

**Abstract - ID: 40**

**Author(s):** Rana Eisa (**Presenter**), King Saud University  
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**Are you an invited speaker/presenter to ICRM2018?:** No

**Title:** Placenta Thickness Measurements during Gestational Age Progress

**Abstract:**

The placenta thickness has a relationship with fetal growth, since it is the only one way of his feeding. The objective of the study was to compare the fetal age progress and the placenta thickness in Saudi pregnant women. In a cross sectional descriptive study, one thousand pregnant women with mean age of 29 years old, were examined by ultrasound imaging. Inclusion criteria was Saudi pregnant women of normal pregnancy, exclusion criteria included fetal or maternal disorders. 3.5MHz, 5MHz convex probes and 7-10 MHz linear probe were used to examine the participants and to get the required measurements of placenta thickness and gestational age (GA) through measuring the biparietal diameter (BPD), abdominal circumference (AC) and femoral length (FL). In the (12th -25th), (26th -36th ) and (37th -40th ) Weeks the GA were;  $18.9 \pm 4.2$ ,  $33.2 \pm 2.9$  and  $38.1 \pm 0.89$  respectively. While the placenta thickness measurements were;  $23.1\text{mm} \pm 5.5$ ,  $35.0\text{ mm} \pm 6.2$  and  $39.6\text{ mm} \pm 7.0$  respectively for the same periods. The highest frequency of placenta grading was Grade2 which is (36.0% of 1000). The highest frequency of placental location was Anterior Fundal which is (22.1% of 1000). There was strong statistical association between the increasing of placenta thickness and the GA,  $P = 0.000$ . The placenta thickness measurements can be carried on consideration with the other GA measurements parameters. **Keywords:** Placenta, Gestational Age, Ultrasound

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#### **Abstract - ID: 71**

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**Are you an invited speaker/presenter to ICRM2018?:** No

**Title:** Comparison of image quality and radiation dose for brain imaging using a 16-slice CT and 64- slice CT

#### **Abstract:**

##### Introduction

The excellent diagnostic value of Computed Tomography (CT) images has led to rapid increase in the CT procedures resulting in a significant increase in radiation exposure to the population. The purpose of this study was to compare radiation dose and image quality of 16- and 64-MDCT scanner during brain procedures.

##### Material and Methods

Two sets of eighteen patient underwent for both 16CT and 64CT. Patient data, scan protocol, and exposure parameters were collected for every scanner. Three radiologists evaluate independently assessed image quality using a 5-point scale, as well as select a preferable image. CTDIvol and DLP (dose-length product) collected for the two units CT, and effective dose calculated for each patient.

Results:

The mean DLP was 670 mGy/cm during 16CT examinations (standard error (SE), 4.2 mGy/cm) and ED1.47 mSv, 64CT examination, DLP was 1160 mGy/cm (SE,5.6 mGy/cm) and ED 2.55 mSv. The p-value was less than 0.05, which is statically significant.

Conclusion:

The study highlights the importance of optimizing multi-phase scanning protocol to ensure that patient dose within the level of acceptable limits.

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