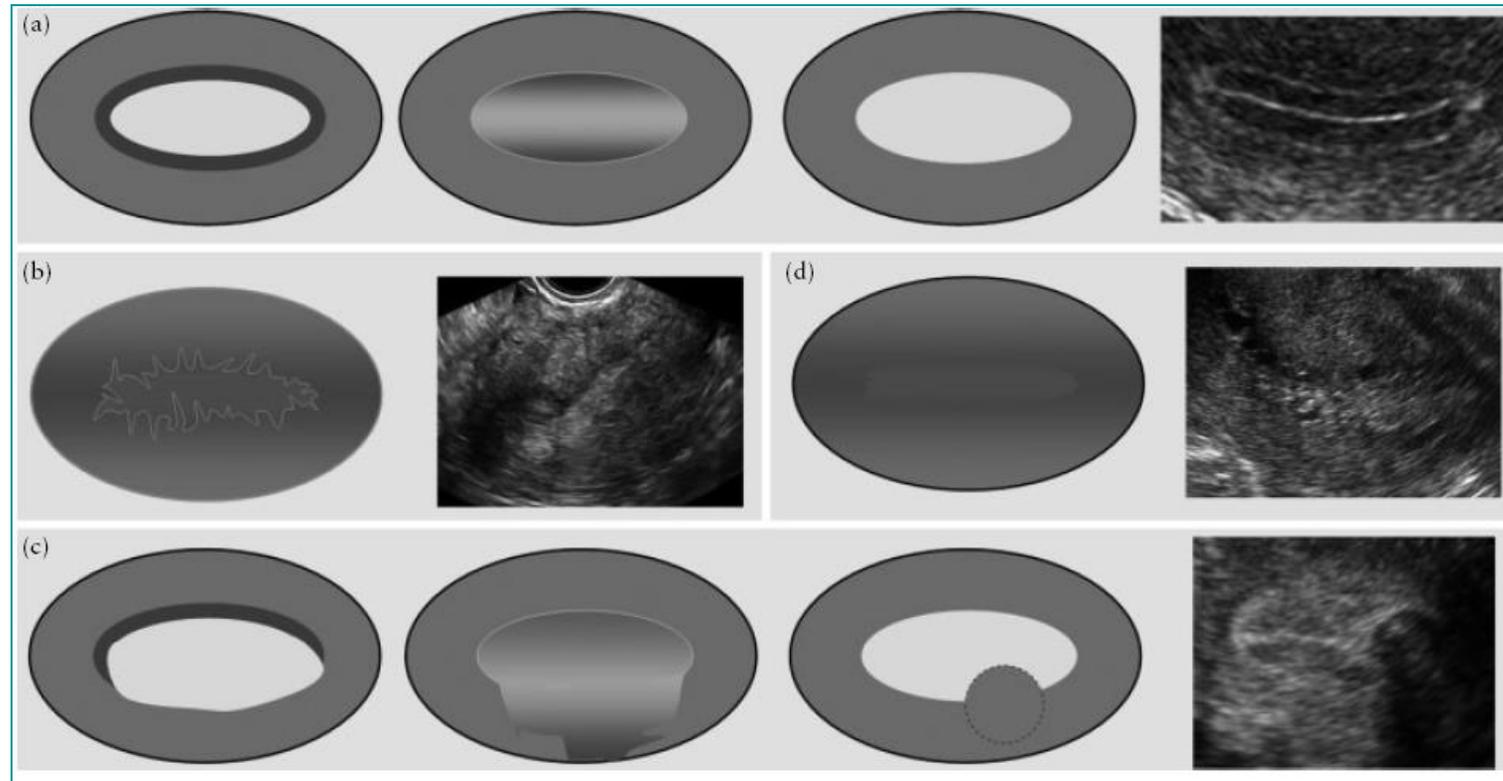
# Qualitative assessment Endometrial midline



- a. Linear
- b. Non-linear
- c. Irregular
- d. Not defined

# Qualitative assessment

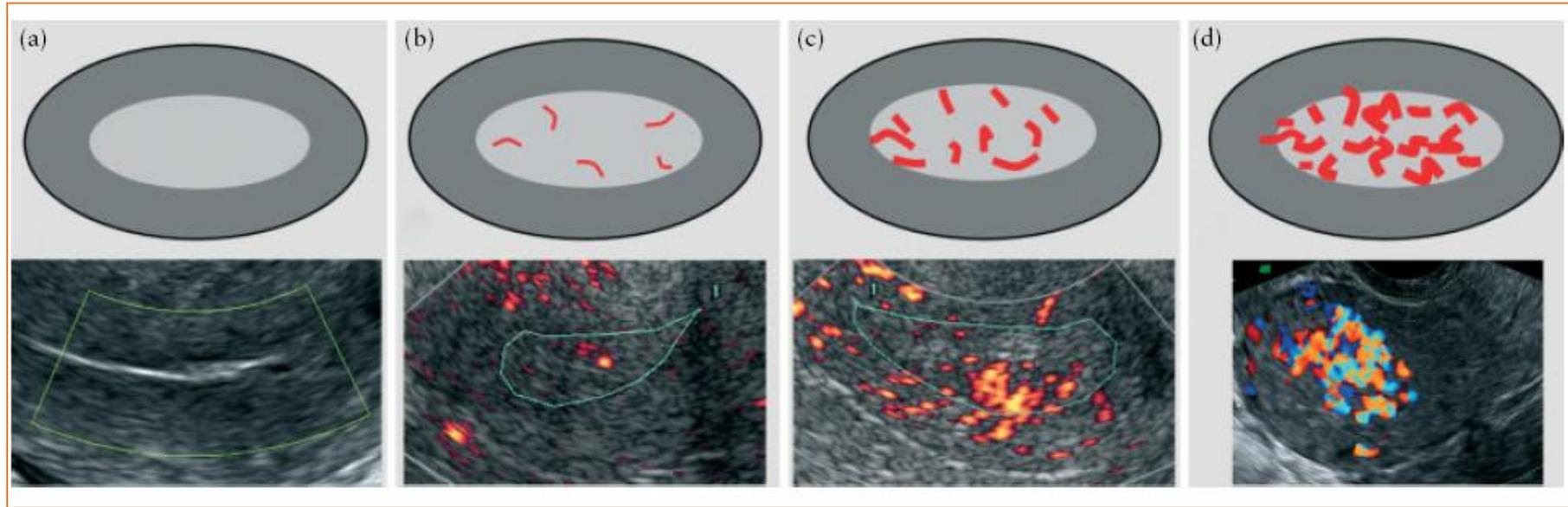
## Endometrial-myometrial junction



- a. Regular
- b. Irrregular
- c. Interrupted
- d. Not defined

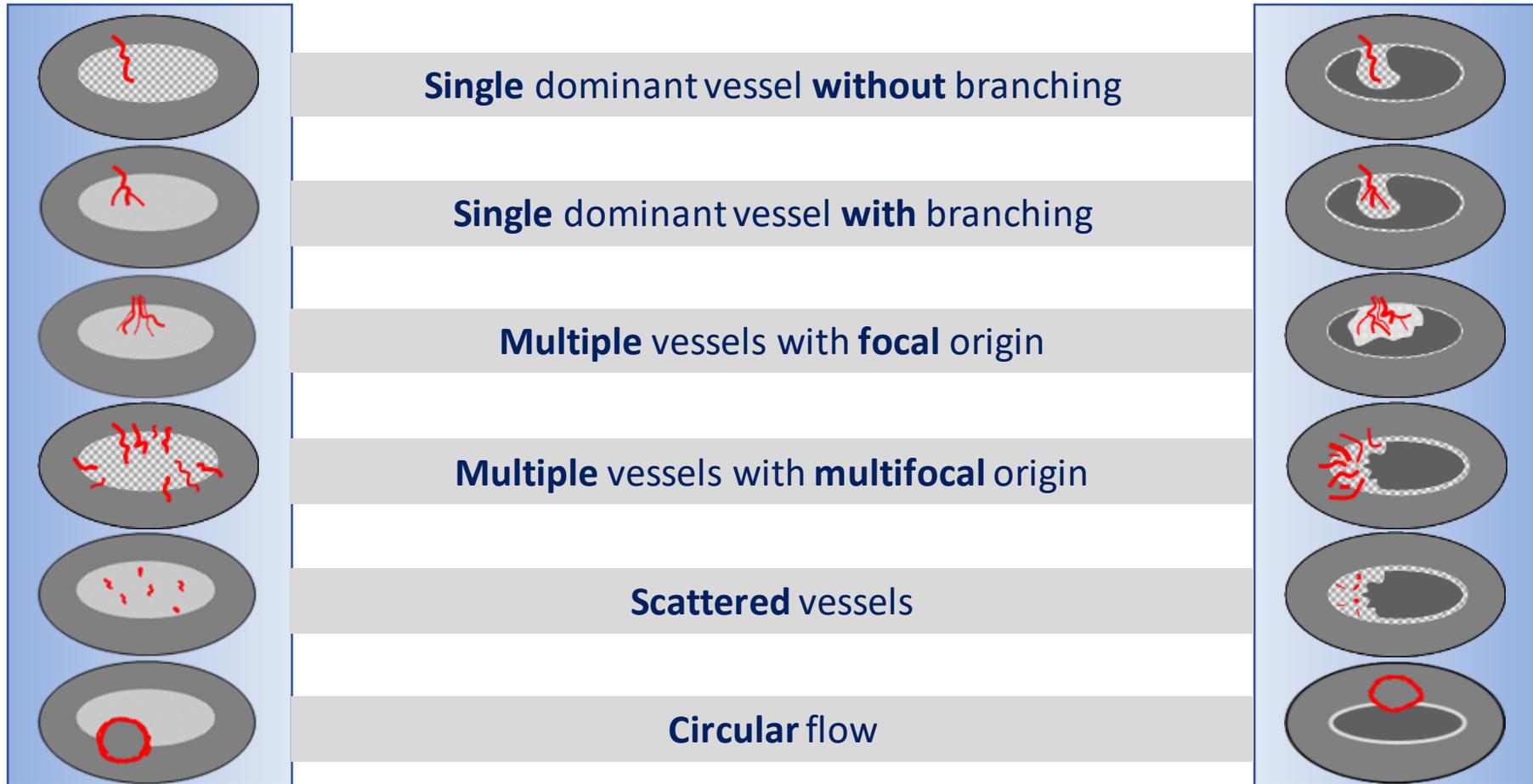
# Color Doppler assessment of the endometrium

## Color score



- |                              |                       |                      |
|------------------------------|-----------------------|----------------------|
| a. Color score of <b>1</b> : | <b>no</b> color       |                      |
| b. Color score of <b>2</b> : | <b>minimal</b> color  | (i.e. minimal flow)  |
| c. Color score of <b>3</b> : | <b>moderate</b> color | (i.e. moderate flow) |
| d. Color score of <b>4</b> : | <b>abundant</b> color | (i.e. abundant flow) |

# Vascular pattern



# IETA-1



*Ultrasound Obstet Gynecol* 2021; 57: 164–172

Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/uog.22109

**AUB**

n = 2856



**ULTRASONOGRAPHY**

**IETA TERMS**



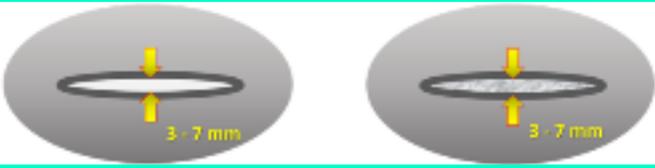
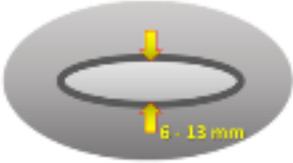
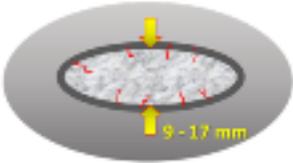
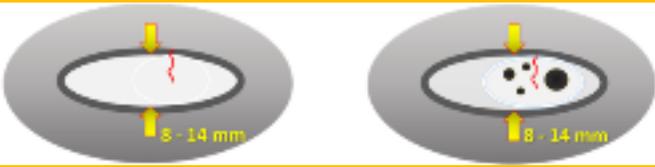
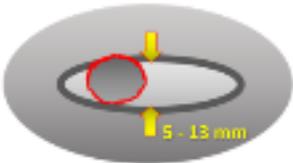
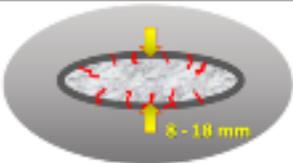
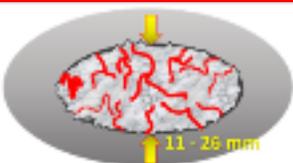
**HISTOLOGY**

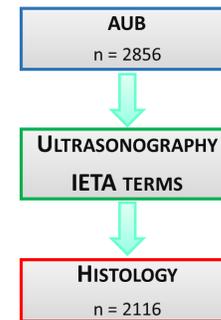
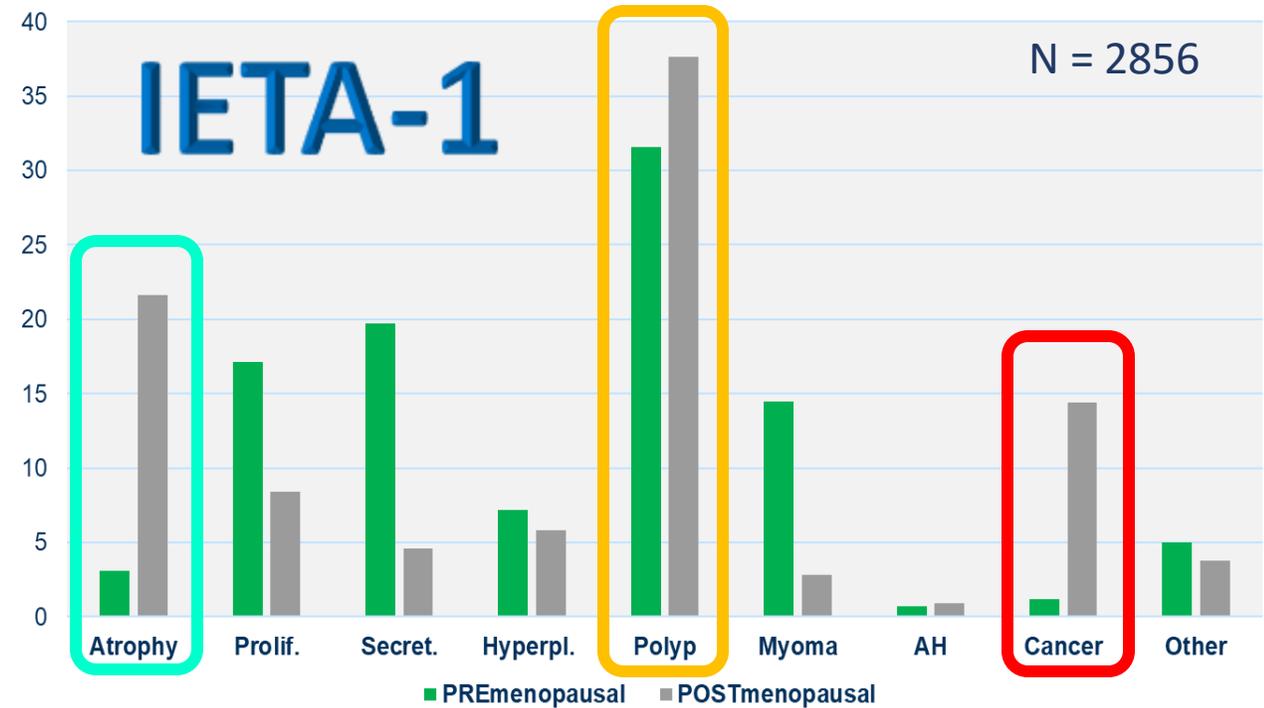
n = 2116

## Typical ultrasound features of various endometrial pathologies described using International Endometrial Tumor Analysis (IETA) terminology in women with abnormal uterine bleeding

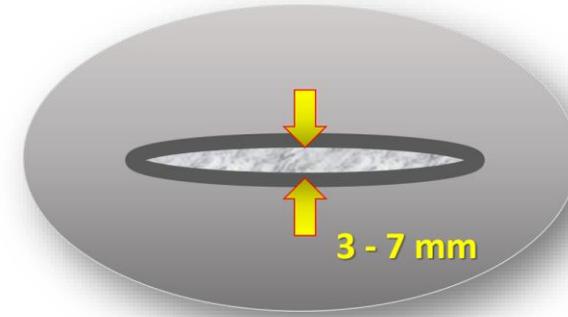
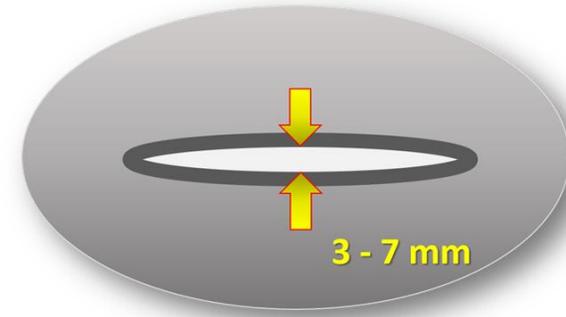
T. VAN DEN BOSCH<sup>1,2</sup> , J. Y. VERBAKEL<sup>3</sup> , L. VALENTIN<sup>4,5</sup> , L. WYNANTS<sup>2,6</sup>, B. DE COCK<sup>2</sup>, M. A. PASCUAL<sup>7</sup> , F. P. G. LEONE<sup>8</sup>, P. SLADKEVICIUS<sup>4,5</sup> , J. L. ALCAZAR<sup>9</sup> , A. VOTINO<sup>10</sup>, R. FRUSCIO<sup>11</sup>, C. LANZANI<sup>8</sup>, C. VAN HOLSBEKE<sup>12</sup>, A. ROSSI<sup>13</sup>, L. JOKUBKIENE<sup>4,5</sup>, M. KUDLA<sup>14</sup>, A. JAKAB<sup>15</sup>, E. DOMALI<sup>16</sup>, E. EPSTEIN<sup>17,18</sup>, C. VAN PACHTERBEKE<sup>10</sup>, T. BOURNE<sup>1,2,19</sup>, B. VAN CALSTER<sup>2</sup> and D. TIMMERMAN<sup>1,2</sup>



ATROPHY	
PROLIFERATIVE OR SECRETORY	
ENDOMETRIAL HYPERPLASIA	
ENDOMETRIAL POLYP	
LEIOMYOMA	
ATYPICAL HYPERPLASIA	
ENDOMETRIAL CANCER	



# Endometrial atrophy



## *Histological outcome*

*All patients*

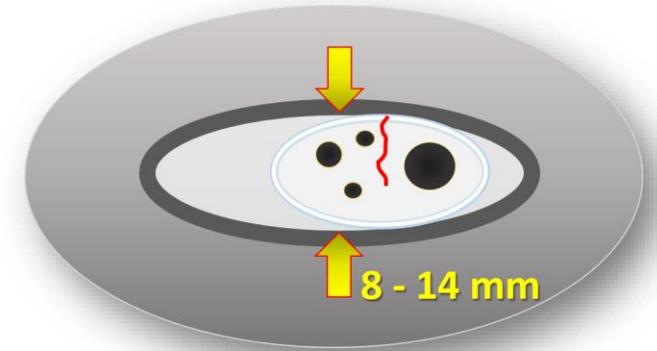
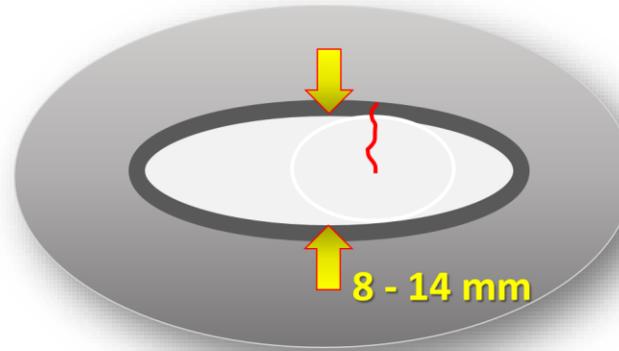
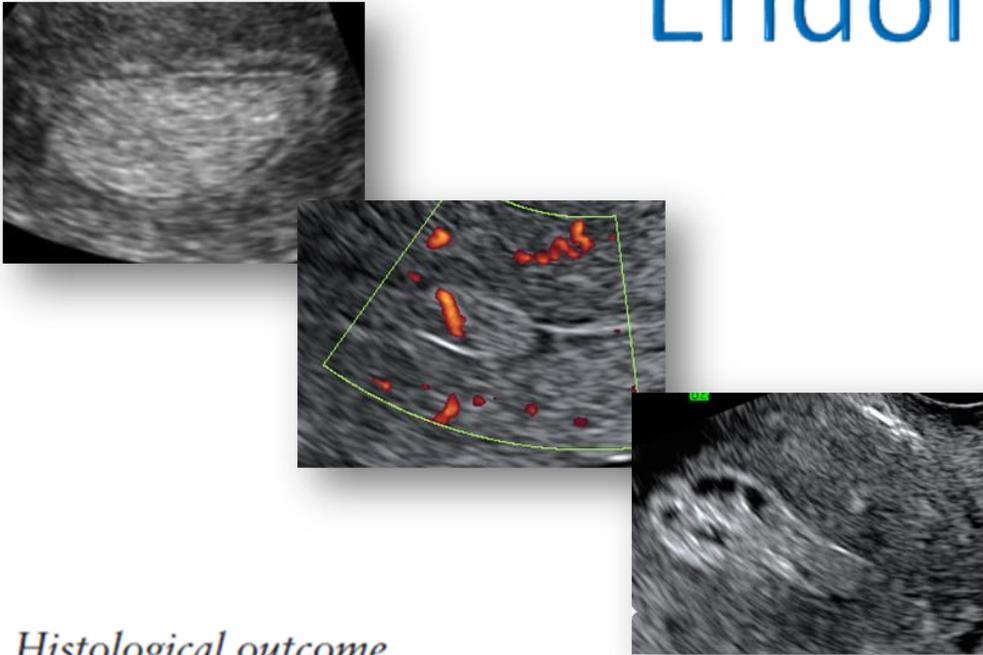
### Endometrial atrophy

Endometrial thickness 3–7 mm	84/163 (52 (44–59))
Uniform hyperechogenic	68/167 (41 (33–48))
Non-uniform heterogeneous echogenicity without cysts	43/167 (26 (19–32))
Undefined midline	123/163 (75 (69–82))
Regular endometrial–myometrial junction	92/167 (55 (48–63))
Color score 1	139/167 (83 (78–89))

n/N (% (95/CI))



# Endometrial polyp



## Histological outcome

### Endometrial polyp

- Endometrial thickness 8–14 mm
- Uniform hyperechogenic
- Non-uniform heterogeneous echogenicity without cysts
- Non-uniform echogenicity with regular cysts
- Bright edge
- Undefined midline
- Regular endometrial–myometrial junction
- Single vessel with or without branching\*
- Color score 2 or 3

All patients

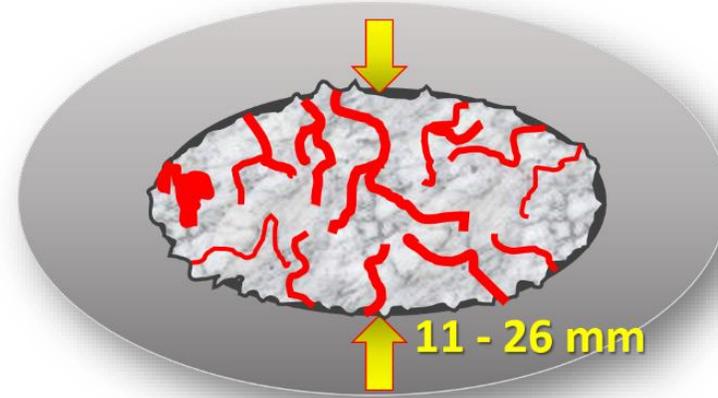
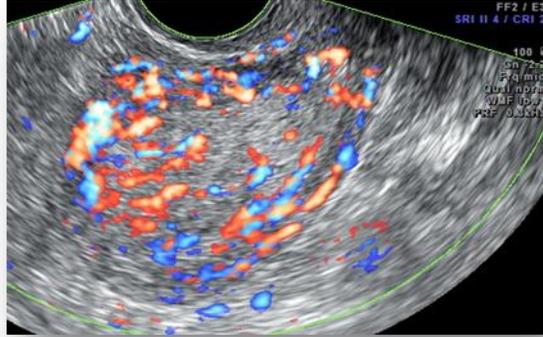
Premenopausal patients

Postmenopausal patients

373/694 (54 (50–57))	246/417 (59 (54–64))	127/277 (46 (40–52))
188/704 (27 (23–30))	122/420 (29 (25–33))	66/284 (23 (18–28))
182/704 (26 (23–29))	118/420 (28 (24–32))	64/284 (23 (18–27))
153/704 (22 (19–25))	32/420 (8 (5–10))	121/284 (43 (37–48))
338/704 (48 (44–52))	232/420 (55 (50–60))	106/284 (37 (32–43))
446/694 (64 (61–68))	205/417 (49 (44–54))	241/277 (87 (83–91))
542/704 (77 (74–80))	348/420 (83 (79–86))	194/284 (68 (63–74))
345/500 (69 (65–73))	246/326 (75 (71–80))	99/174 (57 (50–64))
483/704 (69 (65–72))	314/420 (75 (71–79))	169/284 (60 (54–65))

n/N (% (95/CI))

# Endometrial cancer



## *Histological outcome*

### Endometrial cancer

Endometrial thickness 11–26 mm

Non-uniform heterogeneous echogenicity without cysts or irregular cysts

Undefined midline

Interrupted endometrial–myometrial junction

Multiple vessels of focal or multifocal origin\*

Color score 3–4

	<i>All patients</i>	<i>Premenopausal patients</i>	<i>Postmenopausal patients</i>
Endometrial thickness 11–26 mm	55/110 (50 (41–59))	5/14 (36 (11–61))	50/96 (52 (42–62))
Non-uniform heterogeneous echogenicity without cysts or irregular cysts	81/111 (73 (65–81))	8/15 (53 (28–79))	73/96 (76 (67–85))
Undefined midline	99/110 (90 (84–96))	11/14 (79 (52–92))	88/96 (92 (86–97))
Interrupted endometrial–myometrial junction	47/111 (42 (33–52))	9/15 (60 (35–85))	38/96 (40 (30–49))
Multiple vessels of focal or multifocal origin*	74/98 (76 (67–84))	9/11 (82 (52–95))	65/87 (75 (66–84))
Color score 3–4	72/111 (65 (56–74))	10/15 (67 (43–91))	62/96 (65 (55–74))

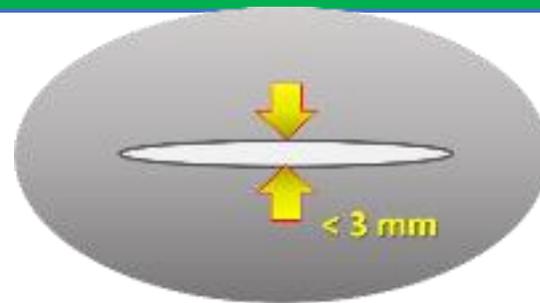
n/N (% (95/CI))

# FEATURE

%  
(95% CI)

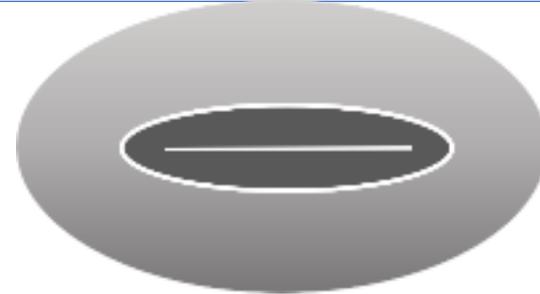


THIN ENDOMETRIUM  
< 3MM



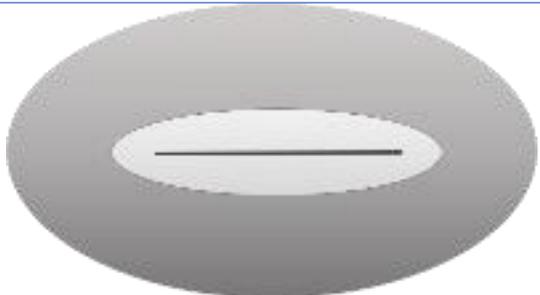
0%  
(0.0 – 5.5)

3-LAYER TYPE



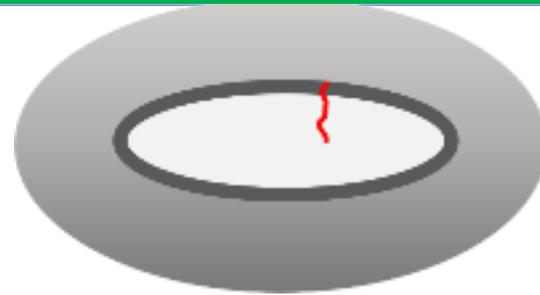
1.1%  
(0.4 – 3.1)

LINEAR MIDLINE



0.7%  
(0.2 – 1.3)

SINGLE VESSEL  
WITHOUT BRANCHING



1.5%  
(0.6 – 3.4)



# Fluid instillation sonography

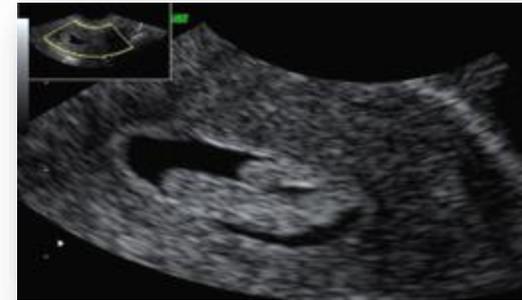
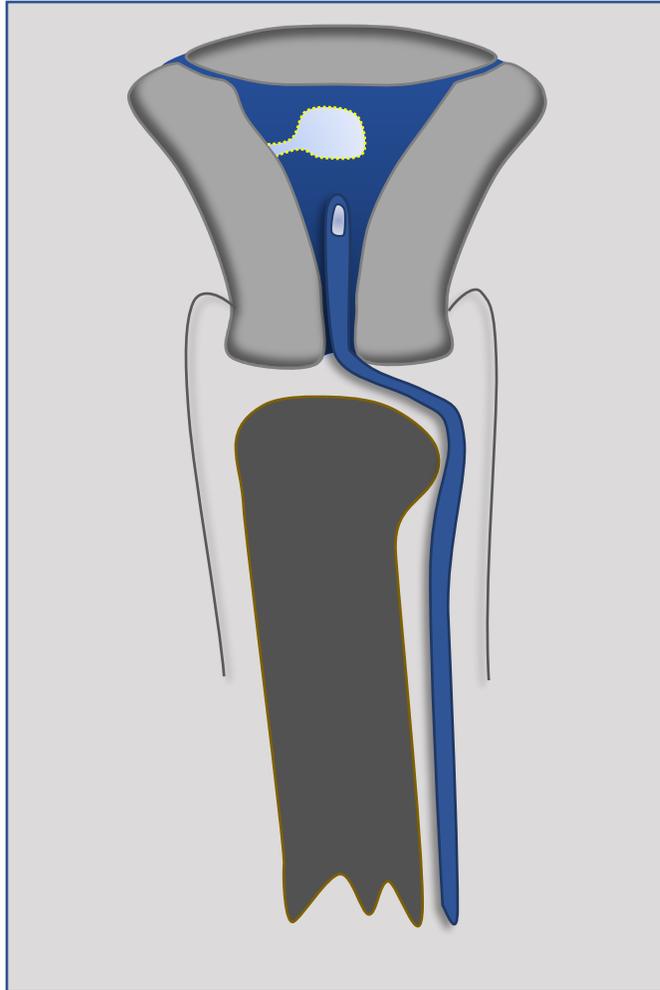
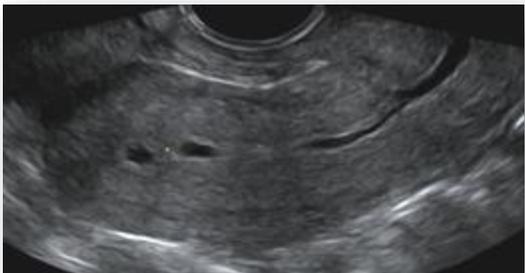
POLYP



FIBROID



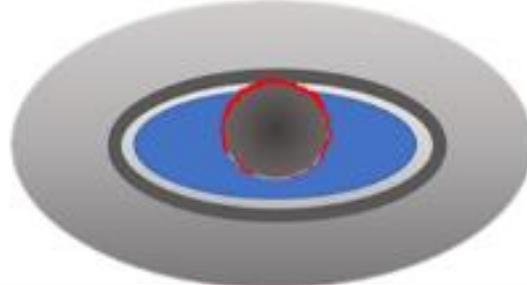
SYNECHIAE



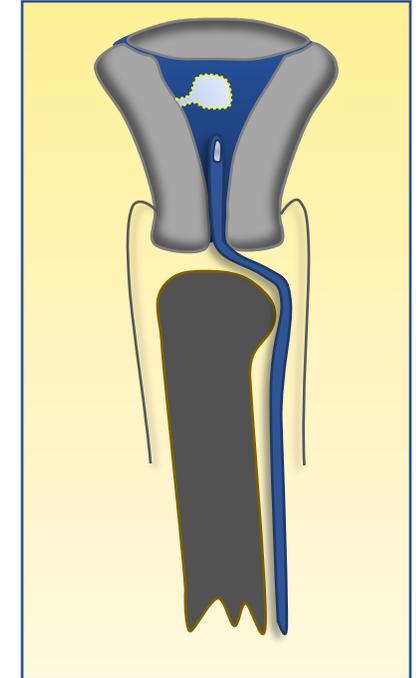
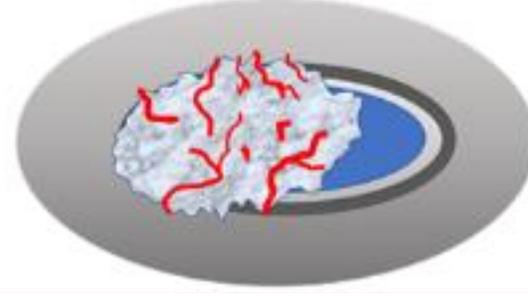
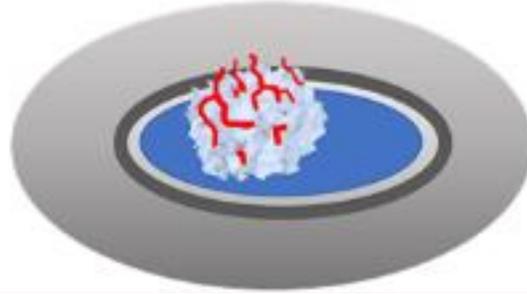
ENDOMETRIAL  
POLYP



LEIMYOMA



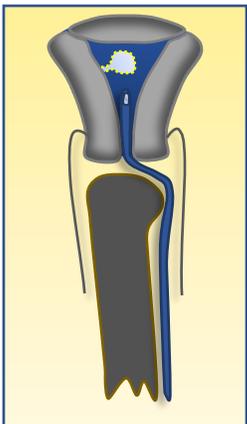
ENDOMETRIAL  
CANCER



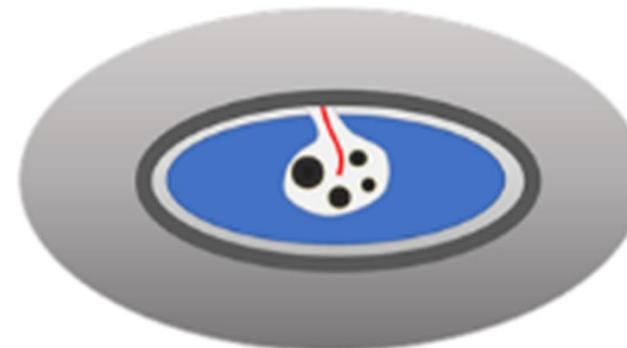
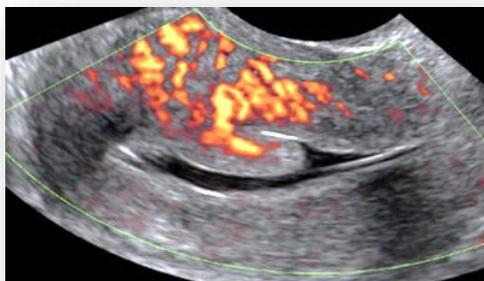
Van den Bosch T, et al. Ultrasound Obstet Gynecol 2021;57:164-72.



IETA 1



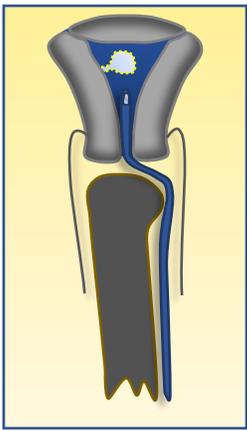
# Endometrial polyp



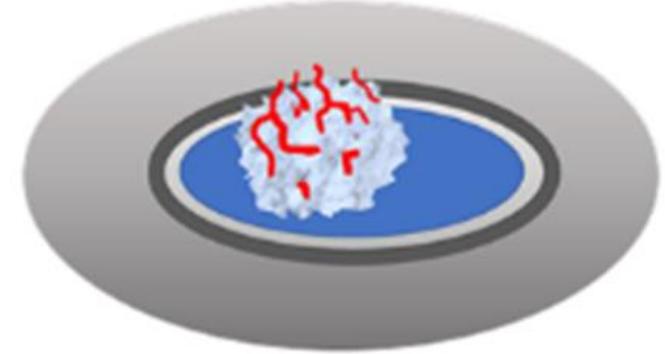
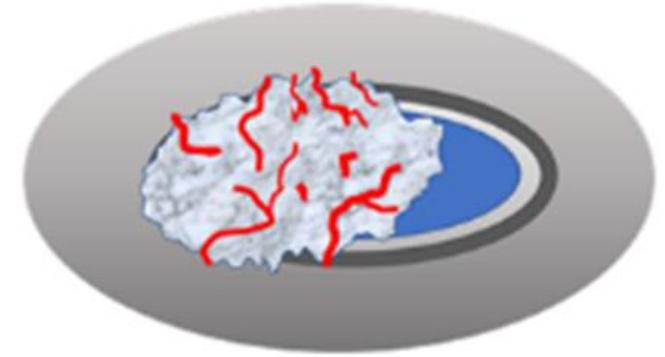
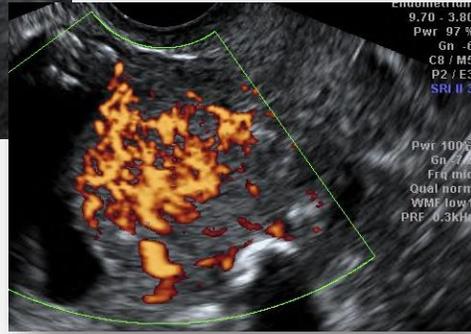
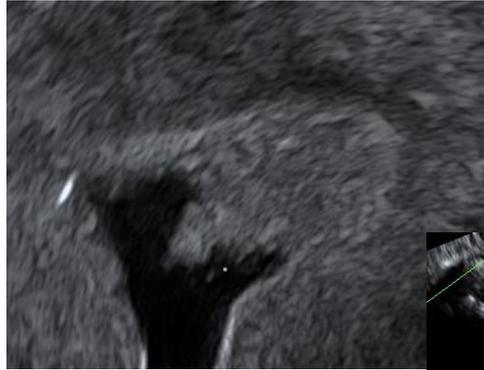
FLUID  
INSTILLATION

<i>Histological outcome</i>	<i>All patients</i>	<i>Premenopausal patients</i>	<i>Postmenopausal patients</i>
Endometrial polyp			
Localized	385/402 (96 (94–98))	176/181 (97 (95–100))	209/221 (95 (92–98))
Pedunculated	282/395 (71 (67–76))	128/180 (71 (64–78))	154/215 (72 (66–78))
Uniform hyperechogenic	176/403 (44 (39–49))	115/181 (64 (57–71))	61/222 (27 (22–33))
Non-uniform echogenicity with <b>regular cysts</b>	117/403 (29 (25–33))	15/181 (8 (4–12))	<b>102/222 (46 (39–53))</b>
Regular outline	381/403 (95 (92–97))	176/181 (97 (95–100))	205/222 (92 (89–96))
Color score 2–4	280/403 (69 (65–74))	137/181 (76 (69–82))	143/222 (64 (58–71))
Single vessel with or without branching*	219/280 (78 (73–83))	117/137 (85 (79–91))	102/143 (71 (64–79))

n/N (% (95/CI))

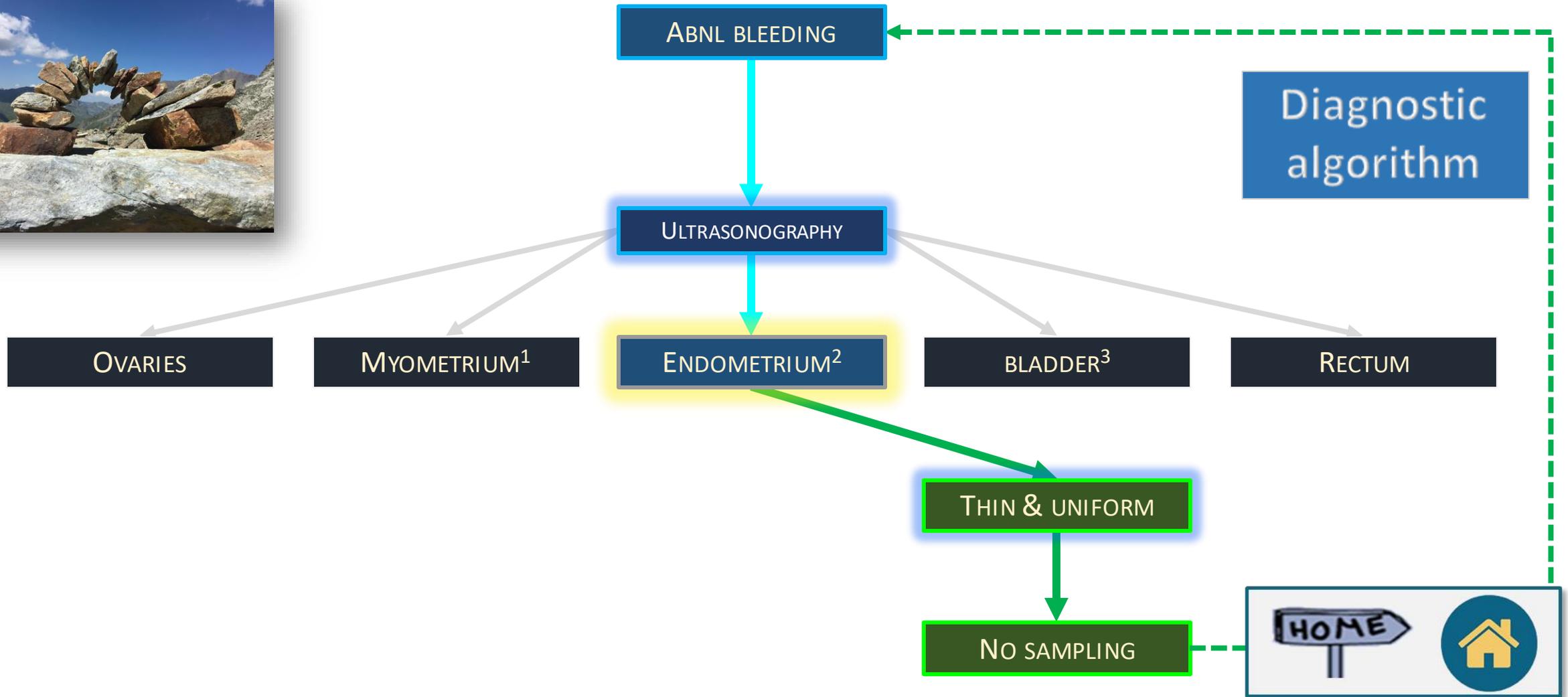


# Endometrial cancer



FLUID  
INSTILLATION

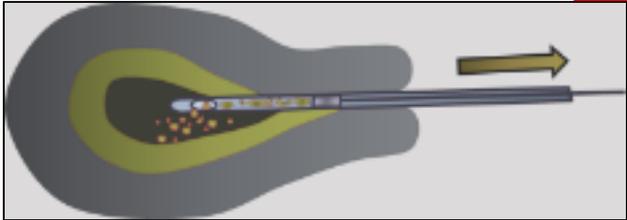
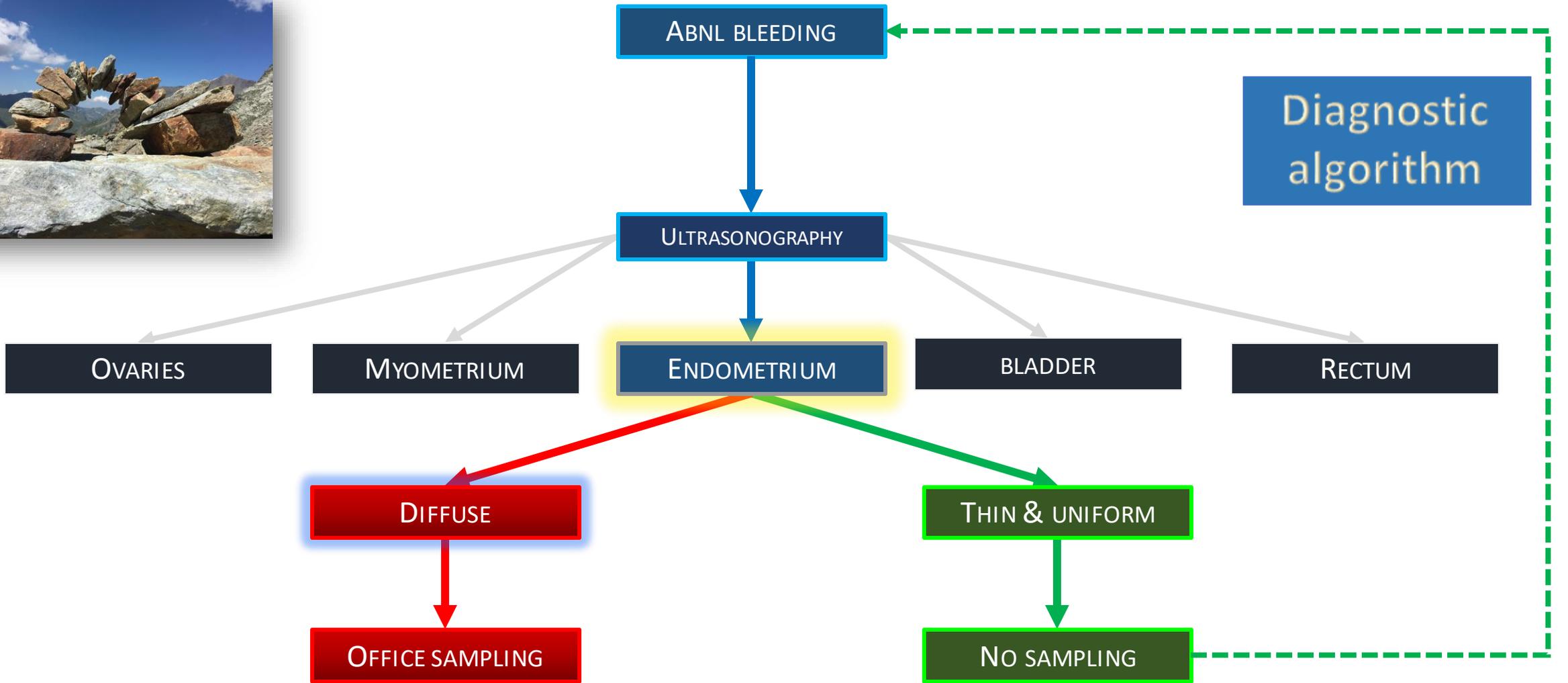
<i>Histological outcome</i>	<i>All patients</i>	<i>Premenopausal patients</i>	<i>Postmenopausal patients</i>
Endometrial cancer			
Extended	26/52 (50 (36–64))	1/4 (25 (4–67))	25/48 (52 (38–66))
Non-uniform heterogeneous echogenicity without cysts	19/52 (37 (23–50))	1/4 (25 (4–67))	18/48 (38 (24–51))
Uniform hyperechogenic	13/52 (25 (13–37))	1/4 (25 (5–70))	12/48 (25 (13–37))
Irregular outline	31/52 (60 (46–73))	2/4 (50 (1–99))	29/48 (60 (47–74))
Multiple vessels of focal or multifocal origin*	31/44 (70 (57–84))	2/3 (67 (21–94))	29/41 (71 (57–85))
Color score 3 or 4	33/52 (63 (50–77))	3/4 (75 (30–95))	30/48 (63 (49–76))



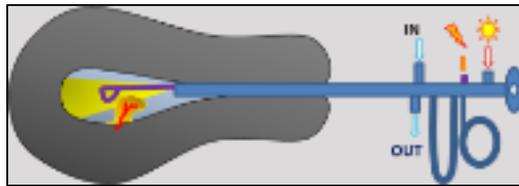
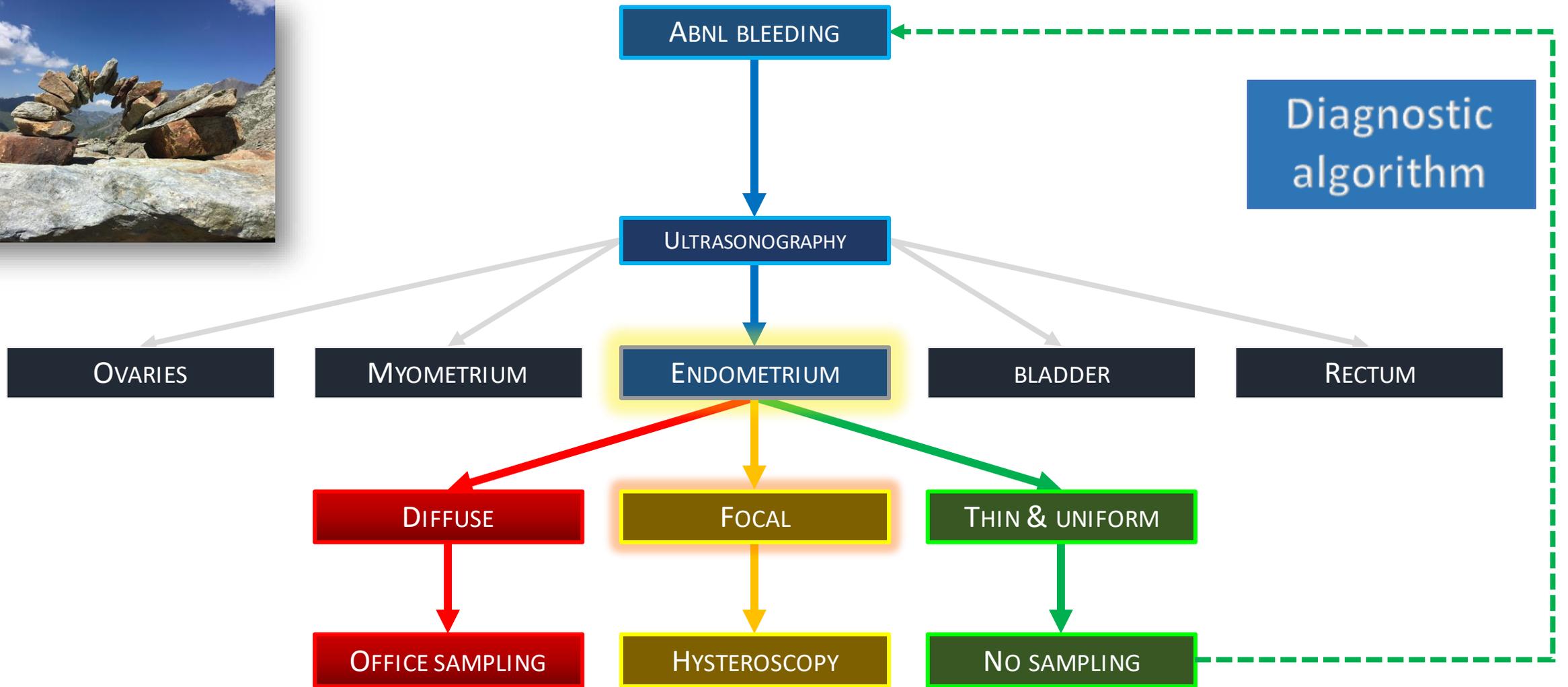
<sup>1</sup>Van den Bosch T, Dueholm M, et al. Ultrasound Obstet Gynecol 2015;46:284-98.

<sup>2</sup>Bignardi T, et al. Best Pract Res Clin Obstet Gynaecol 2009;23:595-607.

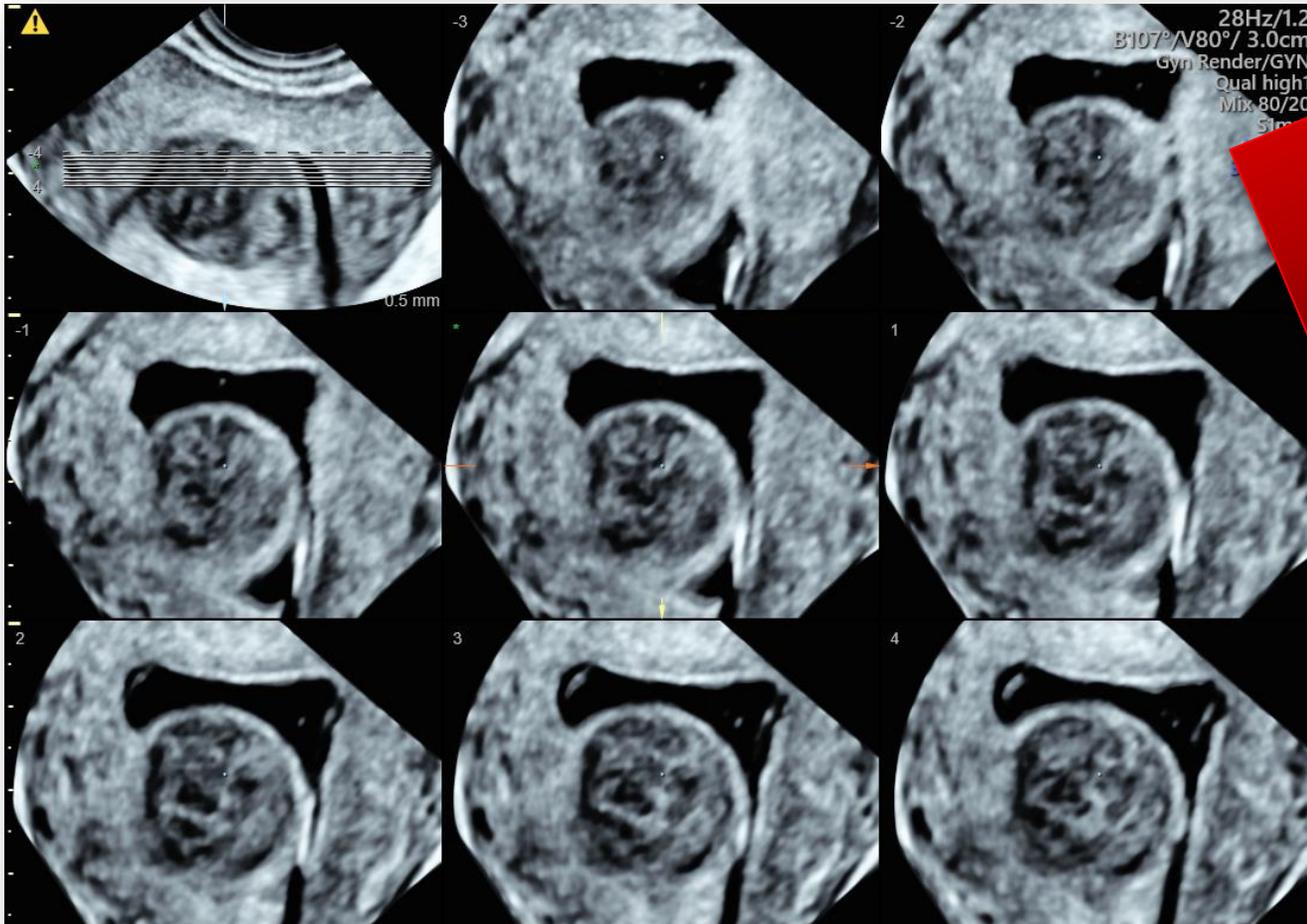
<sup>3</sup>Betsas G, et al. Ultrasound Obstet Gynecol 2008;32:959-60.



**+ tissue yield !**



# Preoperative planning



**Preop.  
info!**

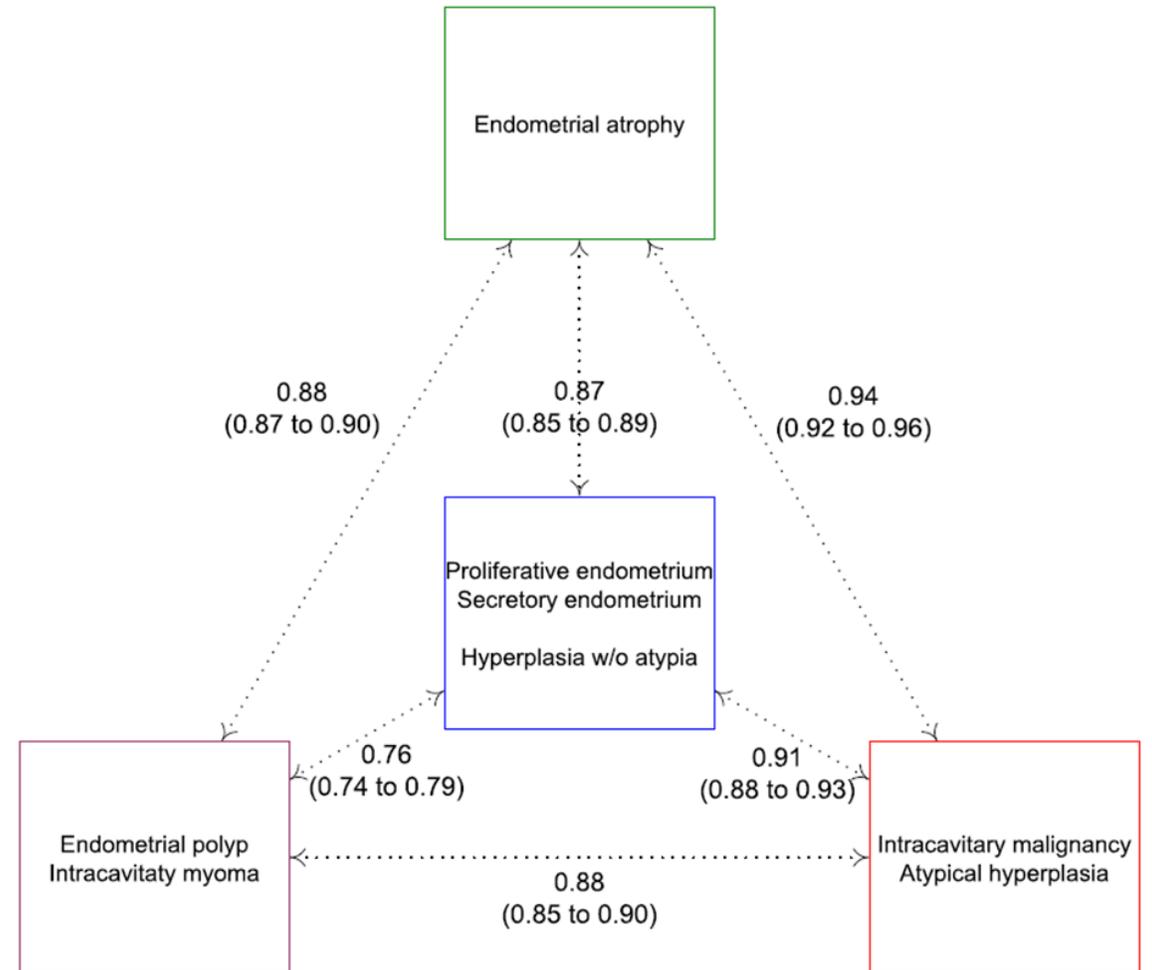
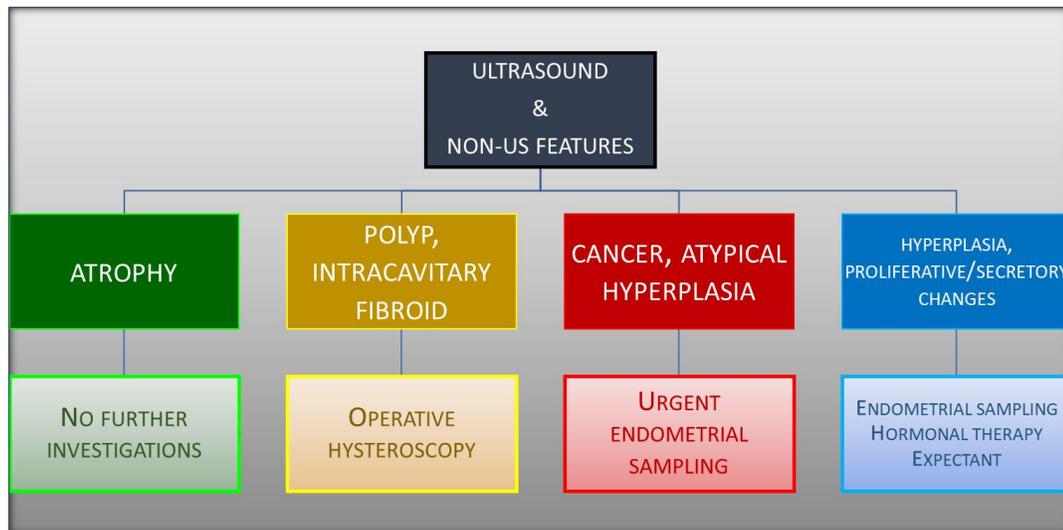
Who?  
How?  
Where?  
When?  
OR-time?

> Gynecol Obstet Invest. 2022 Feb 11. doi: 10.1159/000522524. Online ahead of print.

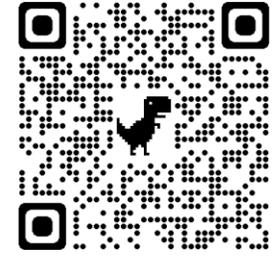
# The risk of endometrial malignancy and other endometrial pathology in women with abnormal uterine bleeding: an ultrasound-based model development study by the IETA group

Laure Wynants, Jan Yvan Jos Verbakel, Lil Valentin, Bavo De Cock, M Angela Pascual, Francesco P G Leone, Povilas Sladkevicius, Ruben Heremans, Juan Luis Alcázar, Angelo Votino, Robert Fruscio, Elisabeth Epstein, Tom Bourne, Ben Van Calster, Dirk Timmerman, Thierry Van den Bosch

PMID: 35152217 DOI: 10.1159/000522524

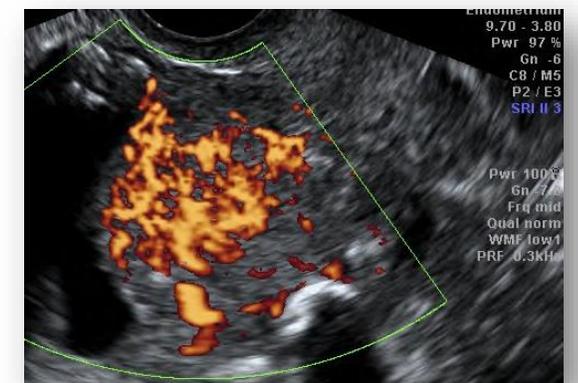
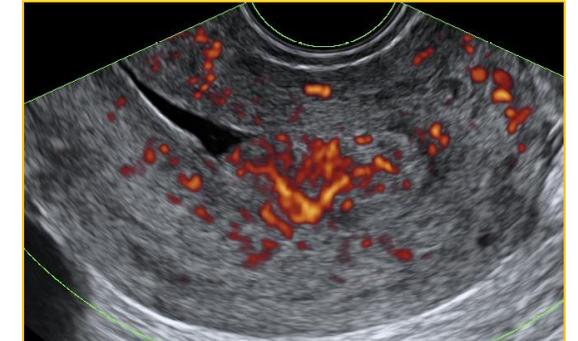
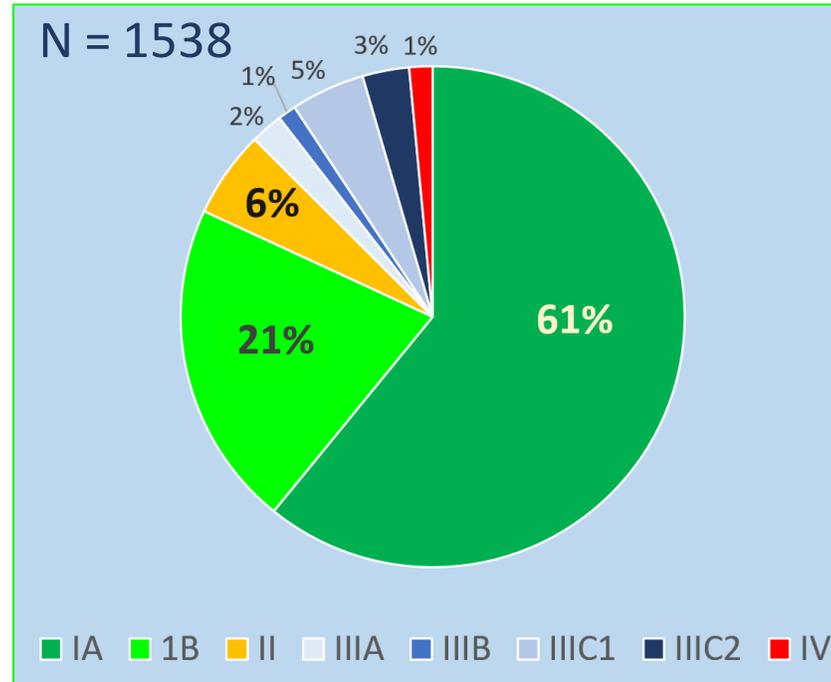
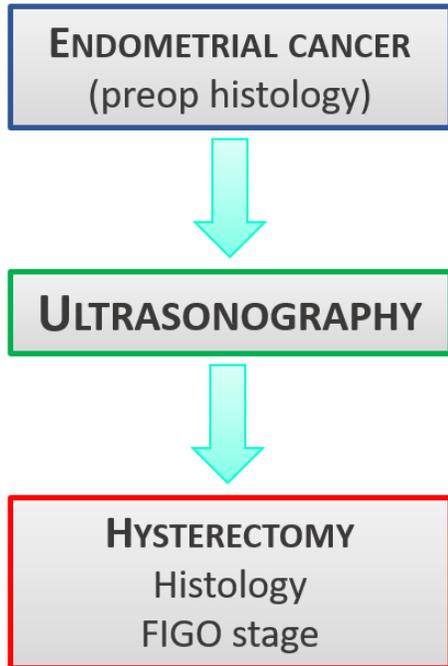


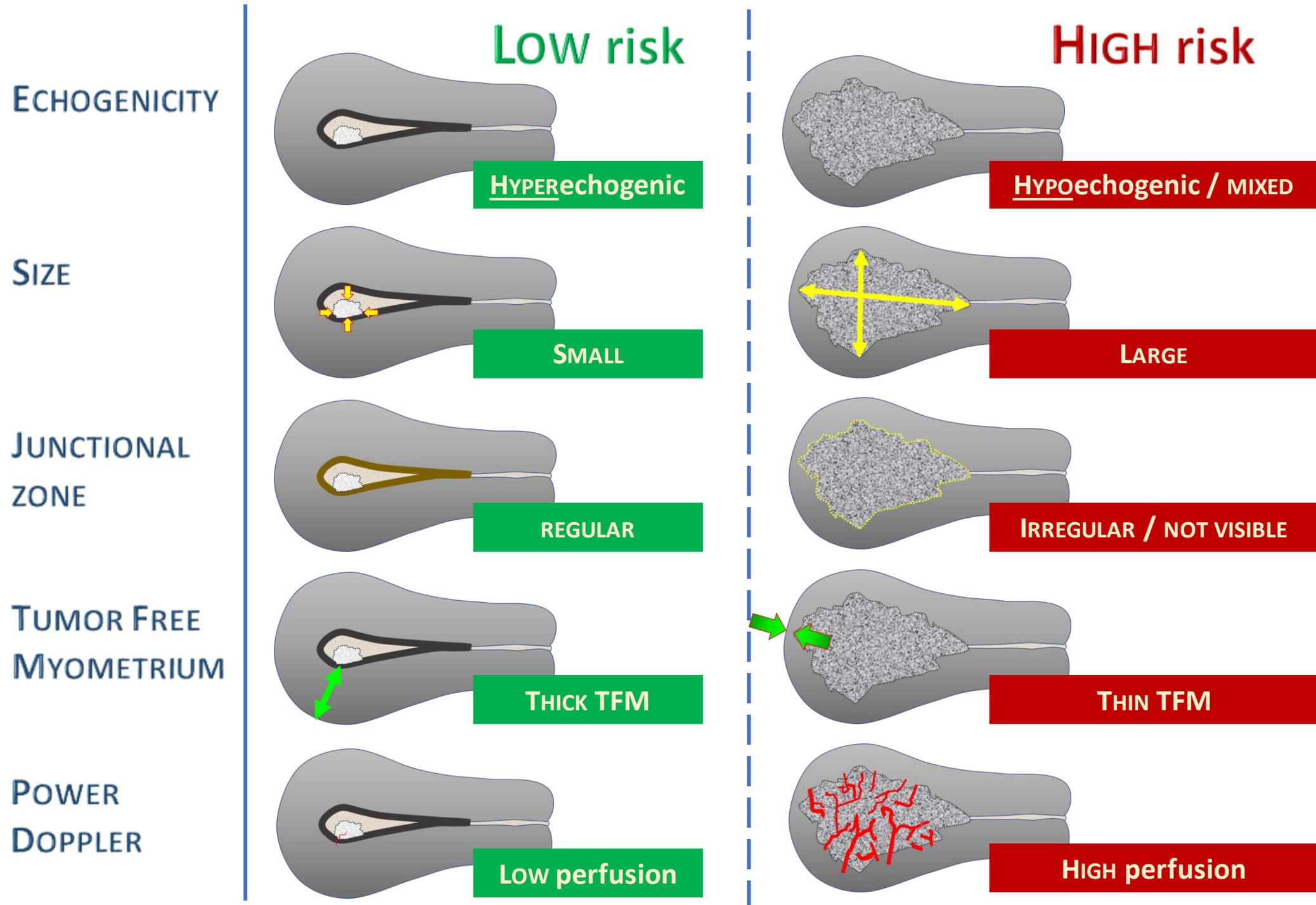
C-statistics (optimism-corrected) to distinguish between multiple outcome categories.



## Ultrasound characteristics of endometrial cancer as defined by International Endometrial Tumor Analysis (IETA) consensus nomenclature: prospective multicenter study

E. EPSTEIN<sup>1</sup>, D. FISCHEROVA<sup>2</sup>, L. VALENTIN<sup>3</sup>, A. C. TESTA<sup>4</sup>, D. FRANCHI<sup>5</sup>, P. SLADKEVICIUS<sup>3</sup>, F. FRÜHAUF<sup>2</sup>, P. G. LINDQVIST<sup>6</sup>, F. MASCILINI<sup>4</sup>, R. FRUSCIO<sup>7</sup>, L. A. HAAK<sup>8</sup>, G. OPOLSKIENE<sup>9</sup>, M. A. PASCUAL<sup>10</sup>, J. L. ALCAZAR<sup>11</sup>, V. CHIAPPA<sup>12</sup>, S. GUERRIERO<sup>13</sup>, J. W. CARLSON<sup>14</sup>, C. VAN HOLSBEKE<sup>15</sup>, F. P. GIUSEPPE LEONE<sup>16</sup>, B. DE MOOR<sup>17</sup>, T. BOURNE<sup>18,19</sup>, B. VAN CALSTER<sup>19</sup>, A. INSTALLE<sup>17</sup>, D. TIMMERMAN<sup>19,20</sup>, J. Y. VERBAKEL<sup>19,21</sup> and T. VAN DEN BOSCH<sup>20</sup>





*Ultrasound Obstet Gynecol* 2022; 60: 243–255

Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/uog.24910



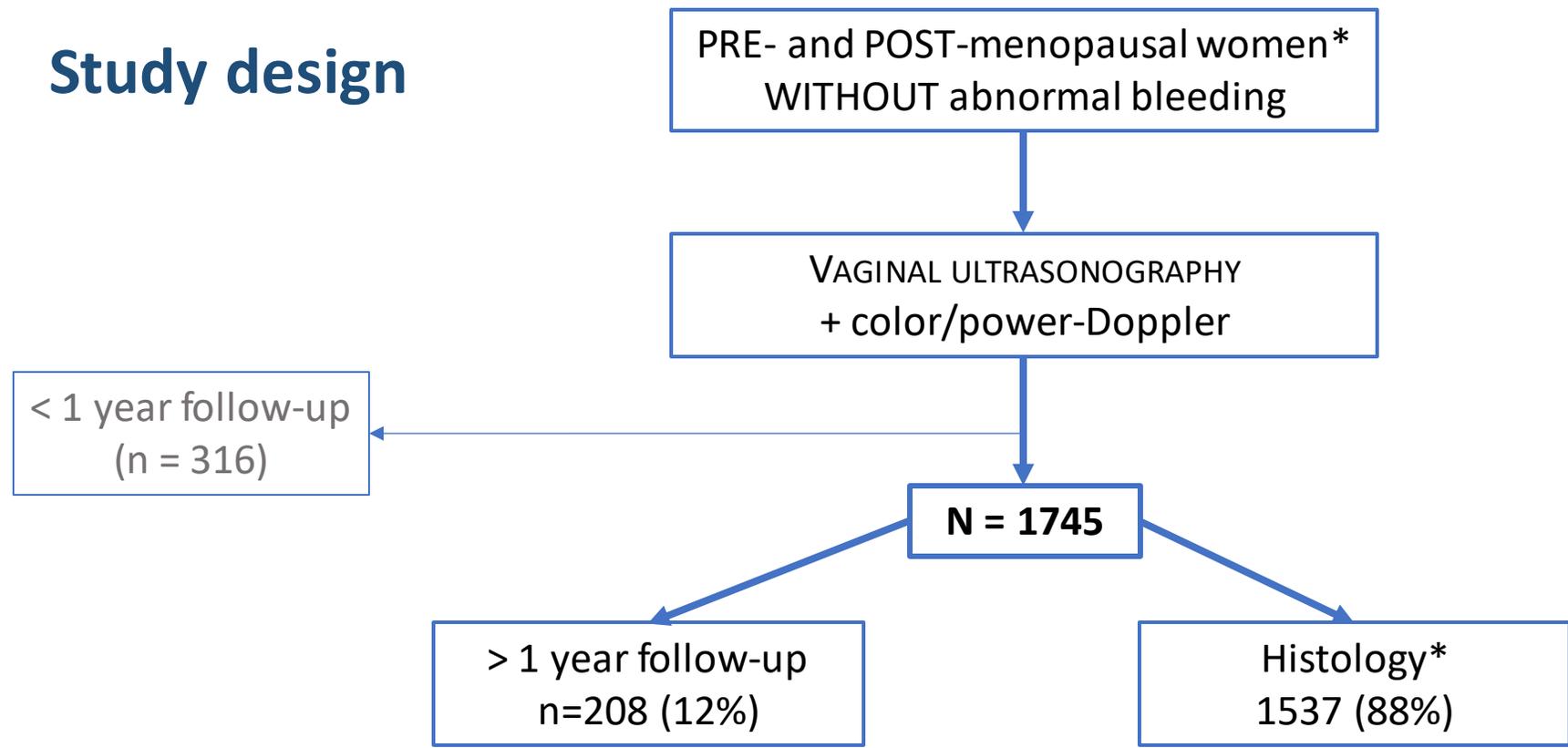
# Ultrasound features of endometrial pathology in women without abnormal uterine bleeding: results from the International Endometrial Tumor Analysis study (IETA3)

R. HEREMANS<sup>1,2#</sup>, T. VAN DEN BOSCH<sup>1,2#</sup>, L. VALENTIN<sup>3</sup>, L. WYNANTS<sup>2,4</sup>,  
M. A. PASCUAL<sup>5</sup>, R. FRUSCIO<sup>6</sup>, A. C. TESTA<sup>7</sup>, F. BUONOMO<sup>8</sup>, S. GUERRIERO<sup>9</sup>,  
E. EPSTEIN<sup>10</sup>, T. BOURNE<sup>2,11</sup>, D. TIMMERMAN<sup>1,2</sup> and F. P. G. LEONE<sup>12</sup>, for the IETA Consortium

N = 1745



# Study design

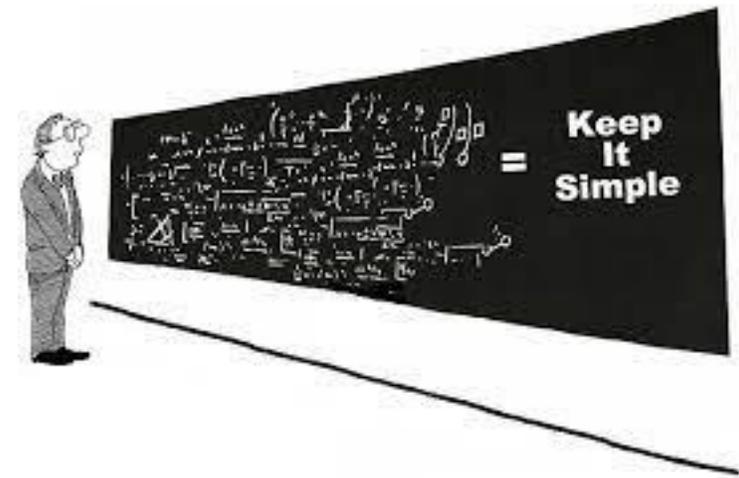


Suspected intracavitary lesion (n=1129)  
Urogynecology (n=317)  
Opportunistic screening (n=161)  
Other indication (n=138)

\*outpatient endometrial sampling (n=77)  
dilatation and curettage (n=23)  
hysteroscopic resection (n=1075)  
hysterectomy (n=368)

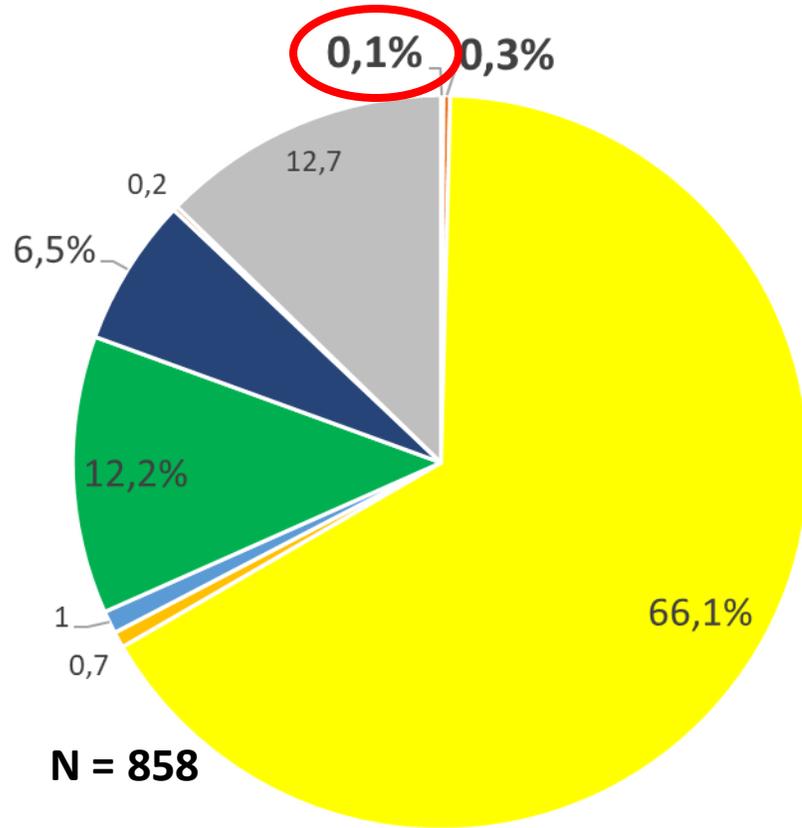


8 Tables ...  
10 Suppl. Tables ...



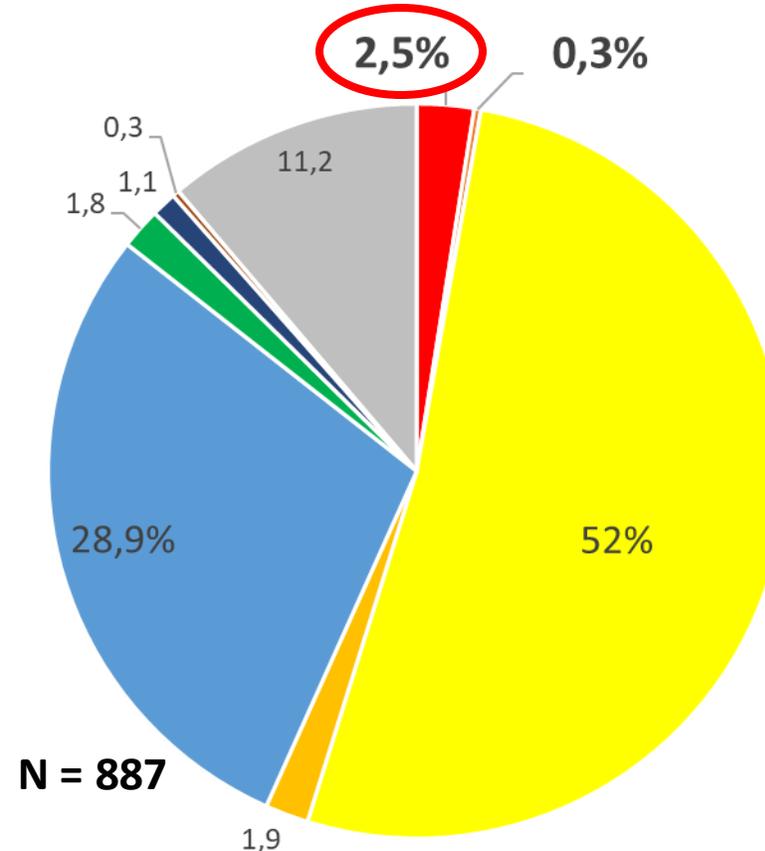
# ASYMPTOMATIC WOMEN

## HISTOLOGY



N = 858

PREMENOPAUSE



N = 887

POSTMENOPAUSE

- cancer
- EIN
- polyp
- hyperplasia
- atrophy
- prolif/secr
- myoma
- insuff
- clinical fu



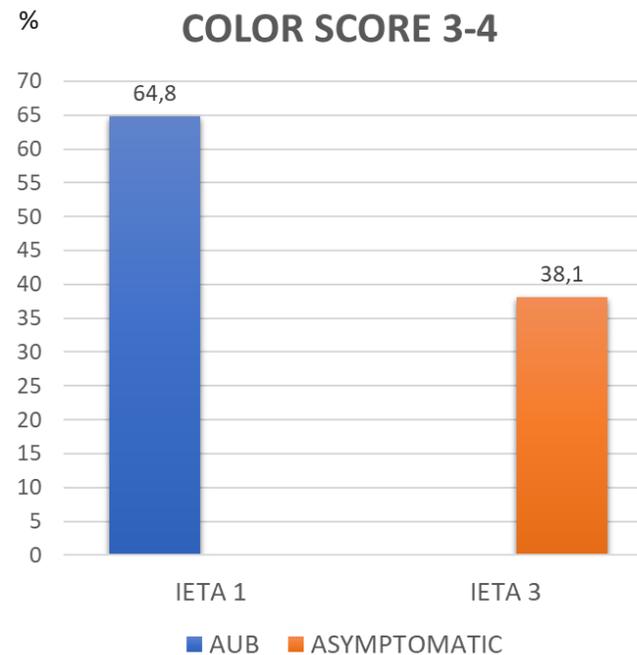
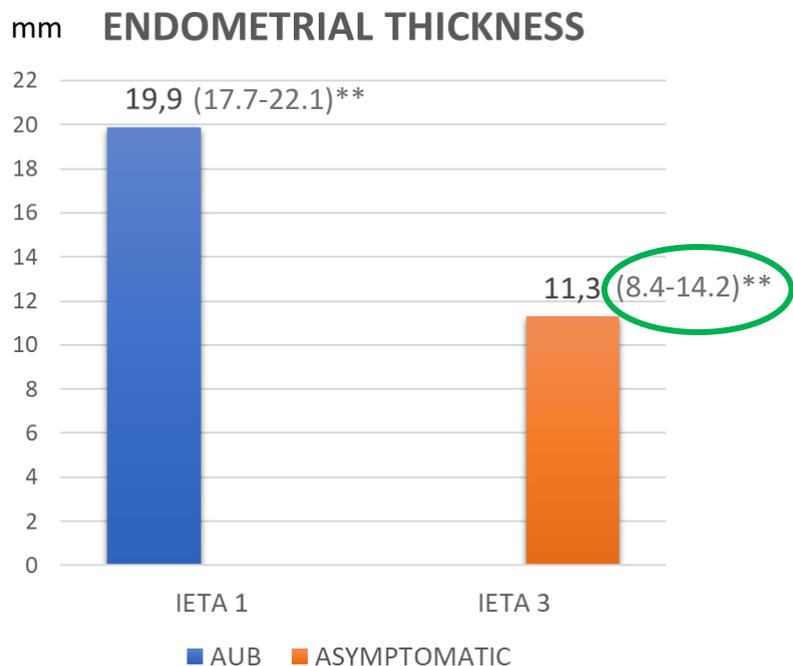
CAVEAT selection bias

# WITH *versus* WITHOUT Abnormal Uterine Bleeding

## IETA-1 *versus* IETA-3

EC  
IETA-1 n=121\*  
IETA-3 n=23

### ENDOMETRIAL **CANCER**



EC: endometrial cancer  
 AUB: abnormal uterine bleeding  
 ASYMPTOMATIC: i.e. without AUB  
 \*unenhanced US features of 137 cancer cases  
 \*\* 95% CI

**ASYMPTOMATIC CANCERS** → **THINNER ET**  
 → **LESS COLOR**

**Table 8** Comparison of sonographic features of endometrial polyps in women without abnormal uterine bleeding (AUB) analyzed in the present study (IETA3) and women with AUB included in the IETA1 cohort<sup>14</sup>

Variable	Premenopausal			Postmenopausal		
	Without AUB (n = 567)	With AUB <sup>14</sup> (n = 428)*	Difference (95% CI)	Without AUB (n = 461)	With AUB <sup>14</sup> (n = 290)*	Difference (95% CI)
Endometrial thickness (mm)	10.5 (10.2–10.8)	11.5 (11.0–11.9)	–1.0 (–1.6 to –0.3)	9.0 (8.6–9.3)	10.7 (10.0–11.4)	–1.7 (–2.5 to –0.9)
Endometrium not visible	8 (1.4)	8 (1.9)	–0.5 (–2.3 to +1.4)	20 (4.3)	6 (2.1)	+2.2 (–0.5 to +5.0)
Uniform echogenicity	173 (30.5)	261 (61)	–30.9 (–36.7 to –24.9)	133 (26.7)	83 (28.6)	–1.9 (–8.8 to +4.9)
Uniform, three-layer	35 (6.2)	127 (29.7)	–23.5 (–28.5 to –18.5)	0 (0)	6 (2.1)	–2.1 (–4.0 to –0.1)
Uniform, hyperechogenic	114 (20.1)	21 (4.9)	–8.4 (–14.0 to –2.8)	112 (24.3)	66 (22.8)	+1.5 (–5.0 to +8.0)
Uniform, isoechogenic	18 (3.2)	11 (2.6)	+0.6 (–1.7 to +2.9)	9 (1.9)	9 (3.1)	–1.1 (–3.8 to +1.5)
Uniform, hypoechogenic	6 (1.1)	1 (0.2)	+0.9 (–0.2 to +2.0)	2 (0.4)	2 (0.7)	–0.3 (–1.6 to +1.1)
Non-uniform echogenicity	386 (68.1)	159 (37.1)	+33.0 (–24.7 to +37.1)	318 (69.0)	201 (69.3)	–0.3 (–7.4 to +6.7)
Non-uniform, homogeneous with cysts	20 (3.5)	29 (6.8)	–3.3 (–6.3 to –0.2)	198 (42.0)	97 (33.4)	+9.6 (+2.2 to +16.8)
Non-uniform, heterogeneous with cysts	11 (1.9)	12 (2.8)	–0.9 (–3.0 to +1.3)	49 (10.6)	40 (13.8)	–3.2 (–8.3 to +2.0)
Non-uniform, heterogeneous without cysts	355 (62.6)	118 (27.6)	+35.0 (+29.0 to +41.1)	271 (58.4)	64 (22.1)	–6.7 (–12.7 to –0.6)
Endometrial cysts	31 (5.5)	41 (9.6)	–4.1 (–7.1 to –0.5)	247 (53.6)	137 (47.2)	+6.4 (–1.3 to +13.9)
Color score 1–2	443 (78.1)	225 (52.8)	+9.2 (+3.5 to +15.0)	397 (86.1)	221 (76.2)	+8.4 (+2.2 to +14.6)
Color score 3–4	116 (20.5)	125 (29.2)	–8.7 (–14.4 to –3.1)	51 (11.1)	63 (21.7)	–10.6 (–16.5 to –4.8)
Single dominant vessel with/without branching	468 (82.5)	246 (57.5)	+22.0 (–19.1 to +50.9)	198 (43.0)	99 (34.1)	+8.9 (+1.4 to +16.2)
Multiple, multifocal vessels	24 (4.2)	31 (7.2)	–3.0 (–6.2 to +0.2)	16 (3.5)	14 (4.8)	–1.3 (–4.6 to +1.9)
Bright edge	451 (79.5)	232 (54.2)	+25.3 (+19.4 to +31.3)	237 (51.4)	106 (36.6)	+14.8 (+7.4 to +22.3)
Regular endometrial–myometrial junction	537 (94.7)	348 (81.3)	+13.4 (+9.1 to +17.7)	365 (79.2)	194 (66.9)	+12.3 (+5.4 to +19.1)

**1746 POLYPS**  
**995 PREMENOPAUSAL**  
**751 POSTMENOPAUSAL**  
**1028 WITHOUT AUB**  
**718 WITH AUB**

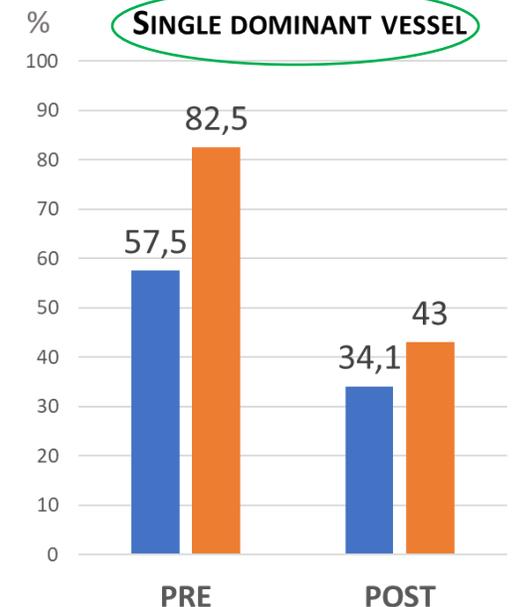
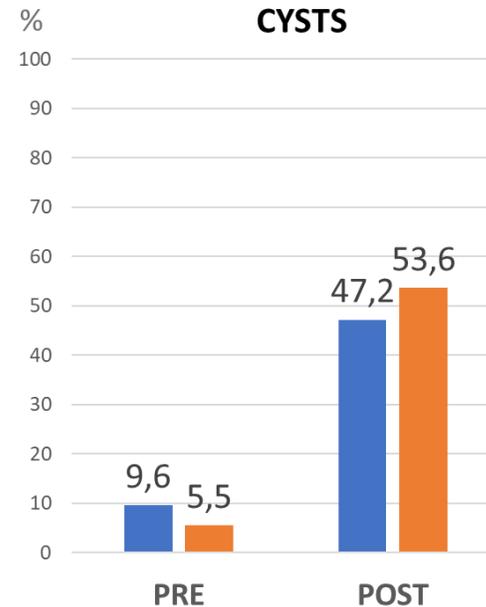
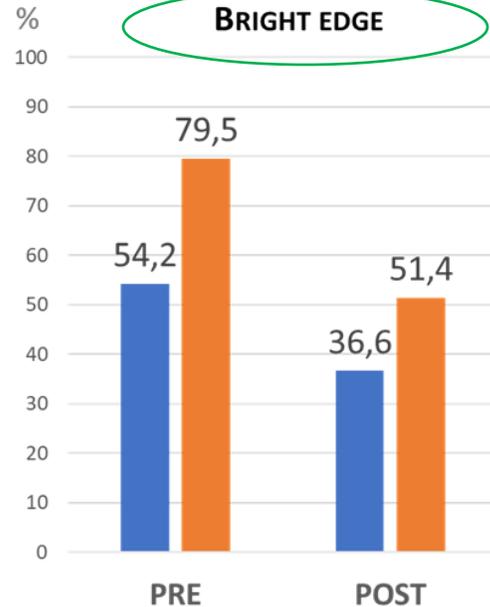
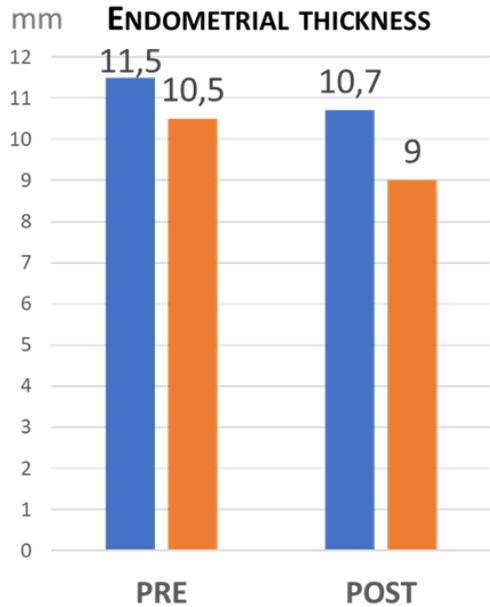
# WITH *versus* WITHOUT Abnormal Uterine Bleeding

## IETA-1 *versus* IETA-3



995 PREmenopausal  
751 POSTmenopausal  
1028 WITHOUT AUB  
718 WITH AUB

### ENDOMETRIAL POLYPS

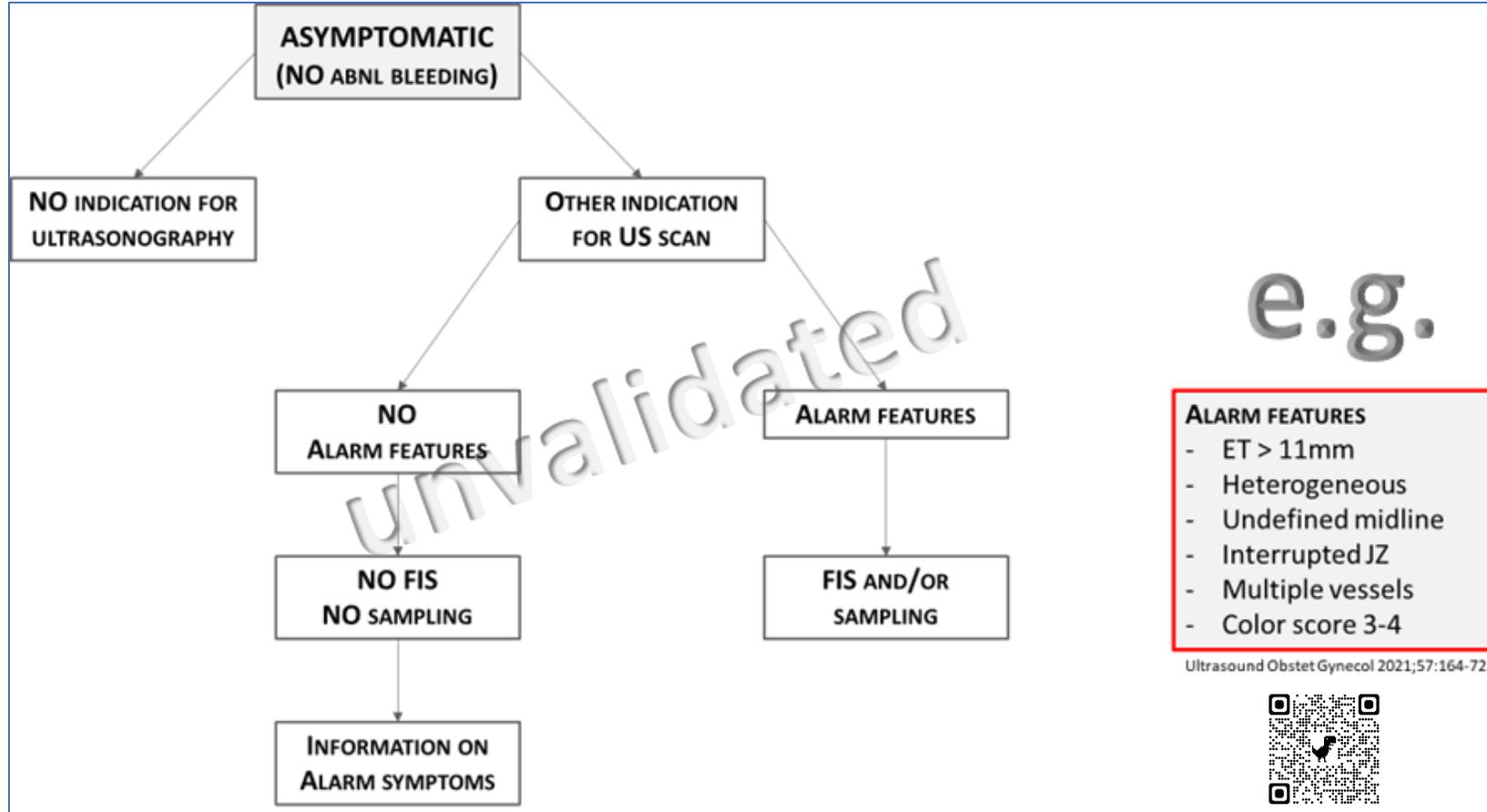


 WITH abnormal uterine bleeding  
 WITHOUT abnormal uterine bleeding

CAVEAT selection bias

# Good clinical judgement

*on a “case-by-case basis” \**



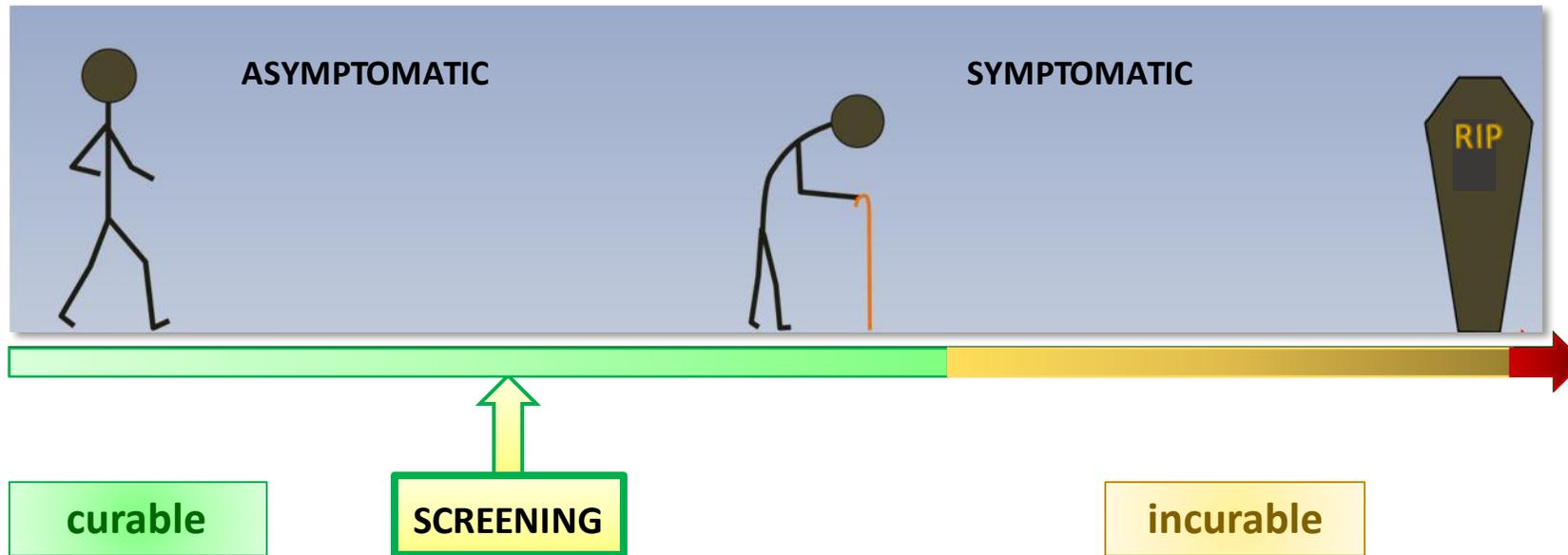
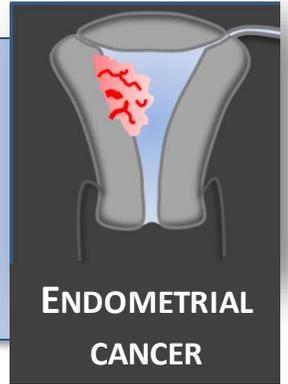
FIS: fluid instillation sonography

\*Goldstein S. Obstet Gynecol 2010;116:168-76.

*“Problems are not the problem;  
coping is the problem.” – Virginia Satir*



# Screening the asymptomatic *versus* early diagnosis in symptomatic stage



Amant et al. Lancet 2005;366:491-505.

Bokhman JV. Gynecol Oncol 1983;15:10-7.

Kurman RM, et al. Cancer 1985;56:403-12.

Lacey JV Jr, et al. J Clin Oncol 2010;28:788-92

Kitchener et al. Int J Gynecol Cancer 2009;19:134-40



**LACK OF SURVIVAL ADVANTAGE**

Gerber B, et al. Eur J Cancer 2001;37:64-71.

Gemer O, et al. Am J Obstet Gynecol 2018;219:181.e1-181.e6.

"It's a small procedure,  
it's not a big deal" ...



" You MAY feel a teeny-tiny pin-prick . . . "

Complications?  
(highly) unlikely ... BUT...

Ultrasound Obstet Gynecol 2016; 48: 390–396  
Published online 8 August 2016 in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/uog.15841



### Transvaginal ultrasound examination of the endometrium in postmenopausal women without vaginal bleeding

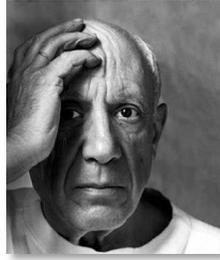
L. JOKUBKIENE, P. SLADKEVICIUS and L. VALENTIN

Included	n = 510		
Hysteroscopy	n=29	→	2/29 (7%) PERFORATION WITH BOWEL DAMAGE



# CONCLUSION

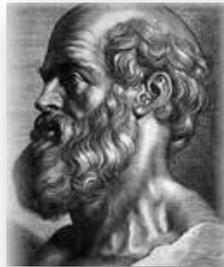
Ido not seek, I find.  
~ Pablo Picasso



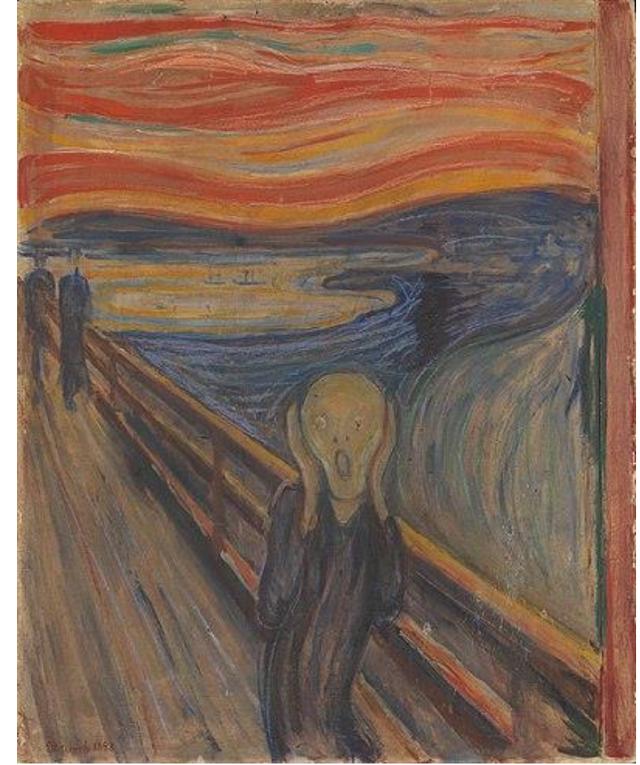
*INCIDENTAL FINDINGS*

Avoid  
overtreatment!

ὠφελῆειν, ἢ μὴ βλάπτειν  
To help, but at least do no harm



HIPPOCRATES



Edvard MUNCH

*BEWARE OF IATROGENIC  
PATHOLOGY!*

**THANK YOU!**