Our prematurity-prevention-program was at first intended for physicians. It is based on an anamnestic assessment of prematurity risk, the early detection of warning signs (including regular measurement of the vaginal pH) and, if necessary, the appropriate therapeutic measures. It should start as early as possible after pregnancy has been diagnosed. In cases of disturbance of the vaginal milieu (only pH increase) a therapy with lactobacillus acidophilus preparations is mostly successful. In cases of bacterial vaginosis however local therapy, for example with metronidazol or clindamycin, is undertaken, and in other infections specific treatment.
DESIGN AND METHOD:. As an additional measure we developed the self-care program for pregnant women which has been in use since 1993.The pregnant women receive information about risk factors and warning signs of prematurity and recommendations to measure their vaginal pH twice a week (with an indicator strip or indicator coated test-glove). She should see her doctor if the vaginal pH is elevated to more than 4.4 or any other of the warning signs occur. In our own study we had 1120 multiparae and we compared the outcome of the pregnancy with self-care activities with the outcome of the immediate previous pregnancy. Our program was then used in two prospective projects in Erfurt (Capital of Thuringia, Germany) and afterwards in the entire state of Thuringia. In Erfurt half of the practitioners motivated patients to take part in the self-care activities (no. of births: 381). All patients in Erfurt who did not take part served as control group (no. of births: 2341). In Thuringia during the first half of the year 2000 the women served as control (no. of births: 7870) and in the second half of 2000 the doctors in Thuringia encouraged their patients to take part (no. of births: 8406).
RESULTS: In all studies the rate of premature births could be considerably reduced. Most interesting are the results of the children at particularly high risk: In our collective the rate of very low birthweight infants (<1500 g) could be reduced from 7.8% in the immediate previous pregnancy to 1.3%. In Erfurt the rate of very early prematures (< 32+0 gw) amounted to only 0.3% in contrast to 3.3% in the control group. In Thuringia the rate of infants born <32+0 gw was reduced from 1,58 % to 0.99% respectively in infants < 1000g from 0.61% to 0.38%.
CONCLUSION: The self-care program for pregnant women proved to be a very efficient method for the prevention of prematurity and should be recommended to every pregnant woman. In cases where this is not possible, at least the doctors and midwives should measure the vaginal-pH at each prenatal care examination.

L65

THE ROLE OF CERVICAL ULTRASOUND IN THE MANAGEMENT OF PRETERM LABOR.

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Background : Different strategies have been developed to refine the risk of preterm delivery in asymptomatic patients. Transvaginal sonography (TVS) has been used in this indication to measure and examine the length and shape of the cervix.
TVS of the cervix in clinical studies conducted in asymptomatic women at high risk of preterm delivery: Three ultrasound signs are suggestive of cervical incompetence : Dilatation of the internal os (I.O.); saculation or prolapse of the membranes into the cervix (with shortening of the functional cervical length), either spontaneously or induced by transfundal pressure; and/or short cervix in the absence of uterine contractions. TVS has clearly demonstrated that cerclage leads to a measurable increase in cervical length which may contribute to the success of this procedure in reducing the risk of preterm delivery. Several non-randomized interventional studies among patients with cervical incompetence have been published. They have defined a new group of patients requiring cerclage when they show progressive cervical modifications on TVS. In other studies, cerclage performed on the basis of cervical changes on TVS did not prevent premature delivery. One prospective randomized trial in asymptomatic high-risk women has shown 2 benefits in cerclage following TVS indications : i) this would generate less prophylactic cerclages in high risk women; and ii) therapeutic cerclage before 27 weeks may reduce the incidence of premature delivery before 34 weeks.
TVS of the cervix in clinical studies among patients at low risk of preterm delivery:
The risk of preterm delivery is inversely correlated with the cervical length. Routine TVS of the cervix

performed between 18 and 22 weeks can help identify patients at risk of preterm delivery. However, given the low prevalence of preterm births, screening would generate either a high false positive rate or a low sensitivity. One non-randomized interventional study among patients with a short cervix on routine ultrasound examination found a lower risk of delivery before 32 weeks in the cerclage group than in the expectant management group. However, the only prospective randomized trial published in a low risk population has shown that cerclage of a modified cervix on TVS in the second trimester did not improve perinatal outcome.
Conclusion: Although the level of evidence is still low, there does appear to be a benefit in performing a cerclage rather than continuing with expectant management in cases with ultrasound appearance of cervical incompetence. Ultrasound can be offered to reduce the indications of cerclage in cases where the situation is uncertain.
Within the general obstetric population, TVS might help selecting asymptomatic but high risk women, however, the benefit associated with cerclage for sonographic indication is not demonstrated.
Key-words : Preterm labor. Preterm delivery. Cervical length. Cervical incompetence. Cerclage. Ultrasound

L66

PREMATURITY AND PREVENTION: IS IT FEASIBLE?
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Preterm birth, especially at gestational ages less than 33 weeks is the major cause of neonatal mortality and late morbidity as well. In the last two decades major improvements have been achieved in the field of management both on the obstetrical and neonatological side. Consequently the mortality rate has been strongly reduced but unfortunately the same success has not been always observed as afr as handicaps rate in survivors is concerned.Moreover it has been pointed out that the positive trend observed in the first half of the last decade has stopped and no major progresses have been noticed after 1995. Therefore it is crucial to prevent the premature birth.Unfortunately the rate of babies born at very early gestational ages seems to be increasing mainly due to the increasing number of multiple pregnancies fro IVF programs and a better detection of fetal compromise inducing iatrogenic premature birth. Prevention's programs can be applied with success when dealing with one particular possible cause but, due the multiplicity of aetiological factors,preventive programs directed toward a general population have offered unsatisfactory results. Among the many factors responsible of premature births socioe-economic conditions play a principal role and any effort should be directed toward removing the unfavourable situations.From the neonatological point of view the availability of technical resources adequate for assisting these fragile babies is necessary to improve at least the mortality rate.The clinical and ethical implications must be evaluated.

L69

A NEW NON INVASIVE METHOD FOR THE PREDICTION OF FETAL LUNG MATURITY
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We have observed by ultrasound (US) technology recurrent patterns in respiratory behaviour during the study of fetal breathing movements (FBMs) related with pulmonary maturity/immaturity. We aimed to correlate these findings with fetal lung maturity (FLM) tests currently performed in our institution in order to validate the hypothesis that some FBMs patterns may correspond to FLM, independent from gender, weight and gestational age. We enrolled 39 high risk pregnancies in whom a complete US study of FBMs was performed and correlated to FLM tests. All women delivered by cesarean section within one week from amniotic fluid sampling. US-FLM was defined as presence of nasal fluid flow velocity wave-