

[EP07.04] Fetal adrenal glands: zone structure, dimensions and Doppler studies on growth-restricted fetuses

Susumu Miyashita^{1,2}, Mai Muchaku¹, Rieko Miura¹, Miyu Yamaguchi¹, Yuna Hirai¹, Shunya Funazaki¹, Saeko Hagihara¹, Yoshihito Momohara¹ and Jun Murotsuki²

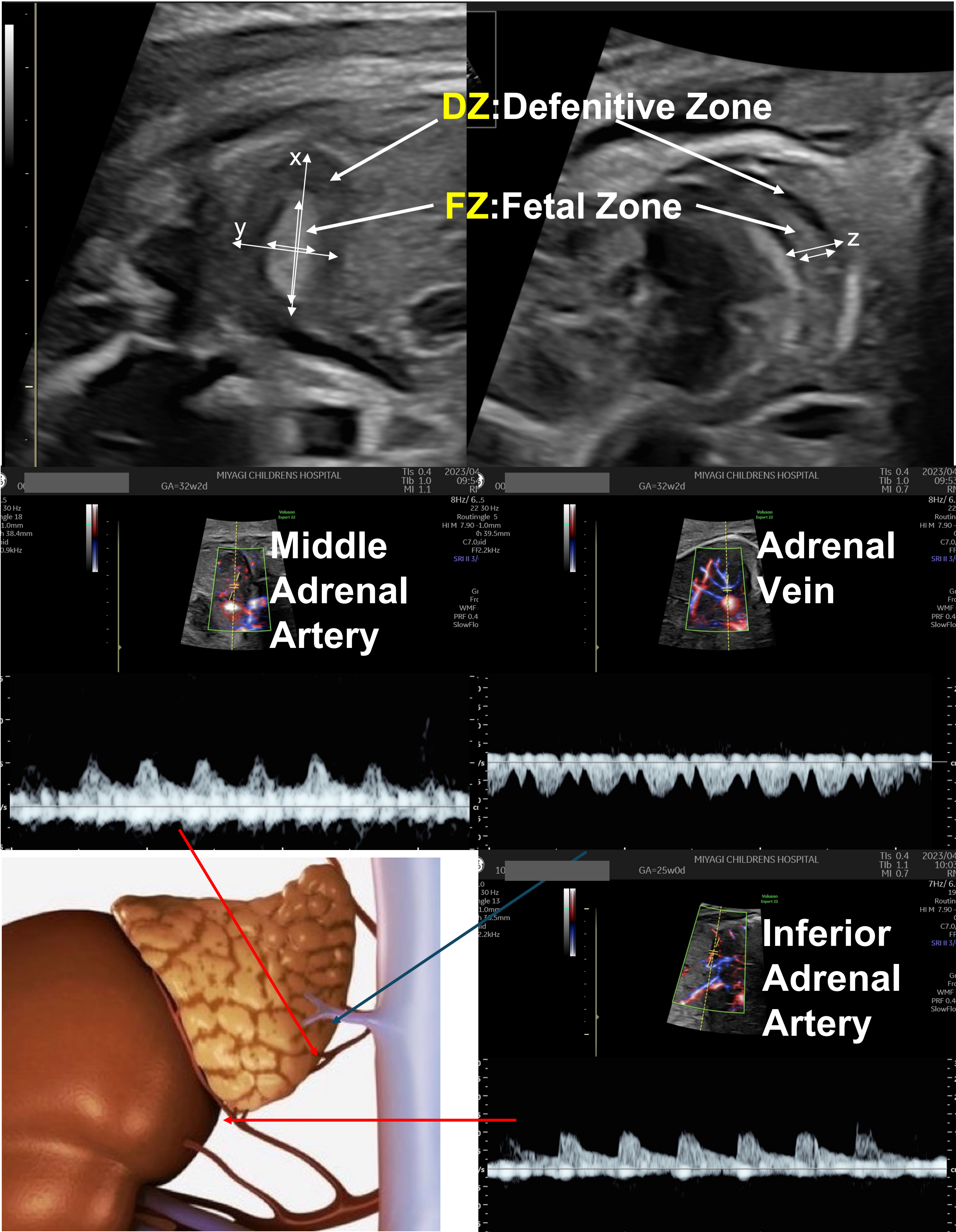
1.Division of Perinatology/ Obstetrics and Gynecology, Yokohama city Minato Redcross Hospital, 2.Division of Maternal and Fetal Medicine, Miyagi Children's Hospital, Japan.

Introduction / Background

Fetal adrenal grand – blood supply

DZ -Superior/Inferior Adrenal A.

FZ -Middle Adrenal A.



Objectives

•To investigate changes of DZ, FZ dimensions and Doppler exams in fetuses with or without FGR.

Methods

•A case-control study in Normal and FGR cases in 18 to 40 weeks.

•Exclusion: major fetal anomaly, chromosomal abnormality

•Slowflow mode on Voluson Expert 22(GE)

•Probe-near-side adrenal gland

DZ: Dx,Dy,Dz, FZ: Fx,Fy,Fz

FZ/DZ: F/Dx, F/Dy, F/Dz

MAA-PI, IAA-PI, AV-S

•Normal vs FGR: two-way ANOVA

Results

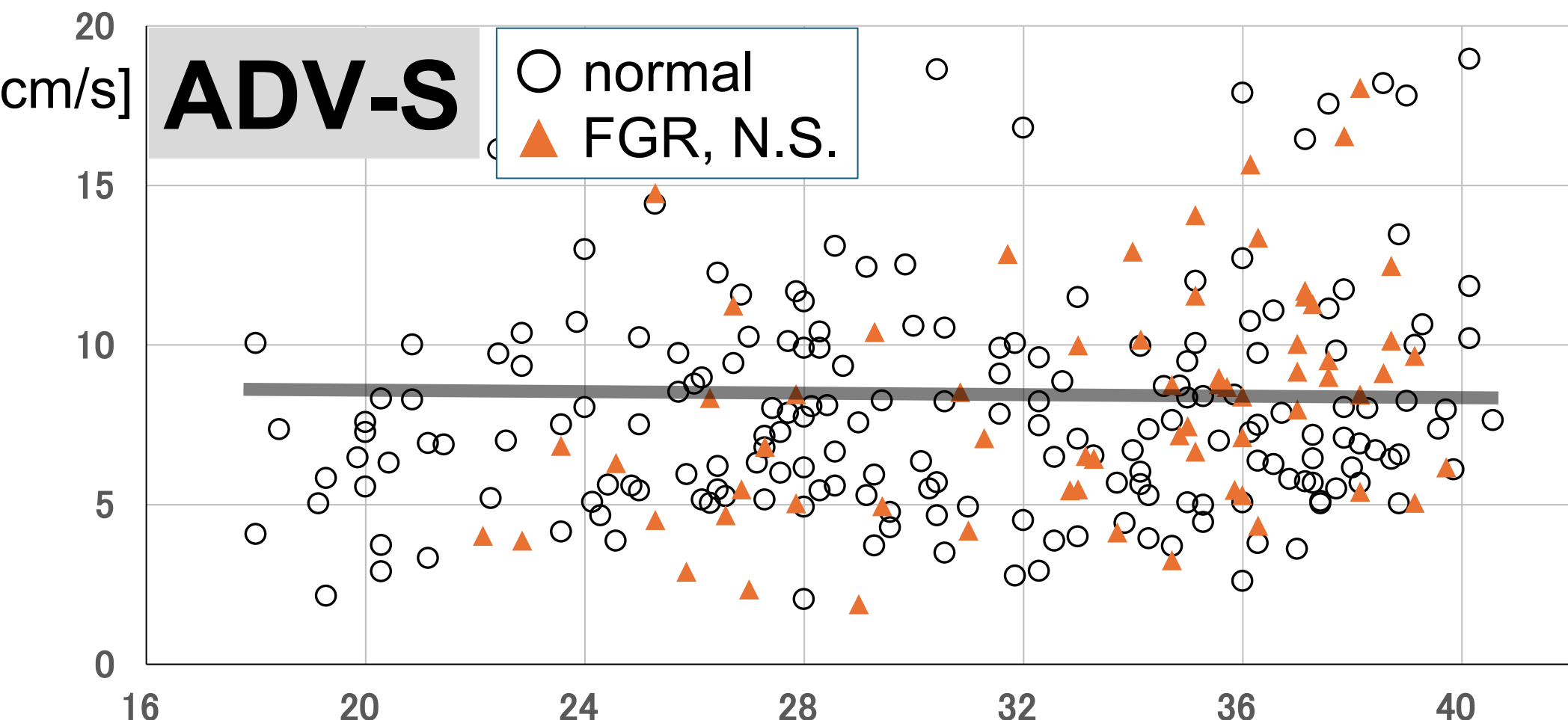
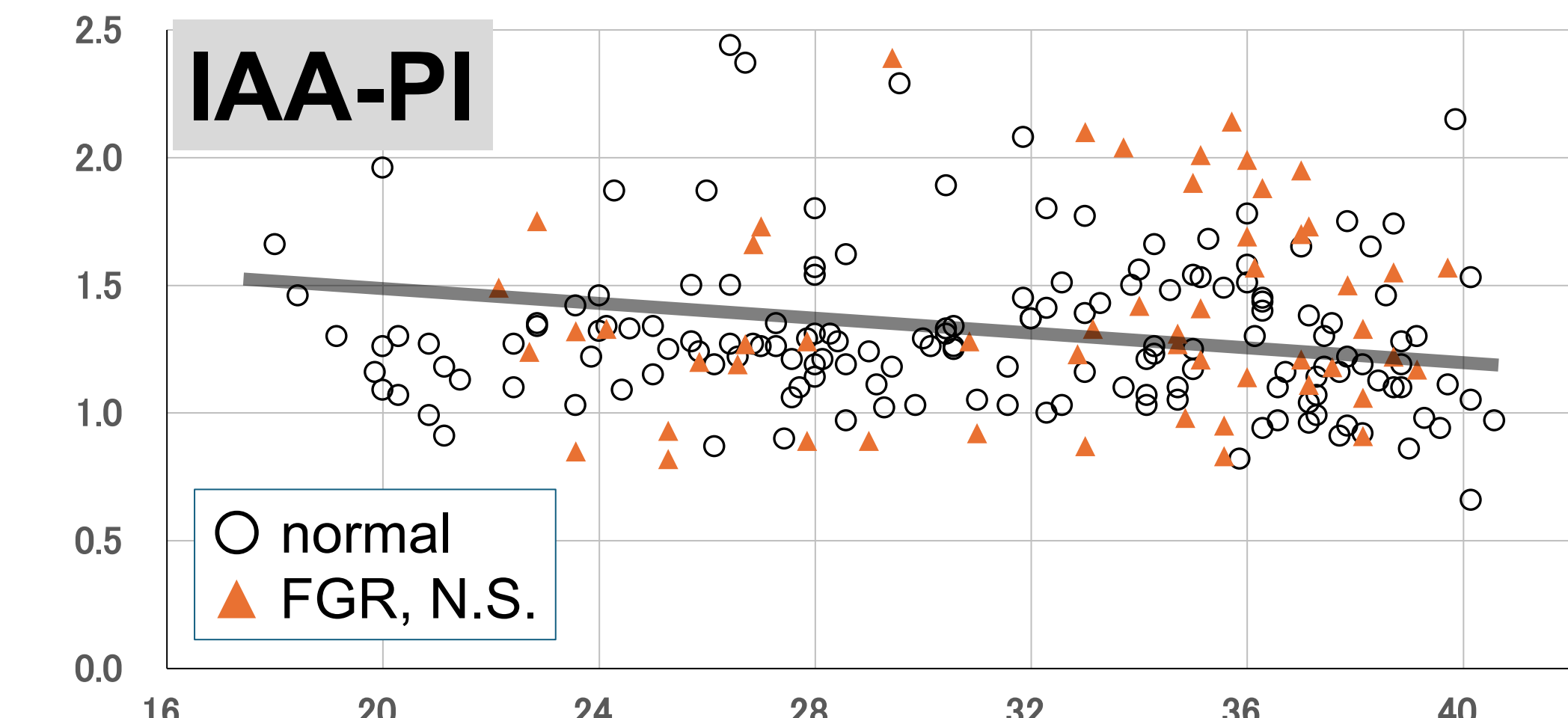
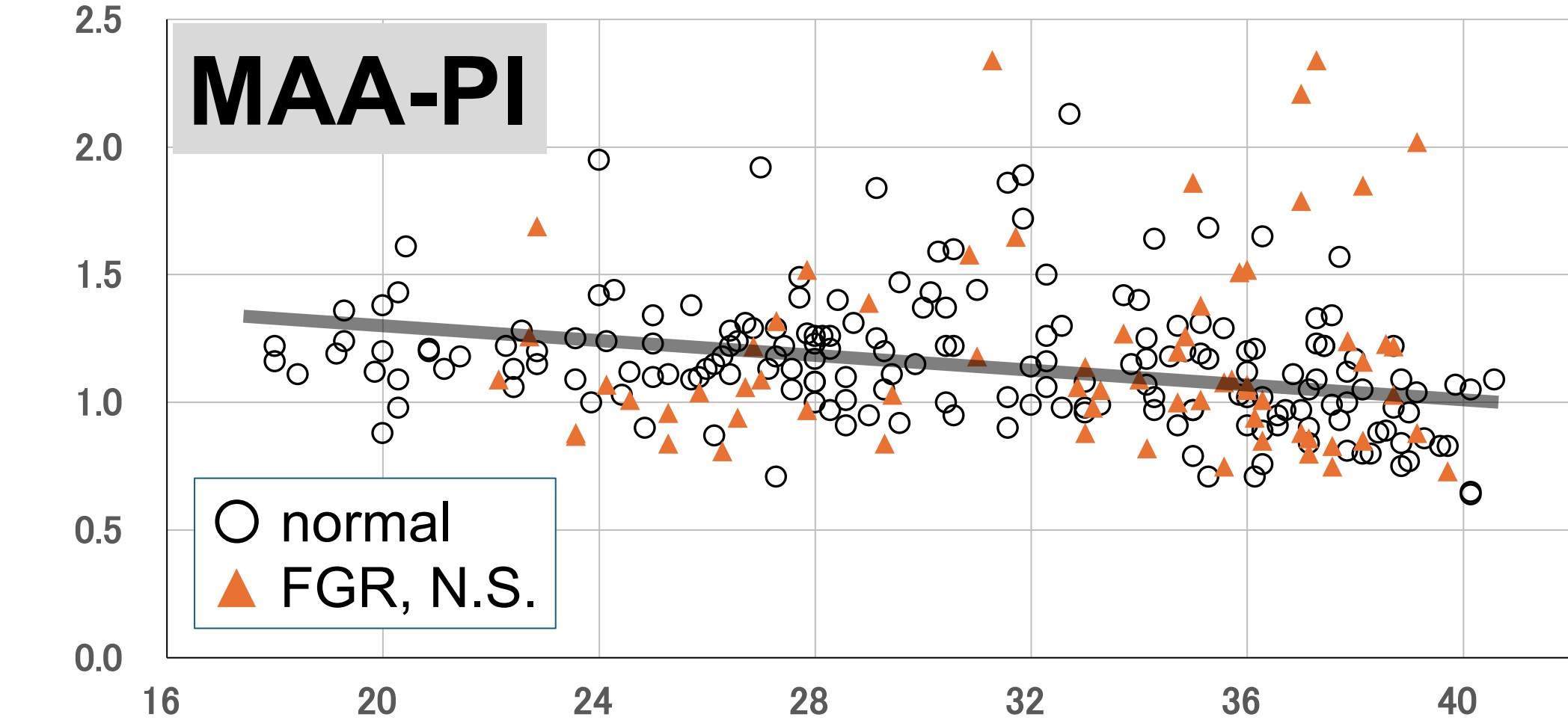
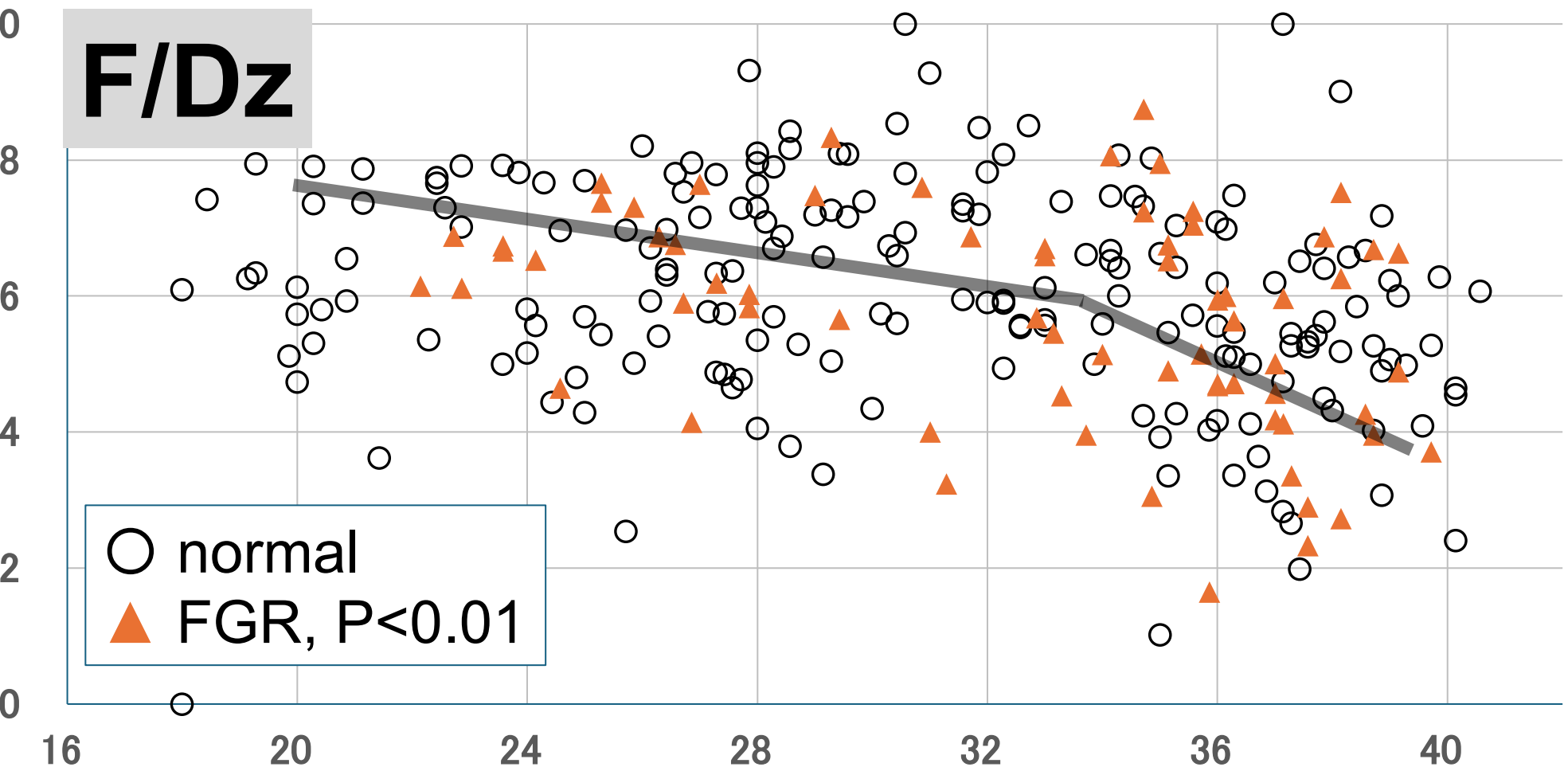
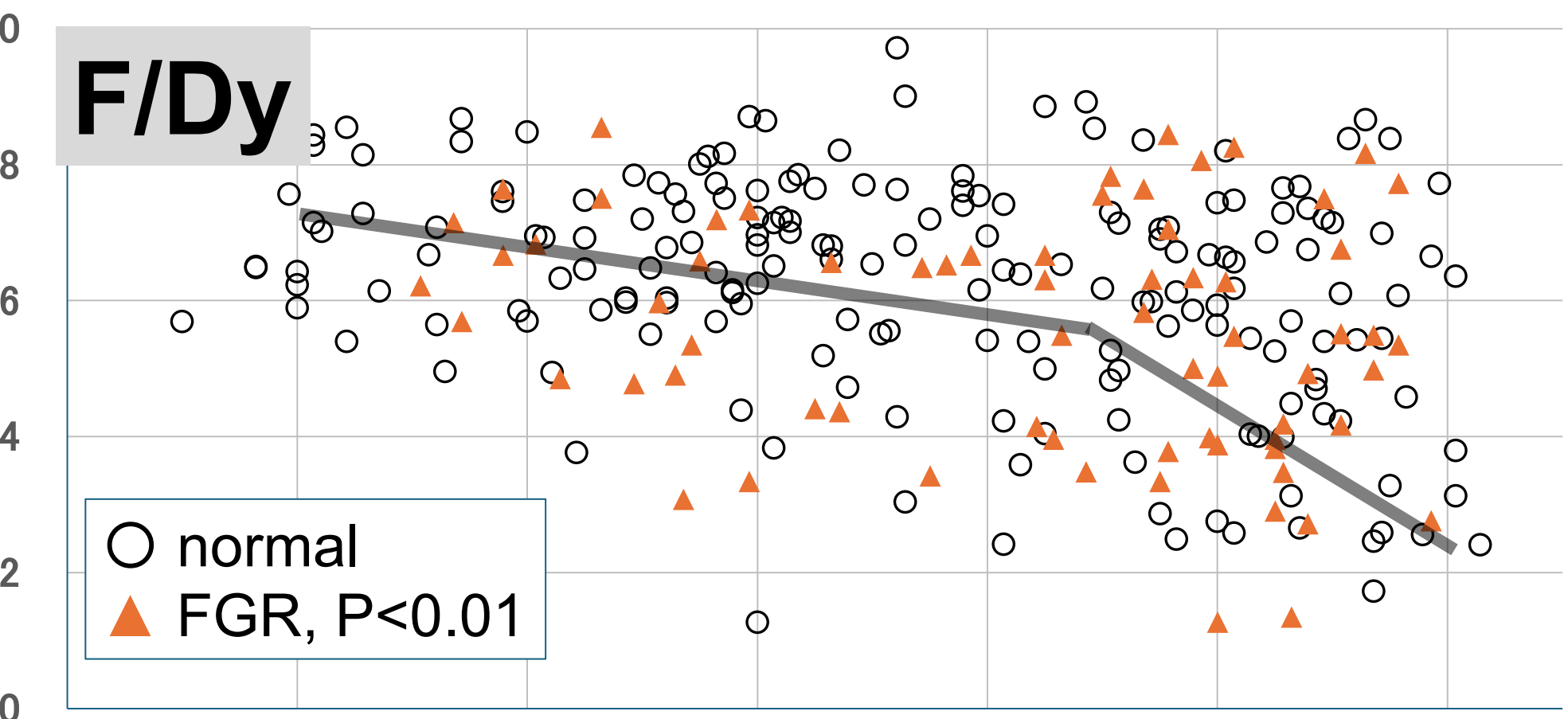
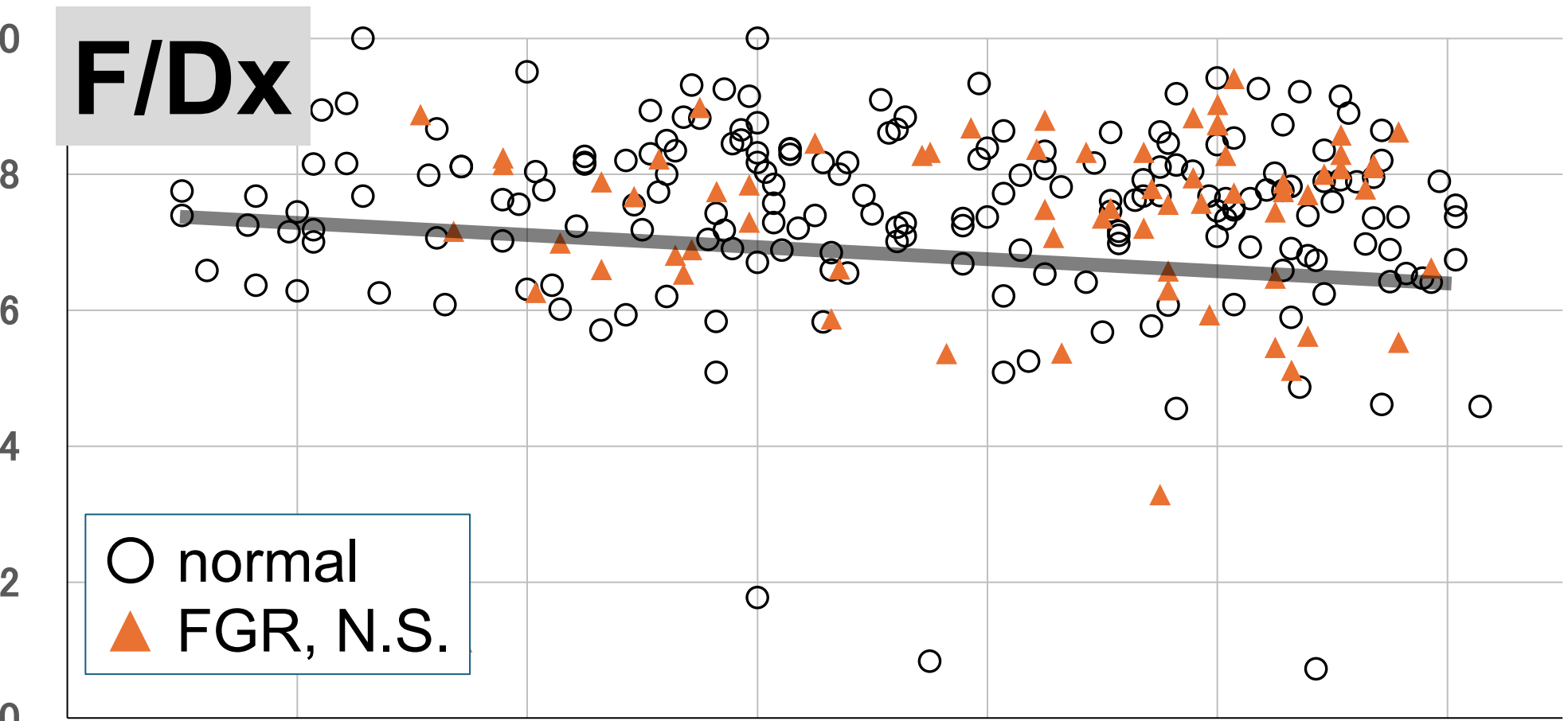
•Enrolled: 191 Normal and 68 FGR cases

•Measurement availability: 99%

•F/Dy, F/Dz: decreased after 34 weeks, lower in FGR

•MAA-PI, IAA-PI: negative correlation to GW, no difference in FGR

	normal growth			FGR		*p<0.01
	n	103		34		
		m	SE	m	SE	
GW		30.1	+/- 0.58	33.6	+/- 0.77	*
EFBW-Z		0.0	+/- 0.070	-2.3	+/- 0.050	*
AFI		14.1	+/- 0.40	11.8	+/- 0.59	*
CTAR[%]		32.2	+/- 0.39	35.8	+/- 0.83	*
UA-PI		0.99	+/- 0.024	1.13	+/- 0.084	*
MCA-PI		1.78	+/- 0.036	1.42	+/- 0.084	*
CPR		1.86	+/- 0.046	1.46	+/- 0.14	*



Conclusions

The changes in FZ/DZ, Doppler examination results suggested to represent functional maturation of fetal adrenal gland after 34 weeks.