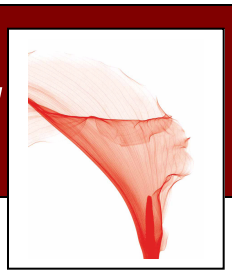
Imaging Redefined
Vol : 4 Iss : 3



VITAL IMAGING CENTRE

The Sound Of Babies…
11 – 14 week USG!

Excellence in ULTRASOUND @ VITAL

At **VITAL Imaging** a dedicated protocol for **First Trimester Nuchal Translucency Measurement** laid by the **Fetal Medicine Foundation** is followed for the **11-14 wk Screening.**

In the 1st Trimester, Nuchal Translucency is taken in the sagittal plane of the fetus.
In the 2nd Trimester, Nuchal Fold is taken in the transverse plane of the fetus.

Who should be offered 11-14 wk scan?

It should be offered to all pregnant women who are at a high risk as well as low risk for the disorders to be screened. Therefore, the screening program described here is also for women who are under 35 years of age at the time of delivery & who do not have a positive history of a chromosomal abnormality

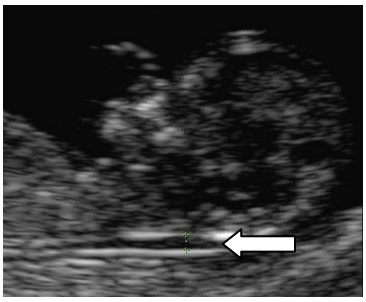
VITAL PREGNANCY SONOGRAPHY PACKAGES

- **DATING SCAN at 6 – 8 wks**
- **FIRST TRIMESTER at 11 – 14 wks SCREENING**
- **ANOMALY SCAN at 18 - 20 wks**
- **3D / 4D SCAN at 18 - 20 wks**
- **3D / 4D SCAN at 28 - 34 wks**
- **COLOUR DOPPLER at 30 - 40 wks**

FIRST TRIMESTER ULTRASOUND SCREENING

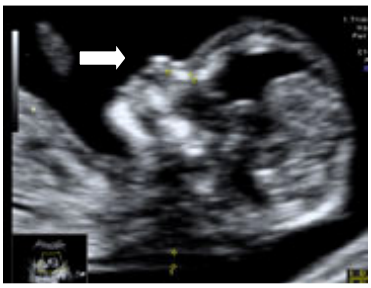
11-14 WK SCAN is examination of the fetal profile in its first trimester to screen for Downs syndrome with the use of maternal age & nuchal translucency (NT). A blood test (free beta-HCG & PAPP-A) also can be added to the screening as it is associated with a higher detection rate & lower false positive rate compared to triple screening.

Extensive research has now established that screening by NT can detect about 80% of affected fetuses for a screen positive rate of 5%. The combination of NT & maternal serum free ß-hCG & PAPP-A improves the detection to 90%.



MEASUREMENT OF NT

CRL 45-84 mm
MID – SAG View, Neutral position
Image Size – Head & thorax
Widest lucency away from amnion



NASAL BONE

CRL 45-84 mm
MID – SAG VIEW
Image Size – Head & thorax
Equal sign- Two parallel horizontal lines:
Top line – Skin
Bottom line – Nasal bone
Third line – Tip of the nose

Optimum 1st trimester screening test is provided by a combination of:

- Age of the mother
- Nuchal Translucency measurement
- Nasal Bone (Present / Absent)
- Free b-HCG and PAPP-A levels in the mother
- Tricuspid Regurgitation (Present / Absent)
- Physical abnormality (Present / Absent)

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EXCELLENCE IN IMAGING…
ALWAYS…

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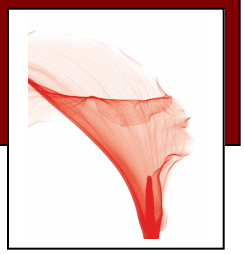

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11 – 14 week USG!

NUCHAL TRANSLUCENCY (NT) -

NT is the sonographic appearance of subcutaneous accumulation of fluid behind the fetal neck in first trimester.

- The term translucency is used, irrespective of whether it is septated or not & whether it is confined to the neck or envelopes the whole fetus.
- The incidence of chromosomal & other abnormalities is related to the size, rather than the appearance.
- During the second trimester, the translucency usually resolves &, in a few cases, it evolves into either nuchal edema or cystic hygromas with or without generalized hydrops.
- NT increases with the gestational age, approx 17% per wk.

NT is increased in fetuses with

- **Chromosomal & other abnormalities** (Trisomies 21, 18 & 13, Triploidy & Turner's syndrome)
- **Cardiac defects**(septal defects)
- **Pulmonary** (diaphragmatic hernia)
- **Renal & abdominal wall defects**
- **Certain genetic syndromes & perinatal risks**

METHOD OF SCREENING	SENSITIVITY (%)
Maternal age (MA)	30
MA & maternal triple marker at 15–18 weeks	50–70
MA & fetal NT at 11–14 wks	70–80
MA & fetal NT, maternal free b-hCG & PAPP-A at 11–14 wks	85–90
MA & fetal NT & fetal NB at 11–14 wks	90
MA & fetal NT, NB, maternal free b-hCG & PAPP-A at 11–14 wks	95

(NT: Nuchal Translucency, NB: Nasal Bone, b-hCG: *human chorionic gonadotropin, PAPP-A: pregnancy-associated plasma protein A)*

NASAL BONE (NB) -

The **presence** of fetal nasal bone is reassuring & is particularly useful for patients with risks between 1 in 150 & 1 in 300 who are traditionally classified as screen positive, but with the presence of the nasal bone confirmed, may be sufficiently reassured.

An **absent** nasal bone will increase dramatically the risk for Trisomy 21, but our advice is that such patients are **rescanned in one week** & action is only taken at that point if there is **persistence** of the absence of the nasal bone.

At 11–14 wks the **nasal bone** is **not visible** by USG in about 60–70% of fetuses with trisomy 21 & in about 2% of chromosomally normal fetuses.

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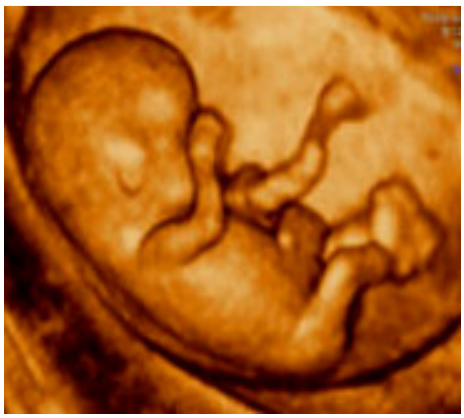

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Or email us at newsletter@vitalradiology.com