

## Ultrasound diagnostics

### **Examination in the 2nd trimester (precise diagnostics, organ screening, malformation ultrasound)**

The advanced ultrasound examination in the 2nd trimester goes far beyond the requirements set out by the maternity guidelines during this period and, besides assessing timely development, the observable organs inc. the child's heart, the amount of amniotic fluid and the placenta, also includes examining the supply to the child and mother. The primary aim of the examination is to reassure you by providing documentation of a normal development of your child. In case of abnormalities, the exact diagnosis can set the right course with regard to further monitoring, delivery and postnatal care. Even in conflict situations we will be by your side with sound specialist knowledge, working together with our cooperation partners, specialists in paediatrics, paediatric cardiology and neonatology. However, despite taking the utmost care, not all physical or genetic anomalies (e.g. chromosomal abnormalities) can be ruled out through ultrasound diagnostics. On the other hand, abnormalities found during organ diagnostics do not necessarily have to lead to an impairment to life after the birth.

### **Foetal echocardiography**

The child's heart is the organ most frequently affected by malformations. If detected in good time, the prognosis is very good in the vast majority of cases these days. The prenatal examination of the child's heart requires, besides special high-resolution equipment, great experience on the part of the examiner. By means of targeted echocardiography and with the aid of special ultrasound technologies, such as colour Doppler, pulsed Doppler, M-mode and 3D technology (STIC), approx. 85 % of all congenital heart defects can be detected. Together with our cooperation partners (conservatively and operationally active cardiologists e.g. from the German Heart Centre in Munich), we want to give affected couples comprehensive and interdisciplinary information and provide the new-born baby with the best possible care.

### **Foetal Doppler ultrasonography**

Doppler ultrasonography is a method during which the blood stream speed is measured in the mother's and/or baby's (foetal) vessels. This indirectly gives indications as to whether the baby is being adequately supplied with nutrients and oxygen in the womb.

Measuring the flow of blood using Doppler ultrasonography is in no way different for the pregnant woman and unborn baby than a standard ultrasound scan. If abnormalities are detected early, prevention measures and appropriate checkups can be arranged.

The extra information gained also helps, in case of a high-risk pregnancy or abnormal growth of the child, to estimate the right time for the baby's birth.

### **3D sonography**

3D/4D sonography is a technical extension to conventional sonography. During this procedure, not only cross-section images but volume information can be gleaned. Using various techniques, these volumes allow more precise and better attributable details in a spatial sense to be extracted. Furthermore, so-called surface rendering enables the foetus to be depicted realistically. All this can lead to a plus in diagnostic information.

### **Does ultrasound have side effects?**

"All scientific studies as well as the clinical experience with sonography, which is now 40 years old, have confirmed that there are no side effects from the ultrasound energy used in medical diagnostics. The examination of pregnant women and children is also free of risk." (German Society for Ultrasound in Medicine). This is particularly true when the examination is done taking account of the corresponding technical requirements and specific expertise