

Third trimester ultrasound and fetal measurements questionnaire

Questions and layout of on-line survey



Australian
National
University

Medical School
ANU College of Health & Medicine

About you & your Workplace

Which best describes your workplace? (if you work at multiple practices, select the answer that applies to the practice you are working at today)

Obstetrician led private practice

Radiologist led private practice

Obstetrician led service in a public hospital

Radiologist led medical imaging service in a public hospital

Other (please specify)

The postcode for my practice is:

(if you work at multiple practices, select the answer that applies to the practice you are working at today)

Australia

New Zealand

My qualification in clinical ultrasound and/or medical imaging is:
(please select all that apply)

DDU (general)

DDU (obstetric)

FRANZCR

FRANZCOG

CMFM

COGU

Obstetric trainee/registrar

Radiology trainee/registrar

Other (please specify)

I have been reporting obstetric ultrasound for:

Less than 5 years

5-10 years

More than 10 years

Reporting third trimester ultrasound

At this practice, I usually report third trimester fetal measurements alongside:
(please select all that apply)

- An equivalent number of weeks and days e.g. AC 270mm, 31wid
- A reference range e.g. AC 270mm, 30w3d - 32w0d
- The measurement and standard deviation e.g. AC 270mm +/- 2SD
- The percentile for the known gestational age e.g. AC 270mm, 90th percentile
- The z score e.g. AC 270mm, z = 1.28
- Other (please specify)

My practice uses the following reference chart for the **biparietal diameter (BPD)** measurement:

- ASUM charts (2000)
- Chitty (2002)
- Hadlock (1982)
- Jeanty (1984)
- Schulter (2004)
- Snijders (1994)
- IG21 (2014)
- GROW
- Do not know
- Other

My practice uses the following reference chart for the **head circumference (HC)** measurement:

- ASUM charts (2000)
- Chitty (2002)
- Hadlock (1982)
- Jeanty (1984)
- Schulter (2004)
- Snijders (1994)
- IG21 (2014)
- GROW
- Do not know
- Other

My practice uses the following reference chart for the **abdominal circumference (AC)** measurement:

- ASUM charts (2000)
- Chitty (2002)
- Hadlock (1982)
- Jeanty (1984)
- Schulter (2004)
- Snijders (1994)
- IG21 (2014)
- GROW
- Do not know
- Other

My practice uses the following reference chart for the **femur length (FL)** measurement:

- ASUM charts (2000)
- Chitty (2002)
- Hadlock (1982)
- Jeanty (1984)
- Schulter (2004)
- Snijders (1994)
- IG21 (2014)
- GROW
- Do not know
- Other

I use the report page data generated by the ultrasound machine when reporting fetal measurements:

Yes

No

Display logic used for the next two questions:

YES

All ultrasound machines in my practice are configured with the same reference charts:

Yes

No

Do not know

NO

In my practice, measurements are reported using:

A digital reporting tool (e.g. ViewPoint or Astraia)

A customised chart

In my practice, the **estimated fetal weight (EFW)** is calculated by:

- Hadlock (BPD-HC-AC-FL)
- Hadlock (BPD-AC-FL)
- Hadlock (HC-AC-FL)
- Schild (sex specific BPD-AC-FL)
- Shepard (BPD-AC)
- IG21 (HC-AC)
- Combs (HC-AC-FL)
- Do not know
- Other

I usually report **EFW** alongside:

- The percentile for the known gestational age e.g. 1481g, 71st percentile
- The percentage error of the estimation e.g. 1481g +/- 15%
- The error of the estimation in grams e.g. 1481g +/- 222g
- The z score e.g. 1418g, z=0.58
- Nothing - I just report the EFW in grams
- Other (please specify)

My practice uses the following reference chart for **EFW**:

- Australian national birthweight percentiles by gestational age (Roberts 1998)
- Australian national birthweight percentiles (Dobbins 2012)
- NZ-WHO growth charts (2010)
- NZ customised charts (2015)
- New South Wales population based birthweight charts (Beeby 1996)
- Fenton growth chart for preterm infants (2013)
- Hadlock EFW chart (1991)
- WHO fetal growth charts (2017)
- FMF fetal and neonatal population charts (2018)
- Do not know
- Other

The reference charts used for each measurement (BPD, HC, AC, FL) and EFW are cited in my reports:

Yes

No

Reference charts used by this practice differ from those used by other practices I have worked at:

Yes

No

Do not know

I have not worked at other practices

I comment the fetus may be small for gestational age or growth restricted at the following cut-off:
(select all that apply)

EFW below the 10th percentile

EFW below the 5th percentile

AC below the 10th percentile

AC below the 5th percentile

Both EFW and AC below the 10th percentile

Both EFW and AC below the 5th percentile

I don't comment on small for gestational age or growth restriction

Other (please specify)

Third trimester Doppler

These questions relate to the use of Doppler in third trimester ultrasound for fetal growth

In my practice, **Umbilical Artery (UA)** Doppler is performed in third trimester ultrasound assessment in the following circumstances:
(select all that apply)

It is performed in all third trimester ultrasound assessments

It is only performed at specific gestational ages

EFW below the 10th percentile

EFW below the 5th percentile

When requested by the referring doctor

It is never part of a third trimester ultrasound in my practice

Other (please specify)

Skip logic used to skip the next three questions when 'It is never part of a third trimester ultrasound in my practice' is selected.

Display logic used for the next question when 'It is only performed a specific gestational ages' is selected.

Please specify the gestational ages at which **UA** Doppler is performed:

I usually report **UA** Doppler using:
(select all that apply)

Systolic/Diastolic ratio (S/D)

Pulsatility index (PI)

Resistive index (RI)

Other (please specify)

My practice uses the following reference chart for **UA** Doppler:

- Trudinger (1985)
- Arduini (1990)
- Baschat (2003)
- Acharya (2005)
- Medina Castro (2006)
- Ebbing (2007)
- Parra-Cordero (2007)
- Do not know
- Other

In my practice, **Middle Cerebral Artery (MCA)** Doppler is performed in third trimester ultrasound assessment in the following circumstances:
(select all that apply)

It is performed in all third trimester ultrasound assessments

It is only performed at specific gestational ages

EFW below the 10th percentile

EFW below the 5th percentile

When the UA Doppler is abnormal

When requested by the referring doctor

It is never part of a third trimester ultrasound in my practice

Other (please specify)

Skip logic used to skip the next six questions when 'It is never part of a third trimester ultrasound in my practice' is selected.

Display logic used for the next question when 'It is only performed a specific gestational ages' is selected.

Please specify the gestational ages at which **MCA** Doppler is performed:

I usually report **MCA** Doppler using:
(select all that apply)

Systolic/Diastolic ratio (S/D)

Pulsatility index (PI)

Resistive index (RI)

Peak systolic velocity

Other (please specify)

My practice uses the following reference chart for **MCA** Doppler:

Kurmanavicius (2001)

Baschat (2003)

Medina Castro (2006)

Ebbing (2007)

Bahlmann (2012)

Ayoola (2016)

Do not know

Other

In my practice, the **Cerebroplacental ratio (CPR)** is reported:

Yes

No

Skip logic used to skip the next two questions when 'no' is selected:

I comment the **CPR** is abnormal at the following cut off:

Values below the 5th centile for gestational age

Values below the 10th centile for gestational age

When the ratio is less than 1

Other (please specify)

My practice uses the following reference chart for **CPR**:

Ebbing (2007)

Baschat (2003)

Morales-Rosello (2015)

Do not know

Other

In my practice, **Ductus Venosus (DV)** Doppler is performed in third trimester ultrasound assessment in the following circumstances:
(select all that apply)

It is performed in all third trimester ultrasound assessments

It is only performed at specific gestational ages

EFW below the 10th percentile

EFW below the 5th percentile

When the UA Doppler is abnormal

When the MCA Doppler is abnormal

When requested by the referring doctor

It is never part of a third trimester ultrasound in my practice

Other (please specify)

Skip logic used to skip the next three questions when 'It is never part of a third trimester ultrasound in my practice' is selected.

Display logic used for the next question when 'It is only performed a specific gestational ages' is selected.

Please specify the gestational ages at which **DV** Doppler is performed:

I usually report **DV** Doppler using:
(select all that apply)

Systolic/Diastolic ratio (S/D)

Pulsatility index (PI)

Pulsatility Index for Veins (PVIV)

Resistive index (RI)

Peak systolic velocity

Other (please specify)

My practice uses the following reference chart for **DV** Doppler:

- Hecher (1994)
- Kessler 2006
- Tongprasert (2012)
- Turan (2015)
- Do not know
- Other

In my practice, **Uterine Artery (UtA)** Doppler is performed in third trimester ultrasound assessment in the following circumstances:
(select all that apply)

It is performed in all third trimester ultrasound assessments

It is only performed at specific gestational ages

EFW below the 10th percentile

EFW below the 5th percentile

When requested by the referring doctor

It is never part of a third trimester ultrasound in my practice

Other (please specify)

Skip logic used to skip the next three questions when 'It is never part of a third trimester ultrasound in my practice' is selected.

Display logic used for the next question when 'It is only performed a specific gestational ages' is selected.

Please specify the gestational ages at which **Ut** Doppler is performed:

I usually report **UtA** Doppler using:
(select all that apply)

Systolic/Diastolic ratio (S/D)

Pulsatility index (PI)

Resistive index (RI)

Peak systolic velocity

Other (please specify)

My practice uses the following reference chart for **UtA** Doppler

Achayra (2005)
Gomez (2008)
Geipel (2011)
Guedes-Martins (2015)
Do not know
Other

Choice of reference chart

To what extent do you agree that the following factors are important considerations in the choice of reference charts?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Recommendations and guidelines of professional bodies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chart methodologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Referring practitioner preferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The software configuration of the ultrasound machine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Under which circumstances would you consider changing the reference charts used at your practice?

	Extremely likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Extremely unlikely
ASUM recommendation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RANZCR recommendation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RANZCOG recommendation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Is there anything you would like to add about how third trimester ultrasound is performed and reported?