



## Objective

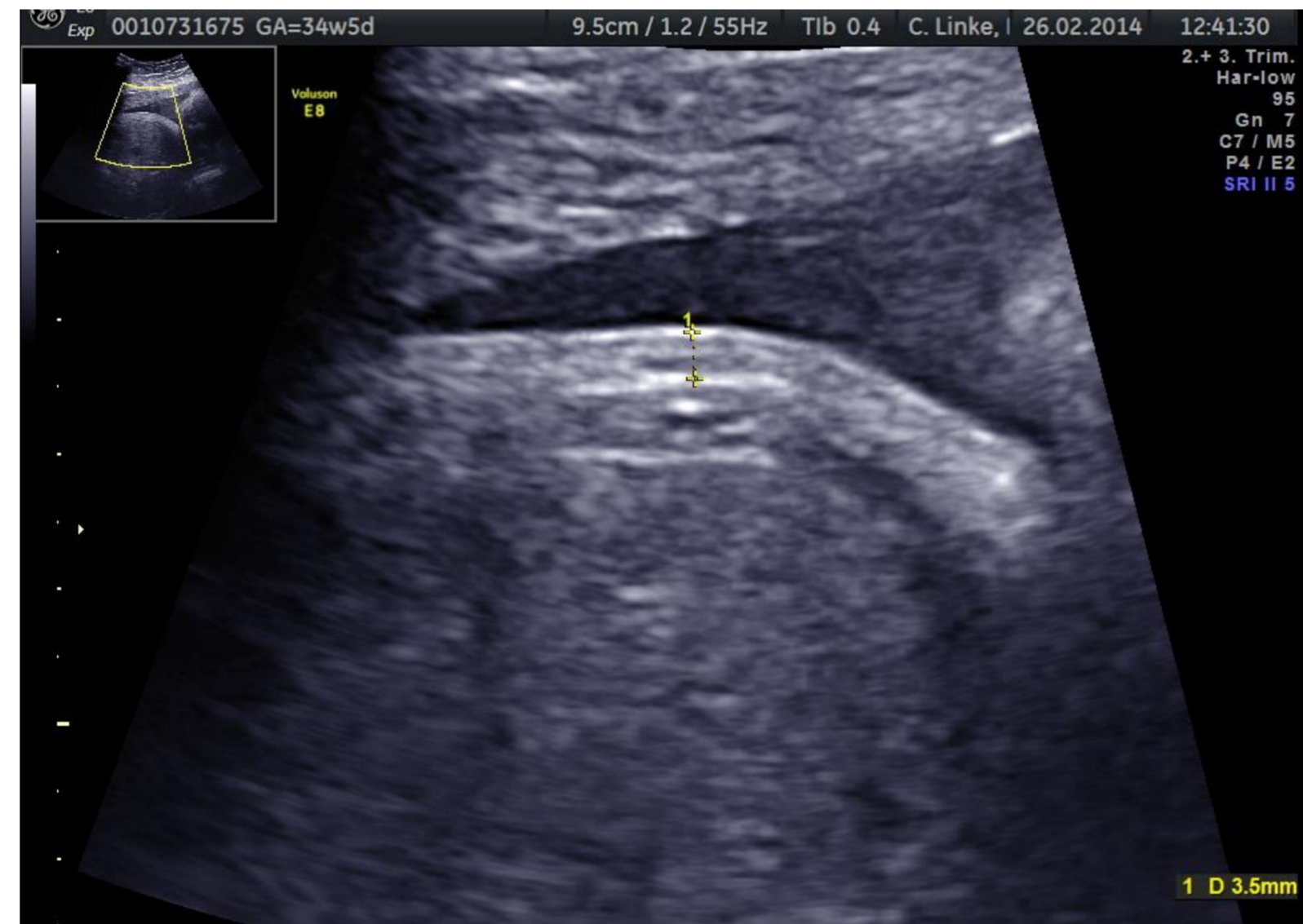
- ❖ German guidelines for the treatment of gestational diabetes (GDM) instruct physicians to involve fetal growth-parameters into the treatment of GDM. That leads to higher blood-glucose targets if the fetus' abdominal circumference (AC) grows below the 10<sup>th</sup> and to lower targets if the fetus grows above the 75<sup>th</sup> percentile.
- ❖ The thickness of the fetal fat layer (FFL) has been claimed to be another marker, an even more sensitive and non-invasive one, reflecting the nutritional state of the fetus.
- ❖ The aim of this study was to evaluate the association of the abdominal circumference, fetal fat layer and estimated fetal weight (EFW) with the treatment and outcome of patients with GDM.

## Methods

- ❖ Data on fetal growth and neonatal outcome were collected prospectively in 466 patients being treated for GDM in 2012-2014 at our outpatient department.
- ❖ 56% of women on dietary control and 44% requiring insulin therapy
- ❖ Data were analyzed using SPSS Version 22.  $p < 0,05$  were considered to be significant. Mann-Whitney-U-Test and  $\chi^2$  were used to compare independent variables, such as group differences.



US diagnostic at the „Kompetenzzentrum“



Measurement of the Fetale Fat Layer (mm)

## Results

- ❖ AC, EFW and FFL increased linear with gestational age.
- ❖ FFL raised linear between 24 and 40wog (weeks of gestation) from 2.3mm to 4.2mm in our cohort.
- ❖ Insulin therapy started at an average of 28.7wog.
- ❖ At 30wog and 34wog FFL-values were significantly discriminating pregnancies requiring insulin therapy from those on dietary control.
- ❖ AC differed significantly at 28wog and 36wog.
- ❖ No significant differences concerning EFW were found at any week of gestation.

## Conclusion

- ❖ Our results implicate that measurement of the fetal fat layer in combination with the abdominal circumference is a useful parameter to monitor treatment in patients with GDM and furthermore reveals first evidence, that the fetal fat layer between 30 and 32wog might discriminate patients who need insulin from those who do not.
- ❖ We did not find EFW to be associated with therapeutic needs.

