Objectives:
In Iran the gestational age for a legal termination of pregnancy is before 19 weeks, so early diagnosis of congenital heart disease is important. Our aim is to compare the detection rates of these ultrasound methods during first trimester screening.

Methods:
After measuring nuchal translucency, ductus venosus PIV, and tricuspid flow, four chamber and three vessel views of fetal heart were obtained using HD flow and B flow. All fetuses with NT>3 mm, high risk screening results, or suspicious CHD were referred for an invasive test and a repeat fetal cardiac scan at 15+ weeks. All suspected CHD cases were also confirmed by a cardiologist. The outcome of pregnancy after delivery was recorded. 1520 fetuses were scanned, however the data of 221 fetuses with known outcome were analysed.

Conclusions:
A trained and expert examiner can screen for CHD during the first trimester ultrasound using transabdominal high-resolution transducers with either HD or B flow in an acceptable length of time and at no extra cost and a detection rate much higher than traditional ultrasound parameters, ie nuchal translucency, ductus venosus PIV and tricuspid flow. As the study is prospective and ongoing we will reanalyse our data in the future.