

Radiology and Ultrasound in Gynaecology

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Introduction

◆ Special investigations

- Expensive
- Time consuming
- Do only when indicated
- Beware of “routine special investigations”
- Difficult to interpret abnormal findings done without clinical indications

Radiology

- ◆ Diagnostic
- ◆ Intervention

Radiology

◆ Gynaecology

- Diagnostic work-up:
- General gyne:
 - ◆ Abdominal pain
 - ◆ Abdominal mass
 - ◆ Amenorrhoea (sella tursica)
- Gynaecology pre-op
 - ◆ CXR
 - ◆ As indicated

Radiology

◆ Gynae

- Oncology staging
 - ◆ CXR
 - ◆ IVP
 - ◆ CT Scan
 - ◆ Cystogram (fistula)
 - ◆ As indicated

Radiology

◆ Gynae

- Infertility
 - ◆ Hysterosalpingography (HSG)
- Routine examinations
 - ◆ Mammogram
- Screening
 - ◆ BMD



Figure 1

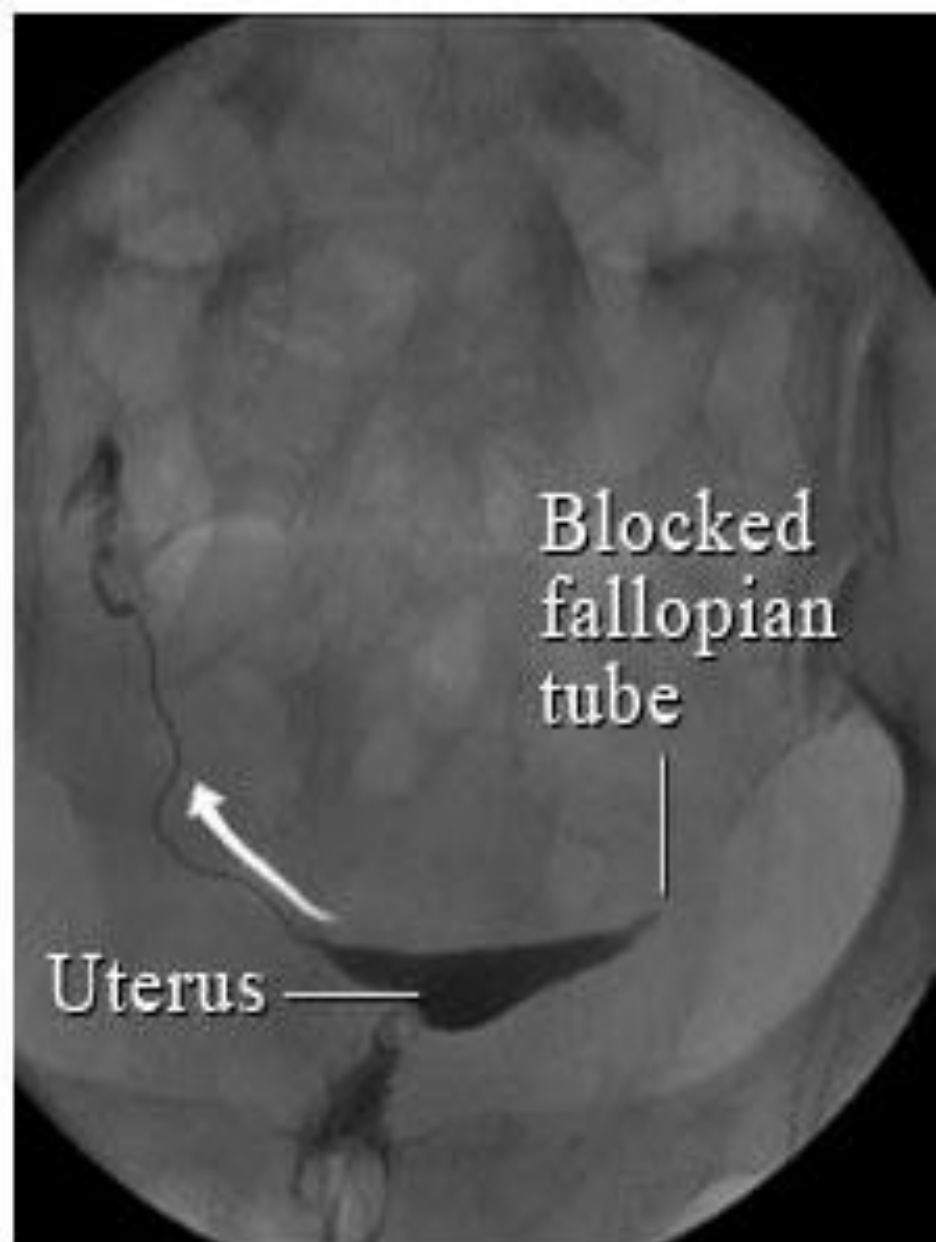
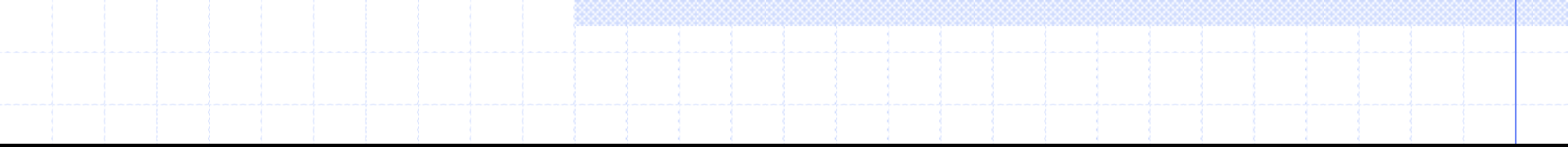


Figure 2









Radiology

◆ Pregnancy: safety of the fetus

Radiological study	Radiation dose
CXR	2.6 millirads
IVP	500-800 millirads
XR lumbar spine	200 millirads
Barium enema	2500-4500 millirads
CT scan upper abd	<3000 millirads
CT scan lower abd	3000-9000 millirads

Radiology

◆ Pregnancy

- Dose of 10 000 millirads considered safe
- Do when indicated
- Do only what is necessary

Radiology

◆ Intervention

- Uterine artery embolisation
 - ◆ Myomas
 - ◆ Bleeding

Ultrasound

- ◆ Very useful in both obstetrics and gynaecology
- ◆ Diagnostic tool

Ultrasound

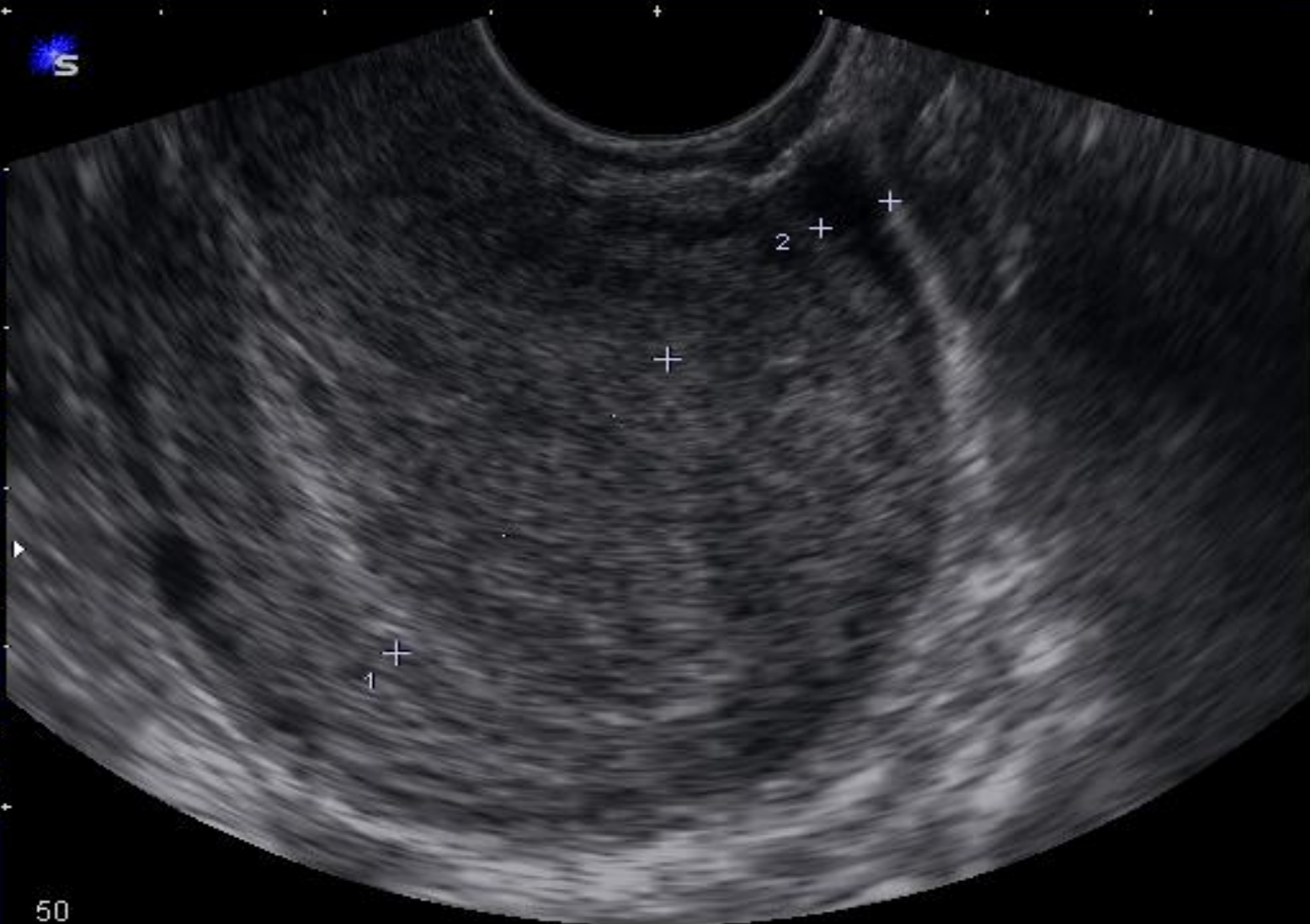
◆ Early pregnancy:

- Location (rule out ectopic)
- Discriminatory level
- Accurate dating (less induction post dates)
- Multiple pregnancy
- Molar pregnancy
- Trisomy 21 screening
- Cervical length and funneling

GYNAE TV

EC9-4 6.5

FPS 33s



- Distance
- Uterus
 - Length
 - Depth
 - Width
 - Endometr.
 - Cervix
- Rt Ovary
 - Length
 - Depth
 - Width
- Lt Ovary
 - Length
 - Depth
 - Width

50

Report 1/3

D 1 = 24.7mm

D 2 = 4.5mm

127



OBS EARLY

EC9-4 6.5

FPS 33s

Distance

Single

✓ GS

CRL

BPD

HC

AC

FL

OFD

ASD

ATD

HL

UL

BN

TL

Report

WorkSheet

Graph

1/2



GS 9.8mm



OBS EARLY

50C50+ 5.0

FPS 26s

Distance

Single

GS

✓ CRL

BPD

HC

AC

FL

OFD

ASD

ATD

HL

UL

BN

TL

Report

WorkSheet

Graph

1/2



Clinical MA 12w1d
CRL 39.1mm 10w6d

2D 65/2/28

MI 0.6 TIS 1.2 TIB 1.2 Tx 100%



P100

6C3

T4.6

22fps

DR65

2DG

86



Dist A 2.3mm

Free 8

CINE REVIEW ▶



St George's IDI
Hospital - TB I

Y1

02-10-20

: 3

11:14:40

10V 5.0M

31/32

DVA: 70%

10Hz



R06
078
080

3: TVUS

St George's IDI
Hospital - TB

Y1 : 04-02-03
: 13:01:51
ICV 5.0H
DVA: 70%
31/32
20Hz



R00
G75
C03

3: TVUS

Ultrasound

◆ Later pregnancy

- 20 week anatomy scan
- IUGR
 - ◆ Dopplers umbilical arteries, ductus venosus, middle cerebral artery of fetus
- Placental location
- Oligo- and polyhydramnios

Ultrasound

◆ Gynaecology

◆ Ovaries

- Size
- Cysts
- Tumors
- PCOS
- Infertility treatment: ovarian stimulation and TVOA

GYNAE TV

EC9-4 6.5

FPS 33s



Distance

Uterus

Length

Depth

Width

Endometr.

Cervix

Rt Ovary

Length

Depth

Width

Lt Ovary

Length

Depth

Width

Uterus-L 76.7mm

Endometrium 4.8mm

Rt Ovary-L 28.3mm

Rt Ovary-D 15.7mm

Report

1/3



B

* 16_04_2007_13_25_06

GYNAE TV

EC9-4 6.5

FPS 33s

Distance

Uterus

Length

Depth

Width

Endometr.

Cervix

Rt Ovary

Length

Depth

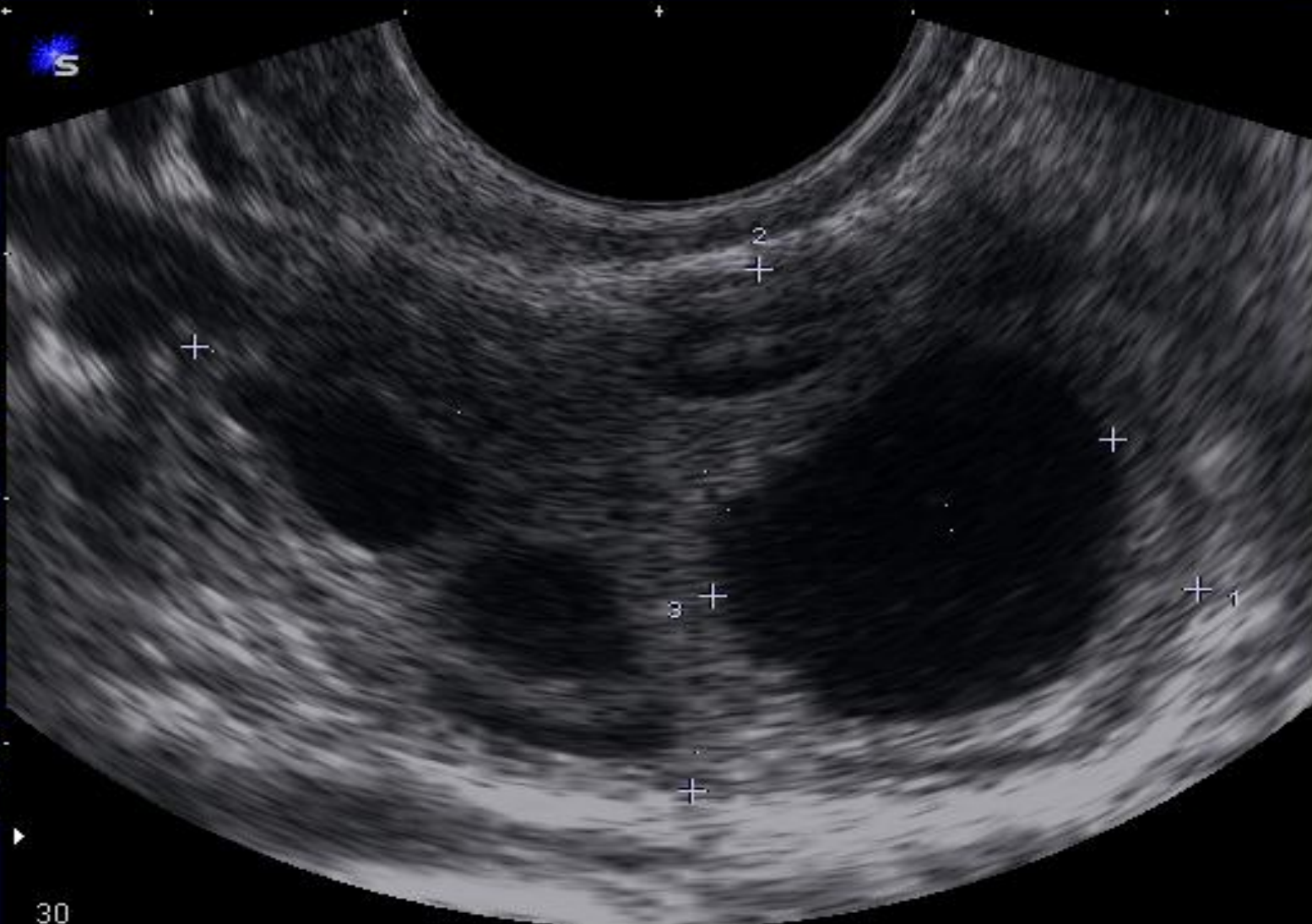
Width

Lt Ovary

Length

Depth

Width



30

Report

1/3

D 1 = 40.7mm

D 2 = 21.5mm

D 3 = 17.0mm

71

2D 65/3/17

MI 0.8 TIS 0.4 TIB 0.4 Tx 100%



GYNAE TV

EC9-4 6.5

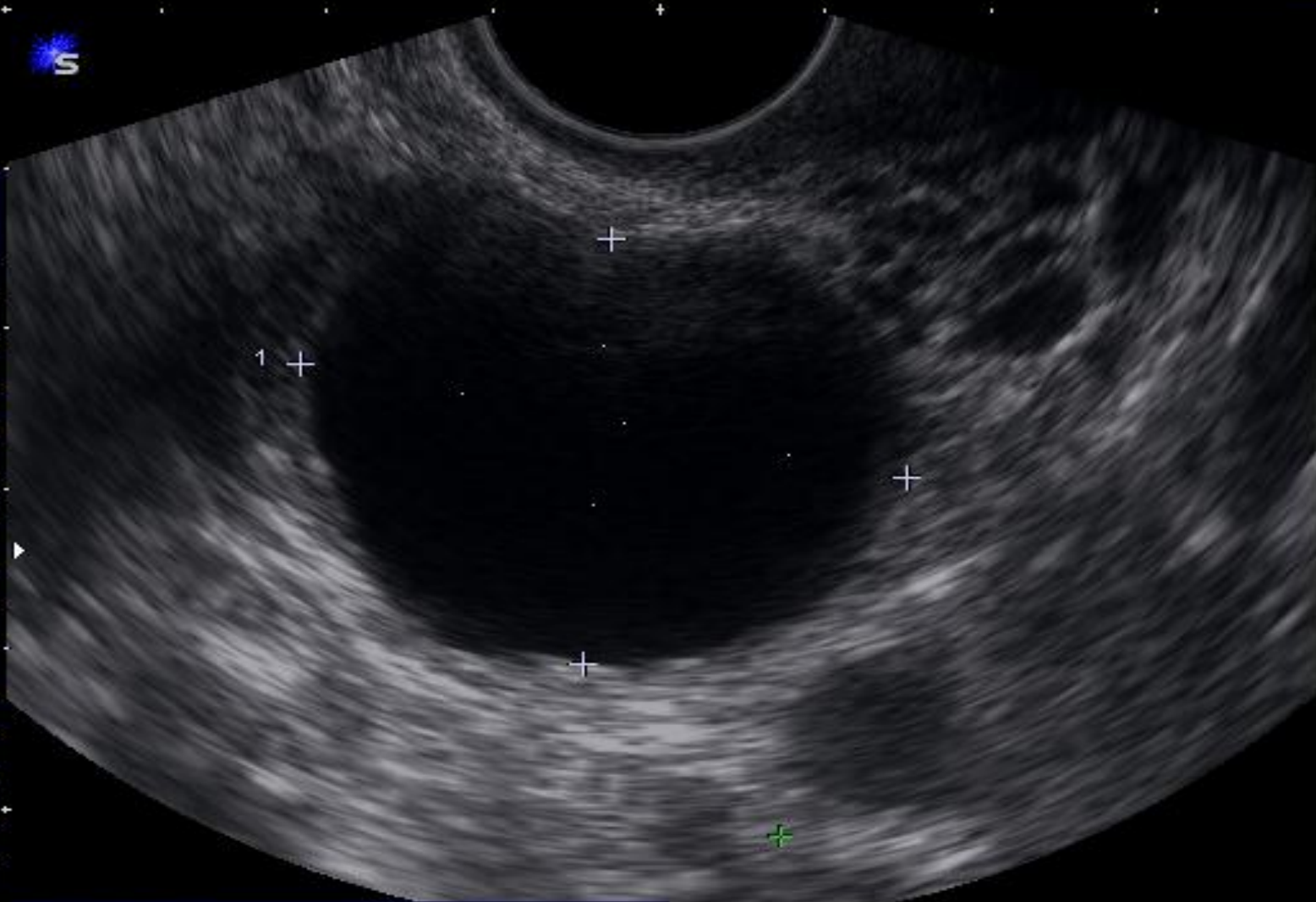
FPS 33s



2Dist Ave

Lt Follicle

- #1
- #2
- #3
- #4
- #5
- #6
- #7
- #8
- #9
- #10
- #11
- #12
- #13
- #14
- #15



D 1 = 37.2mm D1 2 = 26.6mm
 D2 2 = mm
 Avg 2 = mm

Report
 3/3

127



Ultrasound

◆ Uterus

- Size
- Position
- IUCD
- Myomas
- Endometrial thickness
- Sonohysterography

GYN AE TV

EC9-4 6.5

FPS 33s



- Distance
- Uterus
- Length
- Depth
- Width
- Endometr.
- Cervix
- Rt Ovary
- Length
- Depth
- Width
- Lt Ovary
- Length
- Depth
- Width

50

Report

1/3

D 1 = 66.9mm

D 2 = 6.4mm

127



GYNAE TV

EC9-4 6.5

FPS 33s



60

127

2D 65/3/21

MI 0.8 TIS 0.4 TIB 0.4 Tx 100%



GYNAE TV

EC9-4 6.5

FPS 33s



Distance

Uterus

Length

Depth

Width

Endometr.

Cervix

Rt Ovary

Length

Depth

Width

Lt Ovary

Length

Depth

Width

Report

1/3

60

D 1 = 36.3mm

D 2 = 33.6mm

127



GYNAE TV

EC9-4 6.5

FPS 33s



60

127

2D 65/3/17

MI 0.8 TIS 0.4 TIB 0.4 Tx 100%





Uterus long axis



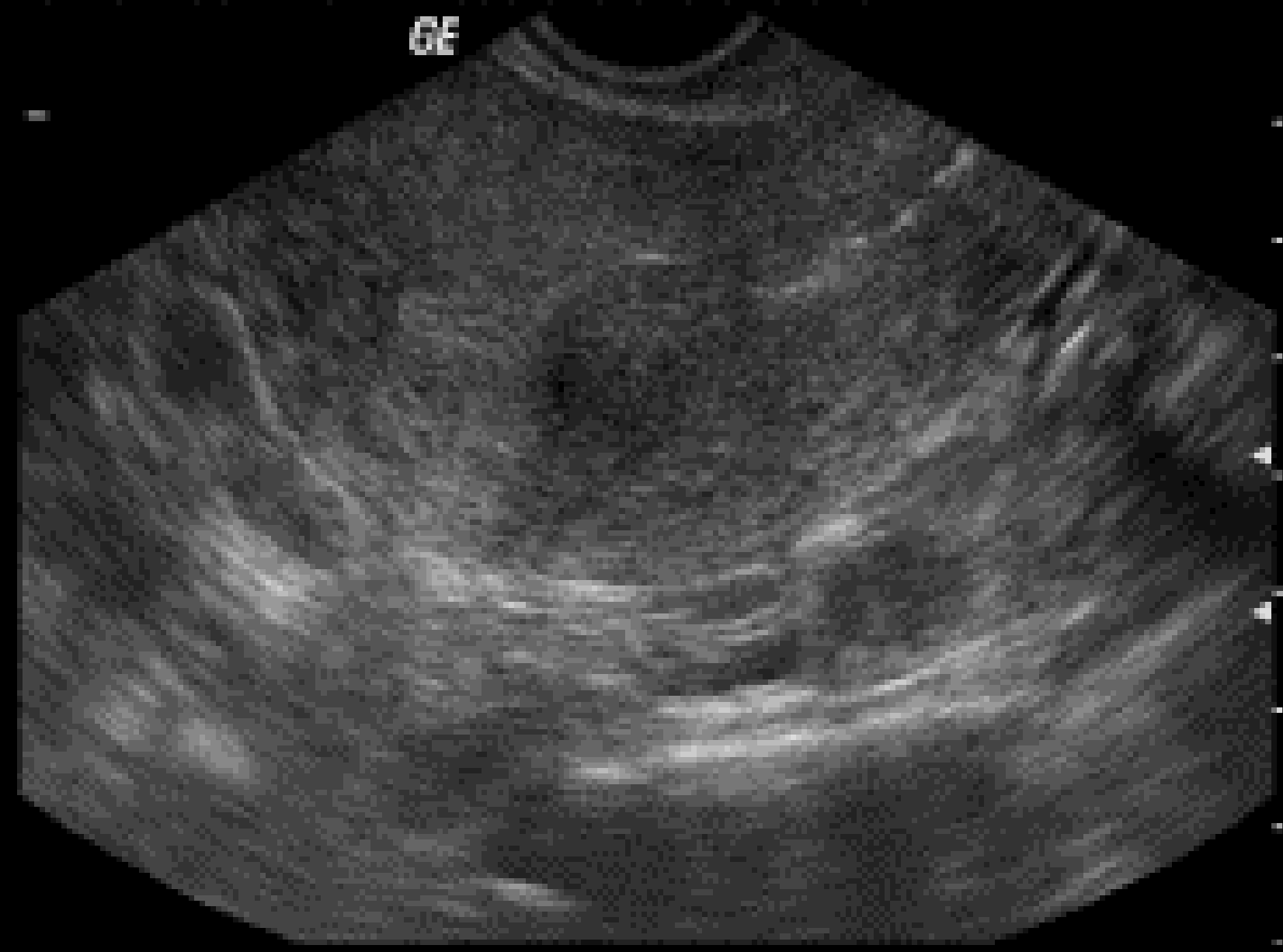
1	0
0	0
	Freq 8.0 MHz
	Gn 50
	Gain 10
	Map 200
	D 5.0 cm
	DFL 73
	FM 20 Hz
	AD 60 %

NYU MEDICAL CENTER

B114

GE

CH0
8cm
DR72
G 54



MI 09 4

NYU MEDICAL CENTER

B11*

GE

LONG UTERUS

CH0
8cm
DR72
0 54



+ 15.6cm

+ 10.7cm

+ 12.5cm

PL 00 4

Ultrasound

◆ Pelvis

- Free fluid
- Adnexal masses
- Other masses
 - ◆ Solid
 - ◆ Cystic

Ultrasound

◆ Gynae oncology

■ Ca cervix staging

- ◆ Liver
- ◆ Kidneys and ureters
- ◆ Cervix
- ◆ Bladder wall assessment
- ◆ Lymph nodes

KALAFONG HOSPITAL
SSD 5000

Y 3 13-06-03
08:25:55
104/105 23Hz
2.14R
DVA: 52%



R15 G53 C4 A1

1: Abdomen

KALAFONG HOSPITAL

IDC
[

: YJ

18-10-'04
08:27:29

[1] 3.5M R-H
17Hz DVA: 100%



+DIST. cm



MEASUREMENT R08 G33 C3
B-1 1 Data Clear DIST. 2
3 Area Trace 4 Area Ellipse 5 Angle 6 Next Page

KALAFONG HOSPITAL

ID[
[

: YJ

: 11

02-08-19

11:30:2

18Hz

3.5M R
DVA: 100



R12: 062 C3



1: Abdomen

Ultrasound

- ◆ Other

- DVT

P100
8C5
7.5
32fps
DR65
2DG
86



Free 8



TOSHIBA

DR L SNYMAN, PRETORIA OOS HOSPITAAI

OB/GYN

15/03/2005

14:33:12

P100

8C5

7.5

32fps

DR65

2DG

80

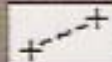
0+

5+

Dist A 29.1mm

Free 8

CINE REVIEW



Conclusion

- ◆ Radiology and ultrasound – useful special investigations
- ◆ Use wisely as indicated

Thank
you