

The cover features a dark green vertical bar on the left side. The background is a light green color with several overlapping geometric shapes: a large grey trapezoid on the left, and several concentric white circles on the right. The text is positioned in the upper left and center.

**THE ULTRASOUND  
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**THE  
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## Preface

Ultrasound is non-invasive, painless, safe and rapid imaging technique. It is now one of the essential component in the diagnostic supported health service system. Of the patient in the organised establishment, more than 30 percent in general need ultrasonographic scanning before deciding their systematic treatment. It is playing a pivotal role in day to day medical practice.

Its wide use is a recent phenomenon, demand for appropriate training in the field is gaining momentum amongst the medical practitioners.

In the above context, the Health Care Ultrasound Scan Centre has opened up an opportunity for basic ultrasound training programme for medical graduates from the year 2003. More than 100 professionals have been benefited from the programme in the mean time. many of them have suggested to maintain a record of the experiences of the training to provide more interactive knowledge. This has prompted to publish a bi-annual journal on Ultrasonography.

The premier issue of the journal is a collection of case studies mainly from the participants of the training programme.

It is a humble beginning.

**Mr. S. N. Lahiri**

*for*

*Management*

*Health Care Ultrasound Scan Centre*

Kolkata,  
24th October, 2009

## Editorial

Recently screening for Down's Syndrome, abnormal number of chromosomes (Aneuploidy) Neuchal Translucency (N.T.) / Nasal Bone examination—is popularizing in different Centres, specially in elderly pregnant ladies more than 34 years old, for this study 11–14 weeks embryos are ideal. (CRL between 45–84 mm). To obtain Neuchal translucency good sagittal scan is essential. Foetal head should be in neutral position, not hyperflexed or extended. The maximum translucency in the Cervical region between the skin and soft tissue overlying the cervical spine is 2.5 mm.

Currently the most accurate non-invasive test for detecting Downs syndrome during pregnancy is the measurement of Nuchal Translucency by ultrasound in between 11–14 wks of pregnancy. This is normally less the 2.5 mm and when seen it is increased, greater than 2.5 mm may indicate the baby has down's syndrome or chromosomal Abnormally.

Older maternal age leaves to increased risk for both mother and foetus particularly if the mother is more than 34 years old. Along with NT, Toxoplasma, Rubella Cytomegalo virus, Herpes Simplex virus and Genetic Amniocentesis have to be done at 16 weeks gestation.

Neuchal Translucency is collection of fluid beneath the foetal skin in the foetal neck and this is present in early pregnancy. The fluid collection is increased in many foetus with downs syndrome and other chromosomal abnormality. It is called translucency because on ultrasound this appears as a black space beneath the foetal Skin.

As a part NT scan to biochemical test on hormone is essential, one is Pregnancy Associated, Plasma protein A (APP-A) and Free beta Human Chronic Gonadotrophine hormone. ( $\beta$ -hcg)

Lastly the high risk screening does not always indicate with absolute certainty that there is an abnormality, and that woman with this result still may normal healthy babies.

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### Ref.

1. Diagnostic ultrasound Caral M. Rumack IIIrd Ed.