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Monday, 6 May 2019

The New Zealand Obstetric Guidelines Consultation
Ministry of Health
New Zealand Government
PO Box 5013
Wellington 6140

To whom it may concern

**Re: New Zealand Obstetric Ultrasound Guidelines: Consultation document**

Thank you for providing the Australasian Sonographers Association (ASA) the opportunity to provide feedback to the *New Zealand Obstetric Ultrasound Guidelines: Consultation document*. The ASA's detailed feedback on this document is included at Appendix 1.

The ASA congratulates the Ministry for undertaking this important work which will contribute to ensuring expectant mothers across New Zealand will have access to appropriate and consistent quality obstetric medical ultrasound services.

We also congratulate the Ministry for recognising the critical role sonographers play in providing these services through the strong representation of the profession in developing this draft document and contacting the ASA to review the document.

The ASA has considered the *New Zealand Obstetric Ultrasound Guidelines – Consultation document* in consultation with our Sonographer Policy and Advisory Committee, and our Obstetric and Gynaecological Special Interest Group. Overall, we consider this to be a very comprehensive document, with many topics covered in depth. We note that some sections are yet to be completed, and look forward to seeing the next draft of the document.

As an aside, with future industry consultation of guidelines of this size and technical nature which directly impact how medical ultrasound services are provided to patients, the ASA requests the Ministry of Health provide longer consultation periods than just over a month. It has been challenging for the ASA's technical committees to review the document and provide considered comprehensive feedback within the designated timeframes.

The ASA also applauds the use of an evidence-based approach and the reference to industry guidelines from the Australasian Society for Ultrasound in Medicine (ASUM), the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) and the International Society of Ultrasound in Obstetrics and Gynecology (ISUOG), in support of consistent industry good practice.

However, we note in some circumstances there is a difference between the draft guideline text and the recommendations of the industry guideline referenced. We encourage the committee to review the document content against the referenced guidelines and either clarify the reason for the difference or amend the content.

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If you require any further information in support of this feedback, please contact James Brooks-Dowsett, ASA Policy & Advocacy Advisor, by phone on +61 3 9552 0008 or email to policy@sonographers.org.

Yours sincerely,

**Dr Jennifer Alphonse, PhD**
President
Australasian Sonographers Association

# APPENDIX 1: the Australasian Sonographers Association's (ASA) response to the *New Zealand Obstetric Ultrasound Guidelines: Consultation document*

## SECTION: Introduction (p. 1)

*Do you have any feedback on the introduction? Is there anything further you would like to see included, for this or future editions?*

Our feedback on this section is as follows:

- P. 1, **Introduction**, states "An uncomplicated pregnancy does not generally require additional first-trimester (e.g. dating) or third-trimester (e.g. growth) scans."
    - **Comment**: the ASA has some concern that recommending limiting scans may ignore the reality of medical defensibility and patient expectation (which can extend to expectations of dating, NT, morphology and growth scans, as well as other third trimester scans).
    - **Comment**: the ASA notes the guideline does not recommend routine dating scan. However, this assumes that expectant mothers are aware of or able to report their LMP accurately. We recommend greater emphasis on performing a dating scan where there is not complete certainty of LMP or estimated date of delivery (EDD) as the pregnancy was conceived with assistive reproductive treatment (ART).
    - **Comment**: Additionally, the ASA recommends the Working Group consider:
        - Adding NIPS (Non-Invasive Prenatal Screening) as an alternative to Nuchal Translucency as this is increasingly being used.
        - Including a dating, scan to establish an accurate gestational age at 8-10 weeks if an NT scan is considered, as it has a specific time frame and the window for this assessment might be missed if relying on LMP alone.
        - Including a viability scan if NIPS is planned. There can be a significant out-of-pocket expense for NIPS blood tests. This is an unnecessary financial burden on the parents if the pregnancy is not viable.
        - 10-15% of known pregnancies demise before 8-10 weeks, with the highest losses of 21.3% by week-5 gestation. Reference: Villines, Z. *What are the miscarriage rates by week?* MedicalNewsToday, article 31 Jul 2018. Accessed 24 Apr 2019.

## SECTION: First trimester (p. 3)

*Do you have any feedback on this section? Is there anything further you would like to see included in this section, for this or future editions?*

Our feedback on this section is as follows:

- On p. 3, **First trimester ultrasound**, the second paragraph states "The first ultrasound of the pregnancy should ideally be offered when the gestational age is thought to be between 12 and 13+6 weeks' gestation,…"
    - **Comment**: This recommendation narrows the window of opportunity when compared to 11-13+6 weeks recommended in the reference (i.e. the ISUOG guideline). The ASA recommends that the guideline either use the ISUOG recommendations or make it clear that this is an adaptation of the ISUOG guidelines.
    - The ASA also notes there is a difference in timing of the NT scan from 12-13+6 weeks and the required CRL 45mm (equivalent to 11+1 weeks). Is the document suggesting that the

recommended time is from 12 weeks but may still be performed at 11+1 weeks? The ASA recommends these statements and associated recommendations are made clearer.

- On p. 8, **Yolk sac**, the first sentence states "The presence of a yolk sac within the intrauterine gestational sac confirms an intrauterine pregnancy and essentially excludes ectopic pregnancy."
    - **Comment**: We suggest adding the word 'usually,'. I.e. "The presence of a yolk sac within the intrauterine gestational sac usually confirms …" (Less than 1:30,000 pregnancies)

      References:
        - Kirk E, Bottomley C, Bourne T. *Diagnosing ectopic pregnancy and current concepts in the management of pregnancy of unknown location*. Human reproduction update. 2013 Oct 6;20(2):250-61.
        - Govindarajan MJ, Rajan R. *Heterotopic pregnancy in natural conception. Journal of human reproductive sciences*. 2008 Jan;1(1):37.
    - The ASA recommends the Working Group considers including a statement that ectopic is not excluded with intrauterine gestation if the patient has undergone assisted reproductive techniques, which could result in a higher risk for heterotopic pregnancy (as many as 2:1,000 assisted pregnancies).

      Reference: Danielsson, K. *Heterotopic Pregnancy Causes, Signs and Diagnosis*. Verywellfamily. Article 11 Mar 2019. Accessed 24 Apr 2019

- On p. 16: **Imaging protocol** (for NT) the final bullet point states "Nuchal translucency (NT) assessment if the patient accepts screening."
    - However, on p. 17 under 'Nuchal translucency', bullet point 3 states "Cardiac and other structural and genetic anomalies may also be associated with an increased NT."
    - **Question**: Given that an increased NT is associated with cardiac anomalies independent of karyotype, would one consider the measurement of NT for this purpose even in the absence of a formal risk calculation?

- On p. 18: **Nuchal translucency assessment criteria,** bullet point 1 states "Optimally performed at 12–13+6 weeks, or CRL ≥56 mm, and must be ≤84 mm."
    - **Comment:** the ASA recommends clarifying the intended parameters recommended in this guideline. I.e. should NT be performed from a CRL of 45 mm, but ideally at a CRL of 56 mm? (as is mentioned in the reporting section).

- On p. 21, the **NT reporting guide and pro forma**, states "If the patient presents for NT assessment but gestation > 13+6 weeks (or CRL > 84 mm), perform fetal biometric and anatomic assessment as for an NT, but do not measure the NT."
    - **Comment**: the ASA questions whether the NZ OB Guidelines meant to say that 'NT measurement can be performed when the fetus measures >84mm, however the FMF Chromosomal Risk assessment not be performed'?

      Thickening of this fluid layer is associated with both chromosomal and non-chromosomal defects including cardiac issues, Noonan's, other lymphatic drainage anomalies, Turners', anaemia and incipient hydrops.

      Identification and measurement of excess NT fluid at any stage from 11w onwards and past the 13w6d limit implied may suggest the need for an early fetal cardiac assessment and in the absences of FMF First Trimester screening, is suggestive of NIPS.

References:


- Clur SA, Mathijssen IB, Pajkrt E, Cook A, Laurini RN, Ottenkamp J, Bilardo CM. *Structural heart defects associated with an increased nuchal translucency: 9 years experience in a referral centre*. Prenatal diagnosis. 2008 Apr 1;28(4):347-54.
- Bahado-Singh RO, Wapner R, Thom E, Zachary J, Platt L, Mahoney MJ, Johnson A, Silver RK, Pergament E, Filkins K, Hogge WA. *Elevated first-trimester nuchal translucency increases the risk of congenital heart defects*. American journal of obstetrics and gynecology. 2005 May 1;192(5):1357-61.
- Tekesin I. *The diagnostic value of a detailed first trimester anomaly scan in fetuses with increased nuchal translucency thickness*. Journal of perinatal medicine. 2019 Feb 25;47(2):241-6.
- The Royal Australian and New Zealand College of Obstetricians and Gynaecologists, Human Genetics Society of Australasia. *Prenatal screening and diagnostic testing for fetal chromosomal and genetic conditions*. East Melbourne: RANZCOG, 2018.


The ASA recommends the Working Group consider amending the proforma statement to:

'*The gestational age is [ ] weeks [ ] days; too late for NT risk assessment (possible only for CRL <84 mm). The Nuchal translucency is ..... mm.* ***If this is above the expected range, fetal echocardiography is indicated****. Second-trimester maternal serum screening and NIPS is recommended.'*

## SECTION: Cervical length screening (p. 25)

*Do you have any feedback on this section? Is there anything further you would like to see included in this section, for this or future editions?*

Our feedback on this section is as follows:

- On p. 26, **Cervical length screening**, the final bullet point states "Third trimester cervical length assessment is not recommended."
    - **Comment:** the ASA recommends the Working Group review the reference on this page, as it is unclear where the relevant reference material is on the website to support the recommendation.

## SECTION: Anatomy scan (p. 29)

*Do you have any feedback on this section? Is there anything further you would like to see included in this section, for this or future editions?*

Our feedback on this section is as follows:

- On p. 30, **Imaging protocol**, **4. Placenta**, the first bullet point states "Ask about any previous caesarean section and document placental location in relation to the scar."
    - **Comment**: the ASA suggests adding the italicised words; "Ask about any previous caesarean section … '*or any other uterine surgery, for example, previous myomectomy or dilation and curettage (D & C).*'"

- On p. 32, **Heart**, bullet point 3 states "Outflow tracts: left/right ventricular outflow tract (LVOT and RVOT respectively)."

- **Comment**: the ASA recommends adding to this statement, "… demonstrating at least one pulmonary artery branch from the RVOT."

- On p. 35, **Fetal pericardial fluid**, there are two bullet points. One relates to > 2 mm, and the other < 3 mm.
  - **Comment**: the ASA recommends the Working group include advice here on the recommended action for fluid between 2-3 mm.

- On p. 35, **Imaging**, the first point states ''Measurement should be made in diastole (with the AV valves open."
  - **Comment**: the ASA recommends adding the bolded words 'Measurement "**of the pericardial fluid**" should be made …'

- On p. 38, regarding **Vasa previa**.
  - **Comment:** the Working Group is encouraged to consider recent literature which suggests that vasa previa should be diagnosed if the exposed fetal vessel lies less than or equal to 2 cm from the internal os, particularly in the situation of a low-lying placenta or placenta previa.

- On p. 40, **Placenta accreta / abnormally invasive placenta (AIP)**, the following sentence: "Percreta – invasion through the myometrium with breech of the serosa, with or without invasion into adjacent structures, for example, in the bladder."
  - **Comment:** Breech is used incorrectly. It should be "breach".

- P. 42 (and p. 101 References). Reference to the book *A Practical Guide to Fetal Echocardiography*.
  - **Comment:** the ASA recommends updating this reference to the current edition "*A Practical Guide to Fetal Echocardiography Normal and Abnormal Hearts (3rd Ed.) by Alfred Abuhamad and Rabih Chaoui. Wolters Kluwer: Philadelphia. 2016. ISBN: 978-1-4511-7605-6."*

- On p. 46, **Imaging Protocol**.
  - **Comment:** the ASA recommends amending dot point 6 to "Pulmonary veins: At least one left and one right seen entering left atrium, with colour and pulsed Doppler **of at least one vein.**"
  - **Comment**: Dot point 10 uses the terminology "Three vessel and trachea (3VT) / arrow view:" However, dot point 22 uses "3VT and arrow views". The ASA recommends the terminology is kept consistent in the document. Preferably using standard terminology employed by other recognised industry organisations such as ISUOG (i.e. 3 vessel tracheal view [3VTV]).

- On p. 47, **Fetal arrhythmia**, the first paragraph states ''An irregular cardiac rhythm is frequently observed and is predominantly benign in the second trimester, due to premature atrial contractions. This can be documented by M-mode on the atria."
  - **Comment**: M-mode of the atria **and ventricle** is required to assess for premature atrial contraction, not just atria. We recommend making this correction by including ''and ventricle''.

- P. 55, **Atrioventricular septal defect – AVSD may be complete or partial**, point 2 (partial):
    - **Comment**: The valve in an AVSD is not a tricuspid or mitral valve, and should not be referred to as such. An AVSD has a septum primum defect and inlet VSD. We recommend this is correct and noted in this section.

- P. 62, **Congenitally corrected transposition of the great arteries (cc-TGA)**.
    - **Comment**: the ASA recommends adding in a statement that cc-TGA is diagnosed on ultrasound by inversion of the left and right ventricles.

- P. 63, **Common arterial trunk (CAT).**
    - **Comment**: CAT is best diagnosed demonstrating a longitudinal arch view demonstrating the head/neck vessels and at least one pulmonary artery arising from the single great vessel which overrides the VSD. Usually no ductus arteriosus present. We recommend amending the text to reflect this.

- P. 66, **Ebstein anomaly**
    - **Comment:** the ASA suggested providing some additional statement to the first dot point under the heading as follows:

      "Ebstein anomaly is characterised by apical displacement of the septal and posterior tricuspid valve leaflets, which are attached to the walls and septum of the right ventricle rather than to the (normally positioned) tricuspid valve annulus. **The anterior TV leaflet is elongated and "sail-like". The tricuspid regurgitation (TR) usually arises from close to the apex at the level of the septal insertion of the septal leaflet**."

## SECTION: Third trimester (p. 75)

*Do you have any feedback on this section? Is there anything further you would like to see included in this section, for this or future editions?*

Our feedback on this section is as follows:

- P. 83: **Rhesus and thalassemia in pregnancy**, under **Indications.**
    - **Question**: Should Anti-C also be listed?

- P. 77, **Fetal anatomy,** includes suggested images for the first scan in the third trimester.
    - **Comment**: the following two views are the same views: "arrow view (+ colour)" and "3VT view (+ colour)". We recommend RVOT demonstrating at least one branch pulmonary artery and 3VT view (or 3VTV).

- On p. 79, **Abdominal pain**, it states "Maternal right iliac fossa (RIF) – if clinically appropriate to exclude appendicitis."
    - **Comment**: Ultrasound cannot *exclude* appendicitis. the ASA recommends changing the wording to "assess for appendicitis."

- On p. 84, Normal third-trimester scan report, the second bullet point states “Note that this is a non-customised growth estimate and recommend customised growth charts.”
    - **Comment**: This sentence needs to provide clearer direction to the user of the Pro Forma. The ASA recommends the Working Group revise this statement.

## SECTION: Doppler (p. 87)

*Do you have any feedback on this section? Is there anything further you would like to see included in this section, for this or future editions?*

Our feedback on this section is as follows:

- P. 98, Image 47.
    - **Comment**: The arrow is not pointing to Lambda sign. We recommend this is corrected.

- P. 98, Image 48, B.
    - **Comment**: the ASA recommends this is corrected so that the arrow points to the dividing membrane (T sign).

## SECTION: Twin pregnancy (p.95)

*Do you have any feedback on this section? Is there anything further you would like to see included in this section, for this or future editions?*

The ASA has no feedback on this section.

## SECTION: Appendices (p. 101)

*Do you have any feedback on the appendices? Is there anything further you would like to see included, for this or future editions?*

Our feedback on this section is as follows:

- P. 110, Appendix 5: **Velamentous cord insertion**,
    - **Comment**: the ASA recommends the Working Group consider include the following as the third dot point to this sub-section:

      *“Velamentous cord insertion of twin 2 can result in fetal vessels coursing through the membranes of twin 2 or fetal cord insertion into the dividing membrane which if unrecognised can result in rupture of twin 2 fetal vessels and death.”*

## ADDITIONAL QUESTION: Access to guidelines

Our feedback on this section is as follows:

- These guidelines contain important information for providing obstetric medical diagnostic ultrasound examinations in both public health services and private health services. The ASA recommends that the Ministry of Health make these guidelines available in multiple formats (e.g. hard copy, online, digital copy) and distributed widely to ensure health professionals in both private and public clinical settings have access to them.