How to measure『Auto FS』

1: Cardiac motion of the four chamber view was recorded in B-mode.
2: ROI was set at a two-third of the ventricular wall from apex, in-to-in of the ventricular wall or septum.
3. Tracking was performed Automatically.

【Introduction & Objective】
✓ We defined fractional shortenings measure by two-dimensional tracking (2DT) technique which pursue wall motion of fetal heart as Auto FS.

(S. NAGSAKI J Med Ultrason 2019 )

✓ Objective of this study is to assess the usefulness of Auto FS by measuring normal singleton pregnancies and pathological fetus.

【Methods】
✓ Auto FS throughout gestation was studied in normal singleton pregnancies.
✓ In the fetal tachycardia case, we calculate Z score before and after transplacental treatment.

【Results】

![Scatterplots of Auto FS in 131 normal fetuses](●) & pathological fetus (before ● /after ● treatment)

Auto FS (%)

0 20 40 60 80
16 20 24 28 32 36 40

Gestational age (weeks)

Scatterplots of Auto FS in 131 normal fetuses(●) & pathological fetus (before ●/after ● treatment)

【Conclusion】
✓ Auto FS showed a trend towards a negative correlation with gestational weeks.
✓ The measurement in case of assuming that the systolic function is decreasing, and rapid heart rate were also possible.