

3D vaginal ultralyd

- 3D ultrasound is based on 2D ultrasound.

Postmenopausale

Ca. 10 % postmenopausale henvist med blødningsforstyrrelser har endometriecancer

Måling af endometrietykkelsen

- Postmenopausale
- < 4mm- ingen cancer

- < 4mm sandsynlighed cancer under 1%
- Observervariation i gynækolog hænder lille: SD 1-2mm

Postmenopausale

Transvaginal ultralyd måling endometrietykkelse

< 4mm	4-8(10)mm	> 8 (10) mm
Igen ved blødning	Endometria sug/pipelle	Hysteroskopi M fj af fokal forandring
Polyp/hyperplasi 2% Cancer <1%	Polyp/hyperplasi 31% Cancer 5%	Polyp/hyperplasi 48% Cancer 34%

Endometrial outline at sonohysterography

'smooth' (a), 'endometrial folds' (b), 'polypoid' (c) and 'irregular' (d).

Item	Score
1 BMI ≥ 30	1
2 Endometrial thickness ≥ 10	1
Endometrial thickness ≥ 15	1
3 Flow, but Not a single/double vessel	1
Many vessels	1
Large vessels	1
Densely packed or color splash	1
4 Abrupt endomyometrial junction	1
5 Irregular endometrial outline GIS	1
Total Score Σ	5

65 year old, BMI=35, endometrium =11,

Score system	Score
BMI ≥ 30	1
Endometrial thickness ≥ 10	1
Endometrial thickness ≥ 15	1
Flow, but Not a single/double vessel	1
Multiple vessels	1
Large vessels	1
Densely packed or color splash	1
Interrupted endomyometrial junction	1
Total Score Σ	7

Case: 82 year, endometrium=16 mm, BMI=28

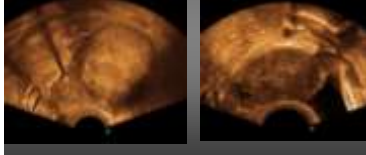
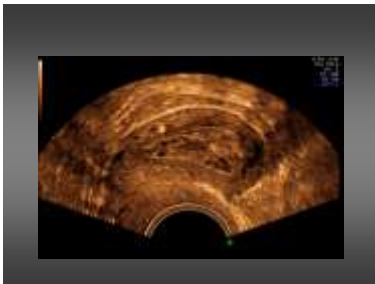
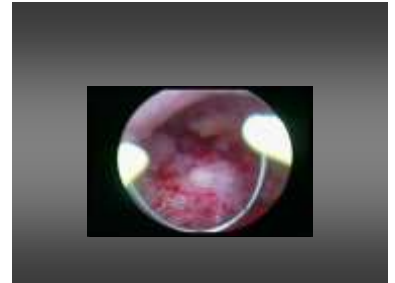
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Interrupted endomyometrial junction	1
Total Score Σ	4

Endometrie cancer

- **Hysterektomi + BSO**
St I + gr 1-2 + under 50% nedvækst
- **Hysterektomi + BSO + glandel fjernelse**
St II el gr 3 el over 50% nedvækst
- **Radikal hysterektomi st II**



Endometrie cancer stadiebestemmelse

Endometrie cancer Sjælden sygdom hos præmenopausale

- **Risiko faktorer cancer/hyperplasi**
- **alder over 45 år, svær overvægt,**
- **massiv familær disposition til cancer,**
- **PCO (polycystisk ovarie syndrom),**



Endometrietykkelse/bedømmelse præmenopausale

- **Cyklus afhængig Endometrie cancer el hyperplasi udelukkes v endometriesugeprøve**



Minimal invasiv behandling af myomer (muskelknuder)

- Hysteroskopisk kirurgi
- Laparoskopisk fjernelse
- Elektrokoagulation af myomer
- Selektiv koagulation kar
- Embolisering af kar
- HIFU



Submukøse myomer- Før hysteroskopisk kirurgi

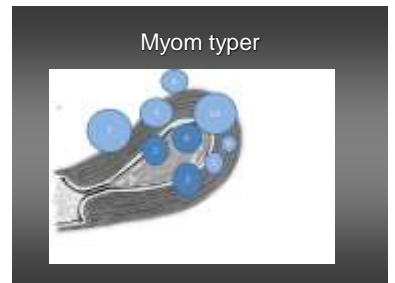


OR



- **Mål og billede: myoma antal, diameter og type (0-I, II), Fri myometribræmme to serosa.**

? cases → MRI

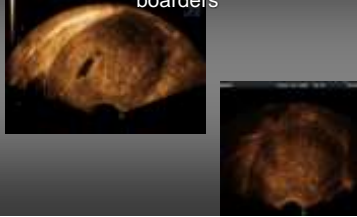



Hvad er adenomyose

- Nedvækst af livmoder slimhinden i livmoder væggen
- Forbundet med underlivssmerter,
- Kraftig blødning
- Dårligere behandlingsresultat ved hysteroskopisk kirurgi
- Vigtig differentialdiagnose overfor myom v myomektomi
- Hyppig årsag til hysterektomi



TVS adenomyosis: Uterine mass with indistinct borders




TVS: Echo texture of adenomyosis

Ectopic endometrium

- Cysts, anechogen spots
- Indistinct endo-myometrial junction
- increased echogenicity, small hyperechoic spots (seldom)

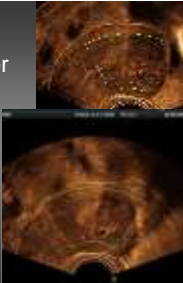
Muskular hypertrophia

- Linear striations
- Diffuse heterogeneous, Irregular, Scattered, Mottled texture



Adenomyosis: TVS +/- Doppler

- Myomas versus adenomyosis:
- Doppler increased:
- Sensitivity: 79% to 88%
- Specificity: 80% to 93%



Chiang 99:16268



MRI characteristics for adenomyosis

- Irregular high intensity spots



MRI: JZ- zone in adenomyosis

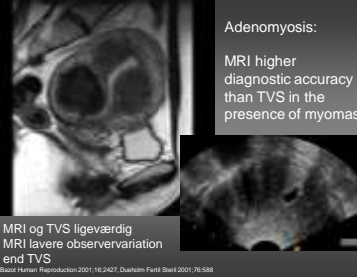
- Thickness >12mm
- And/ or Irregular



Ascher, Reinhold, Fogashi, Mark, Bazzot

Adenomyosis: MRI higher diagnostic accuracy than TVS in the presence of myomas

MRI og TVS ligeværdig
MRI lavere observvariation end TVS



Bassal Herrel. Reproduktion 2001; 16: 3407. Dualem Fertil Steril 2001; 76: 588

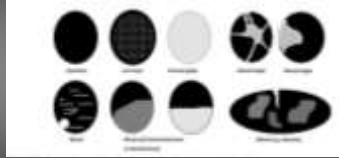
Ovariecyster

Beskrivelse

Cystevæg



Cysteindhold



Hydrosalpinx



- Uniloculær cyste: uden septa, uden solide partier, uden excresenser



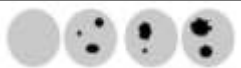
Multiloculær cyste:



Multiloculær solid-cyste:



Solid tumor mere end 80% solid komponent



Ovarietumorer

- Funktionelle
- Endometriose cyster
- Benigne neoplasmer:
 - Serøse /mucinøse cystadenomer
 - Teratomer(dermoid)
 - Fibromer
 - Granulosa/theca celle tumorer
- Borderline serøs/mucinøs
- Maligne serøs/ mucinøs
- Metastaser: mamma, ventrikel, thyreodea

Ovariers ultralydskriterier for Suspekte cyster/ tumorer

- Antal kamre (Septa >3,tykkelse) en-to-flere
- Ekkotæt indhold.
- Ekkotætte områder.
- Modsidige ovarium
- Fri væske.

Suspekte ovarietumorer

- Ikke suspekt:
 - 1-2 kamre
 - Ingen solide partier
 - Ingen excresenser
 - Normale forhold modsidige ovarium
- Suspekt
 - > 2 kamre
 - Solide partier
 - Ekskresenser

Ikke suspecte cyster/Tumorer:

- CA 125 alle
- Præmenopausale:
 - Størrelse >7-8 cm OP
 - 4-7 cm kontrol.
 - < 4 cm afsluttes.
- Postmenopausale:
 - 3 - 5 cm: UL + CA 125-måling efter 3 måneder. Såfremt cysten er vokset, og/eller stigning i CA 125: operation.
 - > 5 cm : oftest operation

RMI		
menopausal status (M)	Premenopausal	0
	Postmenopausal	3
		M score
Ultrasound score (U)	Unilokular	0
	> Bilokular	1
	Solide areas	1
	Bilateral	1
	Excrescences	1
	Ascites	1
	Extra-ovarian disease	1
Σ U score		Σ U score
Ca-125	Value	Ca-125
RMI	RMI = M-Score x U-Score x CA-125	

Mønster genkendelse

- Corpus luteum
 - Endometriom
 - Fibrom
 - Dermoid
 - Hydrosalpinx
- Kan rubiceres som ikke suspekter uanset størrelse og uden Ca-125 af erfarne klinikere