

Universal third trimester scan in a maternity unit in East London

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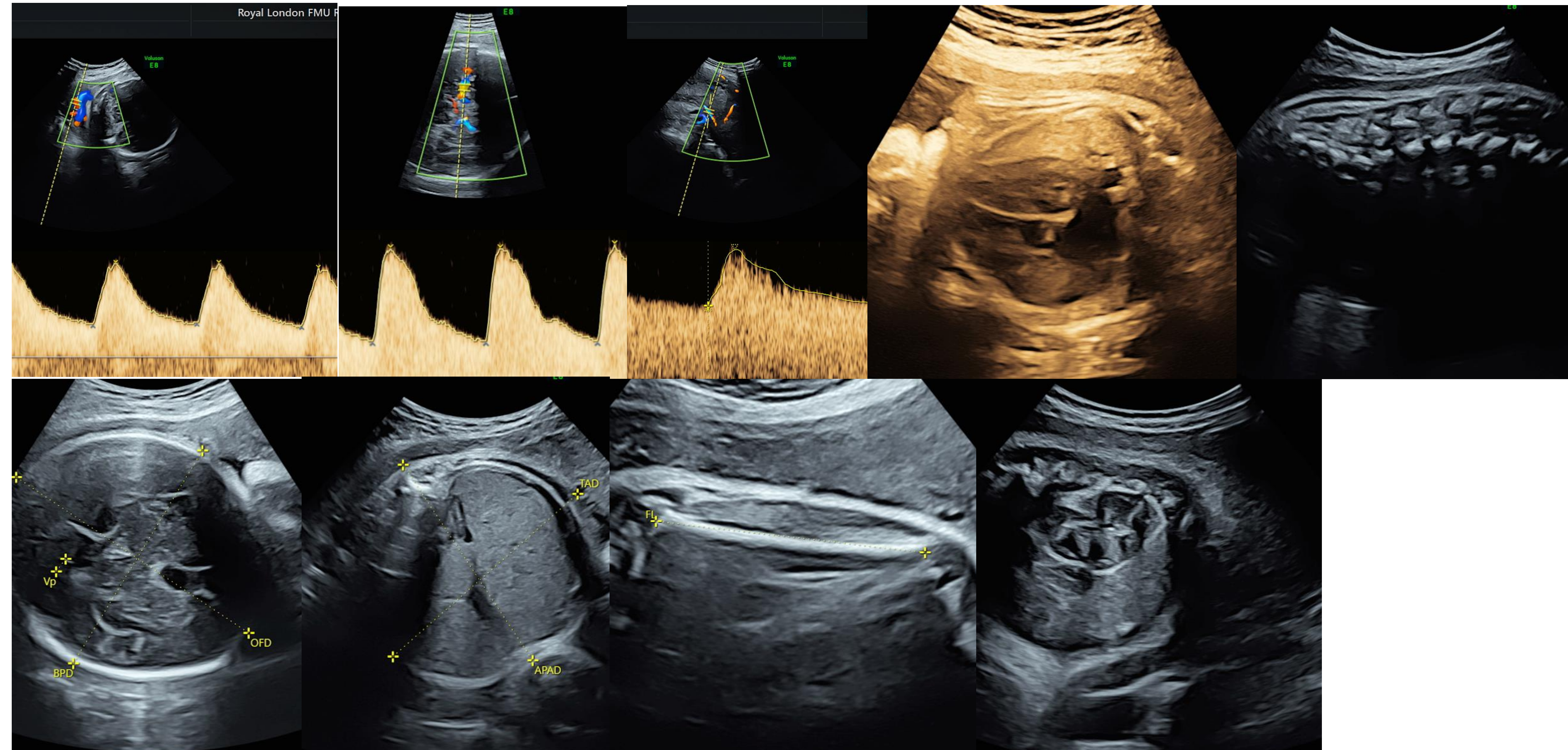
Objectives

To review universal third trimester growth scans and report on incidence of abnormal findings including: (1) small for gestational age (SGA) or growth restricted (FGR) fetus (estimated fetal weight, EFW<10th centile and/or reduced fetal growth velocity across two scans in the third trimester and/or abnormal fetal Dopplers); (2) large for gestational age (LGA) fetus (EFW >90th centile); (3) late onset structural and non-structural (e.g., polyhydramnios, oligohydramnios, undiagnosed placenta praevia..) defects

Design:

Two-year retrospective audit (January 2018 - December 2019) of growth scans performed at 35-37 weeks of gestation for all singleton pregnancies with no known structural abnormalities at anomaly scan, booked in a single maternity unit in East London with high prevalence (>60%) of non-White ethnicities.

Third Trimester scan requirements:

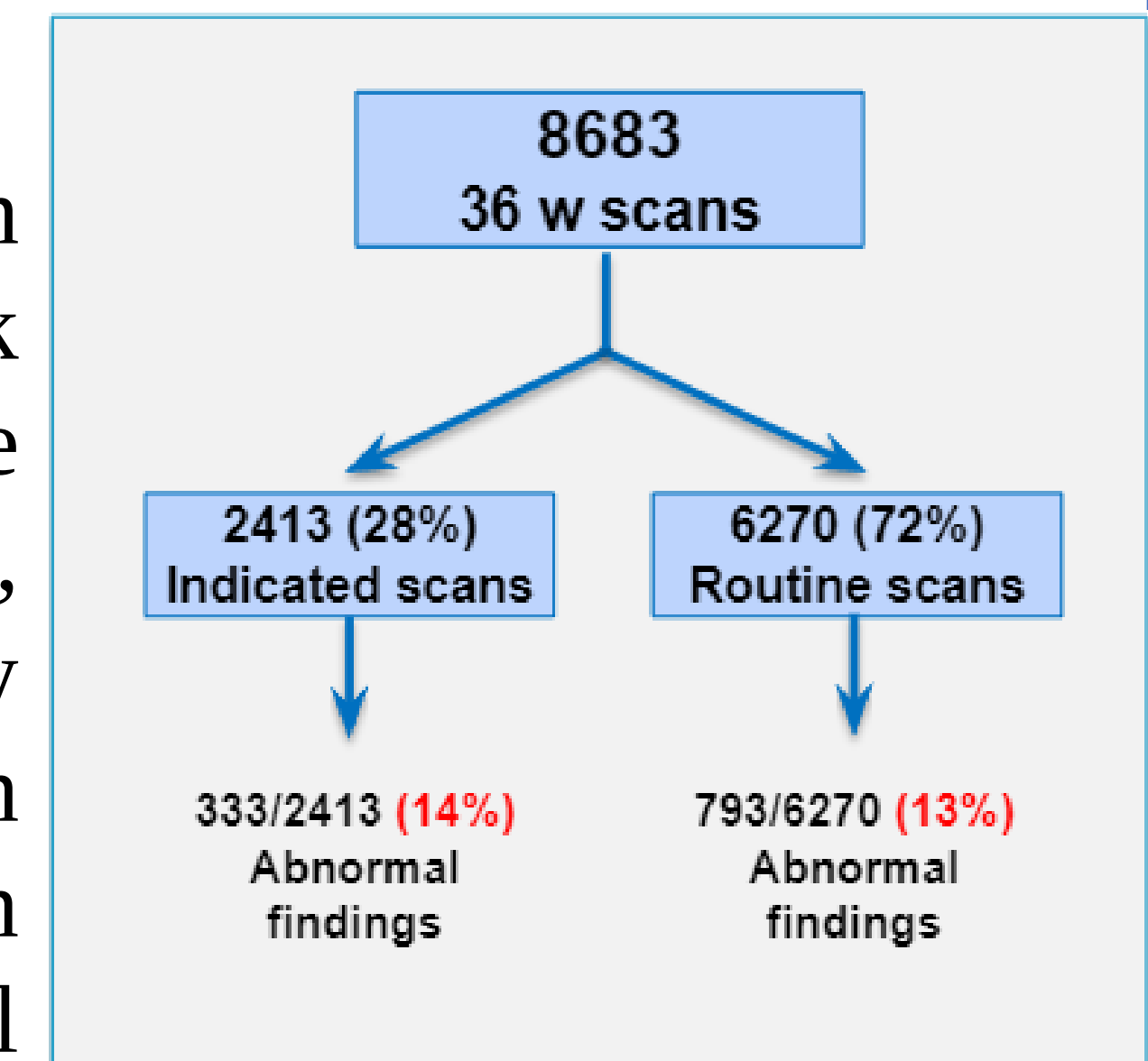


Method:

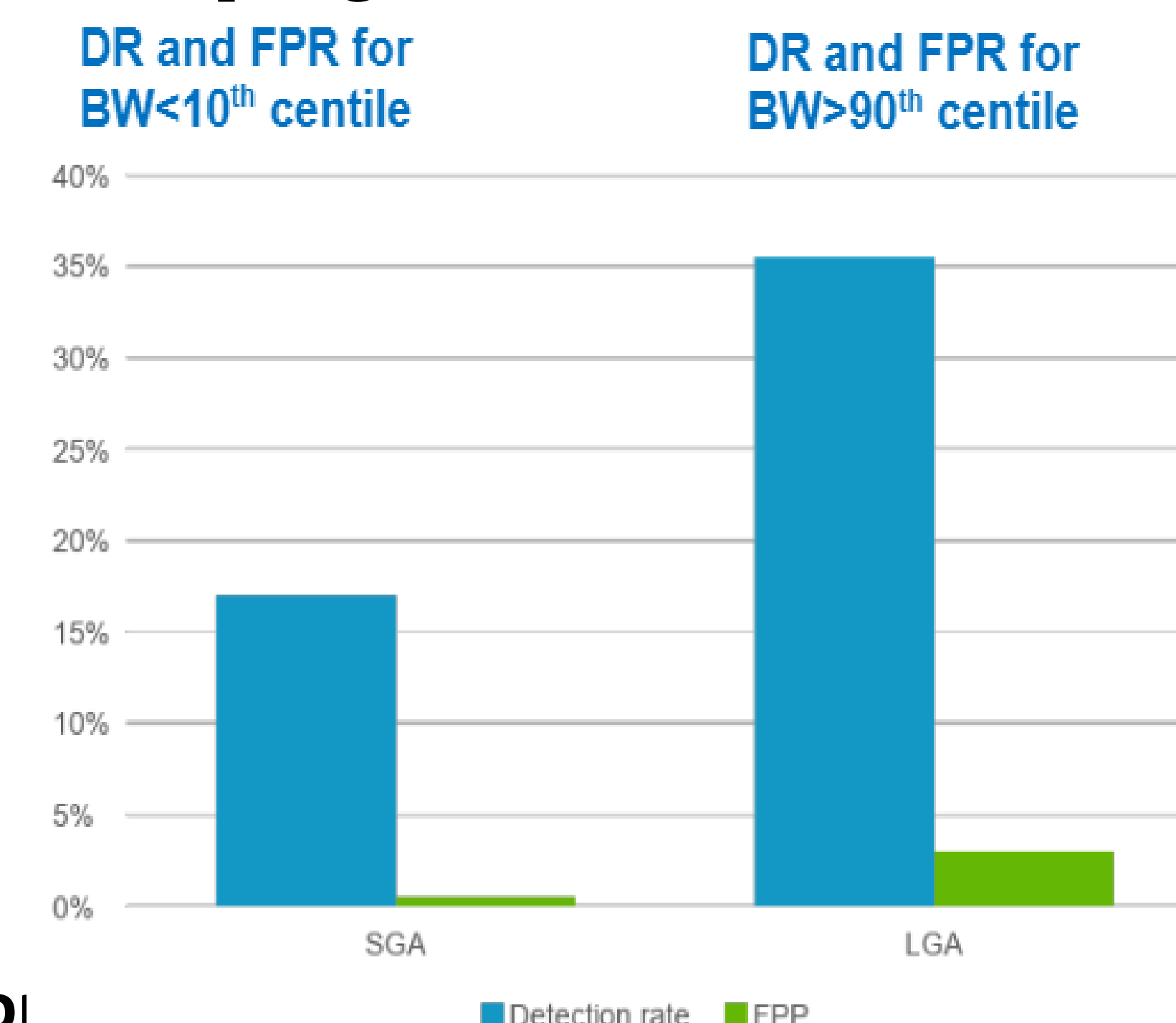
Ultrasound data were collected from the ultrasound archive system (Viewpoint 6). The EFW was plotted on customized centiles (GAP/GROW). Maternal demographics, medical history and pregnancy outcomes were collected from the hospital computerized database. Descriptive analysis was carried out using Microsoft Excel.

Results:

A total of 8683 ultrasound scans were carried out. Of these 28% were performed in high-risk (diabetes, hypertension, previous SGA etc..) and 72% in low-risk pregnancies. The incidence of SGA and LGA was 17% and 35.5% respectively. The incidence of newly diagnosed structural defects was 0.5%, including renal, brain, cardiac, gastro-intestinal, and miscellaneous abnormalities. The incidence of any abnormal findings (SGA/LGA/defects/other) was not significantly different between high-risk (12%) and low-risk (13%) pregnancies, except for polyhydramnios which was more common in the high-risk group, (18% vs 6.3%) likely because of maternal gestational and pre-gestational diabetes.

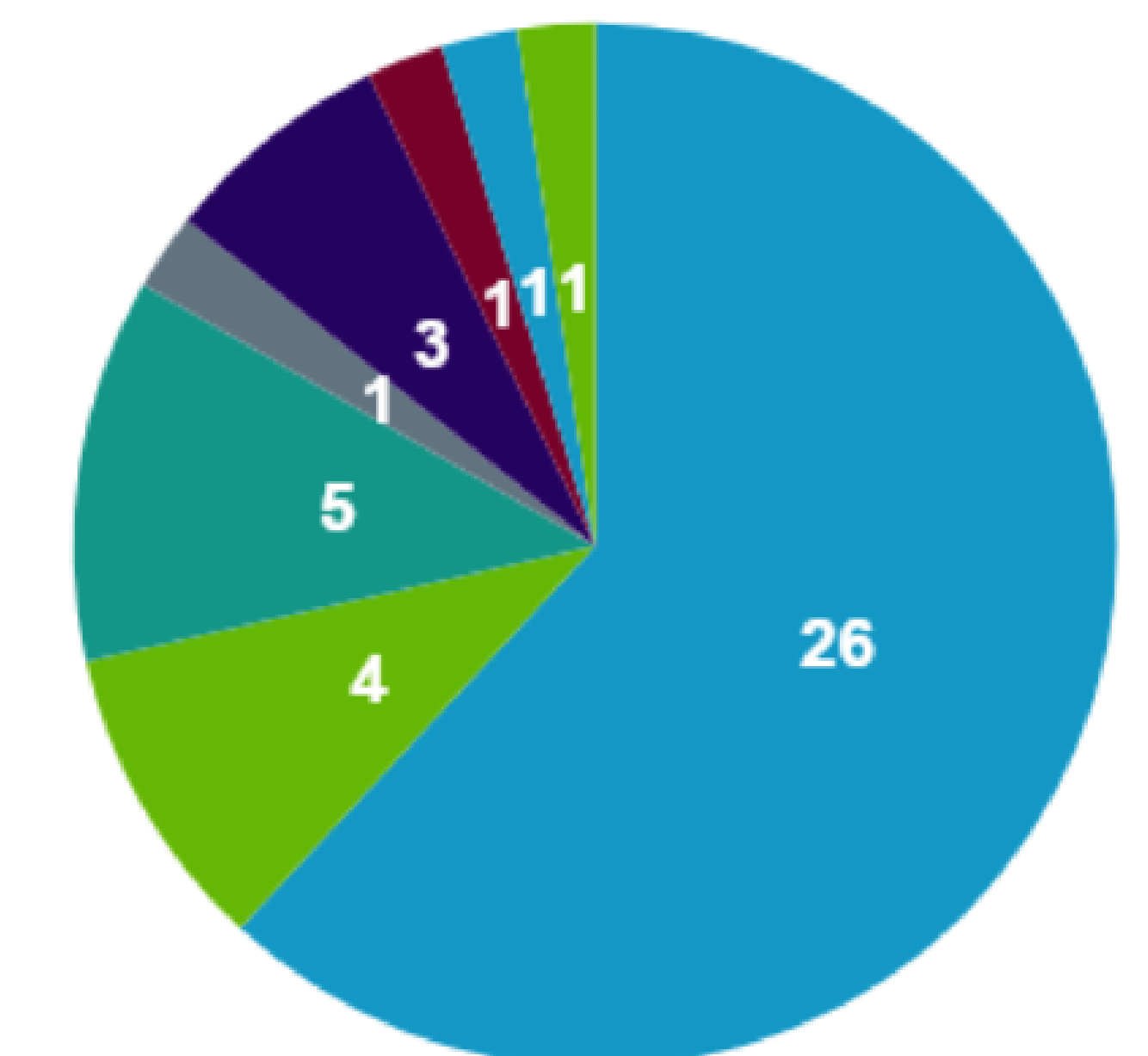


The rate of newly diagnosed defect was 0.5% (42/8683)



Legend for pie chart:

- Renal
- Brain
- Heart
- Talipes
- Fetal cyst/mass
- Hyperechogenic gallbladder
- Obstructing fibroid
- Hydrops



Conclusion

A policy of universal third trimester scan will lead to an extra scan in about 70% of the population. In our population, the incidence of abnormal findings was not significantly different between the high-risk and low-risk groups. Improved detection of SGA/IFGR, along with additional findings of late-onset defects and subsequent management (selection of timing/place/mode of delivery/postnatal follow-up) have the potential to improve perinatal outcomes.