ABSTRACT BOOK

All abstracts are accessible via http://mondial-congress.com/en/isidog17

Organising committee
Congress President: Ljubomir Petricevic, MD
President of ISIDOG: Gilbert Donders, MD
President of ESIDOG Austria: Herbert Kiss, MD, MBA

in cooperation with the Austrian Society of Obstetrics and Gynaecology

Congress secretariat & Abstract handling
Mondial Congress & Events
Operngasse 20b
1040 Vienna, Austria
Tel.: +43 1 58804 172
e-mail: isidog2017@mondial-congress.com

Organising & scientific secretariat
ESIDOG Austria
Department of Obstetrics and Gynaecology, MUV
Secretary: Philipp Pappenscheller
Waehringer Guertel 18-20
1090 Vienna, Austria
Tel.: +43 1 40 400-28810
e-mail: isidog2017vienna@esidog.at
Web: www.esidog.at

Conference website
The conference website is www.mondial-congress.com/isidog2017
OC01
Infectious versus clonal high-risk human Papillomavirus (HPV) DNA prevalence in pregnant women

Depuydt C, Verstraelen L1, Beert J1,4, Vanden Broeck D1, Bosmans E1, Salembier G1, Donders G1,2
1Aml, Sonic Healthcare Belgium, Antwerp, Belgium,
2Department of OB/Gyn Antwerp University, Antwerp, Belgium,
3Femicare vzw, Tienen, Belgium, 4Intermediate Structure Human Body Material, Sonic Healthcare Belgium, Antwerp, Belgium

Background
HPV-infection is one of the most common viral infections of the female genital tract. In its natural history, the HPV-virions can induce two different pathways: 1) infectious virion producing pathway, leads to transient virion-production, transmission of infection, and temporal male and couple subfertility, but does not cause cervix cancer. 2) clonal transforming pathway can lead to cervical dysplasia and cancer. Only a limited number of studies investigated the influence of HPV on fertility and its impact remains controversial. We recently showed that infectious HPV-positive women were 6x less likely to become pregnant after IUI. In this study, we investigated the infectious versus clonal HPV-type specific prevalence just before conception.

Methods
Laboratory-based, retrospective study (01/2006-07/2017) by crosslinking the AML Down-screening registry with the cervical cancer screening and diagnostic follow-up database to identify women who were 10-12 weeks pregnant (moment of first trimester Down-screening) and who had liquid-based cytology smear and HPV-testing performed at 1 day to 4 months before conception. All cervical samples were tested for the presence of HPV-DNA with a clinically validated type-specific quantitative HPV-test (HPV-types: 6,11,16,18,31,33,35,39,45,51,52,53,56,58,59,66,67 and 68).

Results
Of the 122996 women that underwent first trimester Down screening during that period, 41539 (33.8%) also had a smear with HPV genotyping. The high-risk HPV prevalence was 26.2% (10889/41539), and 1/3 of the infections were clonal.

Discussion
Prevalence of total, clonal and infectious HPV infections will be compared with other groups. Type-specific differences will be highlighted. The possible impact on fertility and cancer screening will be discussed.

OC02
Influence of age on histologic outcome of cervical intraepithelial neoplasia: results from a large cohort, systematic review and meta-analysis

Bekos C1, Grimm C1, Joura E1, Horvat R2, Reinthaller A1, Polterauer S1
1Medical University Vienna, Comprehensive Cancer Center, Department of Obstetrics and Gynecology, Division of General Gynecology and Gynecologic Oncology, Vienna, Austria, 2Medical University Vienna, Department of Pathology, Vienna, Austria

Age is one of the crucial factors influencing the natural history of cervical intraepithelial neoplasia (CIN). Aim of this study was to investigate the histologic outcome of CIN during observational management in young women. This analysis included 783 women presenting with CIN at our outpatient clinic between 2006 and 2010. At least one colposcopically guided biopsy (CGB) for histologic diagnosis had to be obtained and observational management for at least three months was mandatory. The histologic findings of initial and follow-up visits were collected and rates of persistence, progression and regression were assessed. Uni- and multivariate analyses were performed. In addition, a systematic review of the literature and meta-analysis of published data was performed. In our cohort CIN I, II, and III was diagnosed by CGB in 42.5%, 26.6% and 30.9%, respectively. Younger patients had higher rates of regression (p<0.001) and complete remission (<0.001) and lower rates of CIN progression (p=0.003). Among women aged <25, 25<30, 30<35, 35<40, and >40 years, regression rates were 44.7%, 33.7%, 30.9%, 27.3%, and 24.9%, respectively. Pooled analysis showed two different pathways. 1) infectious infection is one of the most common viral infections of the female genital tract. In its natural history, the HPV-virions can induce two different pathways. 2) infectious virion producing pathway, leads to transient virion-production, transmission of infection, and temporal male and couple subfertility, but does not cause cervix cancer. 2) clonal transforming pathway can lead to cervical dysplasia and cancer. Only a limited number of studies investigated the influence of HPV on fertility and its impact remains controversial. We recently showed that infectious HPV-positive women were 6x less likely to become pregnant after IUI. In this study, we investigated the infectious versus clonal HPV-type specific prevalence just before conception.

Methods
Laboratory-based, retrospective study (01/2006-07/2017) by crosslinking the AML Down-screening registry with the cervical cancer screening and diagnostic follow-up database to identify women who were 10-12 weeks pregnant (moment of first trimester Down-screening) and who had liquid-based cytology smear and HPV-testing performed at 1 day to 4 months before conception. All cervical samples were tested for the presence of HPV-DNA with a clinically validated type-specific quantitative HPV-test (HPV-types: 6,11,16,18,31,33,35,39,45,51,52,53,56,58,59,66,67 and 68).

Results
Of the 122996 women that underwent first trimester Down screening during that period, 41539 (33.8%) also had a smear with HPV genotyping. The high-risk HPV prevalence was 26.2% (10889/41539), and 1/3 of the infections were clonal.

Discussion
Prevalence of total, clonal and infectious HPV infections will be compared with other groups. Type-specific differences will be highlighted. The possible impact on fertility and cancer screening will be discussed.
OC03

Correlation between Human Papillomavirus and premature birth

Suciu N1,2, Cretoiu D1,3, Suciu I2, Bacalbasa N1, Toader O2
1Department of Obstetrics and Gynecology, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania,
2Alessandrescu-Rusescu National Institute for the Health of Mother and Child, Bucharest, Romania,
3Department of Cellular and Molecular Biology and Histology, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

Background.
A lot of data are indicative of a correlation between Human Papillomavirus (HPV) infection and a higher incidence of premature rupture of the membranes (PROM) and preterm birth (PTB). Nowadays there are over 150 HPV related viruses, some were detected in the cervix and placenta. Several studies showed that cervical infection of HPV is a risk factor for PTB and there are statistically significant associations of placental abnormalities in HPV infected women and therefore cervical cytology might be effective in predicting pregnancy outcome. However, there is still controversy regarding an association between HPV infection and preterm birth.

Methods.
Therefore, we conducted a literature review based on the study of the electronic database from the PubMed® / MEDLINE® Web of Science and Embase databases (2002-2016), as well as Cochrane Database sources.

Results.
We found that there is evidence of a significant association between HPV infection and PTB. Moreover, a possible placental transfer of maternal antibodies (and their protective role) was observed in anti-HPV-vaccinated pregnant women.

Conclusions.
Our data suggest that HPV infection might increase the risk of PTB but further studies are needed to guarantee the role of HPV in PROM and PTB. Several decades will pass until we will be able to outline if HPV vaccination has contributed to a decrease in PROM and PTB.

OC04

Association between multiple HPV infection, HPV E6/E7 expression and cervical precancerous lesions severity

Jermakova I1, Rezeberga D1,2, Egrite L1, Liepniece-Karele I1,2, Zodzika J1,2, Plisko O1,2, Kroiča J1, Sīviņa D2
1Riga Stradiņš University, Riga, Latvia, 2Riga East Clinical University Hospital, , Latvia

Background
Role of persistant HPV infection in development of precancerous lesions is essential and correlation of multiple HPV infection with E6/E7 mRNA expression is shown in some studies (Anderson 2012). There are no studies in Latvia on high risk (HR) HPV profile and E6/E7 mRNA expression in patients with cervical intraepithelial neoplasia.

Methods
97 women aged 18-65 with abnormal cytology referred for colposcopy during their first visit to Reference Colposcopy Centre in Riga East Clinical University Hospital in July 2016-July 2017 were included in the study. Results of material from cervix for presence of HR HPV DNA types 16/18, 31, 33, 45, 58, high risk HPV E6/E7 common RNA and histology after punch biopsy taken under colposcopy control were analyzed for each patient. HPV types and HPV RNA E6/E7 oncoproteins were identified by real time PCR test.

Results
Will be presented

Conclusions
Will be presented.
P01
HPV and human reproduction

Suciu N1,2, Dragodan V1, Suciu I2, Pop L, Toader O1,2
1Department of Obstetrics and Gynecology, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania,
2Alessandrescu-Rusescu National Institute for the Health of Mother and Child, Bucharest, Romania

Background.
HPV - STDs, is a health problem because of its growing dissemination potential and pathology it entails in the human genital tract. Studies have assumed that HPV plays a significant role in the human natural and medically assisted reproduction. In men, HPV can decrease spermatozoa motility, can cause of asthenozoospermia, can induce fragmentation of cellular DNA and seems to induce changes in the pH of the seminal fluid. HPV-DNA, in the seminal fluid, can be transmitted to the oocytes, expressed in the blastocyst and can induce trophoblastic apoptosis with reduced endometrial implantation of the trophoblast and with a high risk of spontaneous abortion. HPV, transmitted during pregnancy, can induce premature rupture of membranes and premature spontaneous delivery. In cases of artificial insemination and in vitro fertilization, the negative impact of genital HPV infection is currently under evaluation.

Methods

Results
Studies have described HPV as infectious agents with potential to alter fertility. Research suggests the first way seems to be correlated with modified fertility in both sexes. The adverse reactions, reported in different cells of the genital tract, in spermatozoa, oocytes and blastocyst, seem to be correlated with the infecting HPV genotype.

Conclusions
The clarification of the HPV infection of spermatozoa and the transmission of HPV to the oocytes and to the blastocyst can explain some of the idiopathic causes of idiopathic infertility and of spontaneous abortion. HPV infection could be considered the risk of infertility, that will be investigated in further research.

P02
Comparison of liquid based and conventional Lieshman stained cervical cytology

Berza N1, Zodzika J2, Grjunberga V3, Isajevs S4, Uspele L2, Senfelde I2, Petroška D5
1Latvian University, Riga Eastern Clinical University hospital, Riga, Latvia, 2Riga Stradins University, Riga Eastern Clinical University hospital, Riga, Latvia, 3Cytological department of Riga East University Clinical Hospital, Riga, Latvia, 4Pathology department of Riga East University Clinical Hospital, Riga, Latvia, 5Cytopathology Department, National Center of Pathology, Vilnius University Hospital Santariskiu klinikos, Vilnius, Lithuania

Introduction
Cytology has always been the cornerstone of the diagnosis of cervical cancer and cervical precancerous lesion. Unfortunately the sensitivity of conventional cytology in the diagnosis of cervical precancerous lesion is approximately 70-80% and liquid based cytology in many studies has shown better sensitivity in the diagnosis of cervical precancerous lesion. Latvia is one of the countries who is using Leishman based staining for cervical cytological smear. So far studies that compare fluid cytology with conventional cytology after the Leishman method have not been performed.

Methods
Study enrolled 100 women; they were divided in 2 groups. Group A with 50 participants were enrolled in Riga East University Clinical Hospital Colposcopy clinic with previously detected cytological abnormalities and 50 women who attended 2 outpatient clinics in Riga for regular check-up, cytological testing by conventional and liquid cytology methods and colposcopic examination of uterine cervix were performed. Reading of the cytological tests was performed in the two independent laboratories.

Results
Sensitivity and specificity in conventional cytology for LSIL was 36% and 85% in comparison for liquid based cytology sensitivity was 30% and specificity was 92%. Sensitivity and specificity in conventional cytology for HSIL was 33% and 94% in comparison for liquid based cytology sensitivity was 67% and specificity was 94%.

Conclusion
The sensitivity and specificity in conventional Leishman’s cytology and liquid based cytology for LSIL are similar. Although in this study liquid cytology shows better sensitivity for HSIL, the number of patients included in the study is small and further research is needed.
PO3
The HPV prevalence and type distribution in vulvar cancers in Austria.

Gensthaler L1, Pils S1, Stani J2, Alemany L2, Horvat R1, Polterauer S3, de Sanjose S2, Joura E1
1Medical University of Vienna, Department for Gynecology and Obstetrics, Wien, Austria, 2Catalan Institute of Oncology, Barcelona, Spain

Background
Over the past two decades a significant increase in the incidence of vulvar cancers, predominantly in younger women, was noticed. This increase is associated with HPV infections. We present the data of Austrian vulvar cancer cases, where the HPV prevalence and type distribution in HPV related vulvar cancer cases was analyzed in an international multicenter study.

Material and Methods
188 paraffin embedded samples of patients, who were diagnosed with vulvar cancer and underwent treatment at the Department of Gynecology, Medical University of Vienna, were analyzed. HPV DNA was extracted and HPV testing was performed on each specimen, using PCR and DNA Enzyme Immunoassay (DEIA). HPV DNA positive samples were subsequently analyzed by LIPA25 to detect the HPV – subtypes. Also, p16ink4a was analyzed in each sample by using immunohistochemistry (CINtec histology kit, ROCHE). A case was considered to be positive and HPV driven, if more than 25% of invasive cancer showed a diffuse overexpression of p16ink4a.

Results
177 of 188 samples could be analyzed. 41 (23,16%) of those were HPV positive. In 93,8% cases, only one HPV subtype was detected, whereas in 6,2% cases, two or three HPV subtypes were found. HPV 16, which was detected in 91%, had the highest prevalence, followed by HPV 33 (6%) and HPV 31 (3%). Overall prevalence of HPV related cases was highest in younger women.

Discussion
With implementation of the nonavalent vaccine and high vaccination rates, it could be possible to prevent almost 97% of HPV – associated vulvar cancers.

PO4
Vaginal flora changes and HPV infection association with abnormal cervical cytology

Plisko O1,2, Jermakova I1,2, Rezeberga D1,2, Zodzika J1,2, Kroica J2, Eglete L1, Sivina D1, Kunicina D1
1Riga East Clinical University Hospital, Riga, Latvia, 2Riga Stradins University, Riga, Latvia

Background
Vaginal microbiome is one of the factors of the acquisition and persistence of human papilloma virus (HPV) infection - a necessary cause for development of cervical precancerous lesions. There are data that vaginal infections are associated with cervical precancerous diseases (Gao, 2013). Previous studies have mostly focused on the association of cervical precancerous diseases and sexually transmitted infections and bacterial vaginosis, and less is known about the role of other abnormal vaginal flora types. This study aimed to identify associations among vaginal flora changes, HPV infection and abnormal cervical cytology results.

Methods
Cross-sectional study was performed in July 2016 – June 2017. 96 patients aged 18 to 50 with abnormal cytology referred for colposcopy to Riga East Clinical University Hospital Colposcopy reference center were included in study group. 32 patients from outpatient clinic in Riga with normal cytology were chosen as controls. Material from cervix and upper vaginal fornix was taken for testing Chlamydia trachomatis, Mycoplasma genitalium, Herpes simplex 1 and 2, HPV 6/11, 16/18, 31, 33, 45, 58 types using Real Time PCR method. Wet mount microscopy of vaginal material was performed using phase-contrast microscope and interpreted according to modified Donders-Schröder scale. Data analysis was performed with MS Excel 2016.

Results
Study included 96 patients with abnormal cytology results and 32 control patients. Vaginal flora, HPV and other infections results will be presented

Conclusions
will be presented.
HPV infection in pregnancy

Boț M1, Vladareanu R2, Vladareanu S1
1UMF Carol Davila, ,
2The Human Papilloma Virus (HPV) is part of the Papillomaviridae family, being double-stranded DNA viruses which induce epithelial cell proliferation, and it is the principal etiological agent of cervical neoplasm.

HPV infection is one of the most common sexually transmitted genital infections (approximately 80% incidence), affecting most women throughout their lives. The infection is mostly asymptomatic, having the tendency to spontaneously remit.

During pregnancy, due to anatomical and hormonal changes, the susceptibility to infection rises, which includes HPV infection.

The principal method of transmission of HPV infection to newborns is by the maternal-fetal route: periconceptional, prenatal (either transplacental or ascending from the female genital tract in the case of premature amniotic membrane rupture), perinatal (when the baby passes through the HPV-infected birth canal).

Prenatally, there exists the possibility of placental HPV infection, with spontaneous remission of cervical infection by the time of the delivery.

Perinatally, the observed rate of transmission to the fetus was low when no cytological changes to the cervix were present.

In regard to cervical cytology, postnatally, studies have shown spontaneous regression, wherein vaginal births have shown a higher rate of regression than caesarean sections. Although there appears to be no difference in the rate of transmission of perinatal HPV infection with respect to the type of birth, caesarean sections are nevertheless recommended in the following cases: verrucous genital lesions which may either cause a mechanical obstruction of the birth canal, or may cause an important perinatal hemorrhage due to its laceration.

FOLLOW-UP OF PATIENTS AFTER RADICAL TRACHELECTOMY FOR CERVICAL CARCINOMA

Mitră M1,2, Brătăla E1,2, Brătăla P2, Bohaltea R1,3, Veiciu O2, Comandasu D1,2
1,2“Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania, 3Bucharest Emergency University Hospital, Bucharest, Romania

Introduction

More than 40% of squamous cervical carcinoma with superficial invasion (SISCCA) - stages IA or IB - affect women located in the middle of their reproductive period.

Material and Methods

Between 2006-2016 we diagnosed 60 cases of cervical carcinoma stages IA-IB. The mean age was 33 years, all patients expressing their desire to preserve their reproductive capacity. The patients were evaluated preoperative by cytology, HPV typing, colposcopy, MRI. Diagnosis was established by biopsy or by colposcopic guided conization piece analysis. Laparoscopic lymphadenectomy with extemporaneous examination of the sentinel lymph node was practiced, followed by radical trachelectomy in cases with negative sentinel lymph node. Patient follow-up was achieved by cytology at every six months in the first 2 years after surgery, respectively colposcopy and HPV typing at 1 year postoperative.

Results

Of the 60 patients included in the study radical trachelectomy was practiced in 56 cases, 4 cases were excluded because of positive extemporaneous sentinel node examination. High-risk strains HPV typing realized at one year postoperative was positive in 10% of cases. Colposcopy revealed 6 cases of ectropion determined by the opening of the uterine lining of the uterus.

Conclusions

Radical trachelectomy with pelvic lymphadenectomy is a technique consistent with the principles of oncological treatment of superficial invasive cervical cancer which allows the preservation of fertility. HPV genotyping during follow-up period is important because a positive typing in these patients draws attention to the possibility of the appearance of lesions on the vaginal stump, especially in cases of mucosal ectropion.
Influence of orally administered probiotics on vaginal microbiota in women with breast cancer during chemotherapy: A randomized placebo-controlled double-blinded pilot study

Influence of orally administered probiotics on vaginal microbiota in women with breast cancer during chemotherapy: A randomized placebo-controlled double-blinded pilot study

**Background**
Due to chemo- and oestrogen deprivation therapy, the genitourinary syndrome of menopause is common in breast cancer patients. We aimed to determine the effect of an orally administered Lactobacillus-preparation on the vaginal microbiota in breast cancer patients.

**Methods**
Postmenopausal breast cancer patients receiving chemotherapy, with vaginal atrophy and an intermediate vaginal microbiota (Nugent score 4-6) were either randomized to the intervention group, receiving probiotic capsules of four Lactobacillus species, or to the control group on placebo twice daily for two weeks. Consecutive vaginal swabs were taken at baseline, one day after the last capsule administration (follow-up 1), and after one week (follow-up 2) in 22 patients (11 vs. 11).

**Results**
We observed a positive influence on the vaginal microbiota in 7/11 (63%) women in the intervention group, and 4/11 (36%) women in the control group. There was a shift of the Nugent score towards normal microbiota levels in the intervention group (-1.3 at follow-up 1, -0.45 at follow-up 2) and a significant deterioration of the Nugent score in the control group (+0.4 at follow-up 1, +2.5 at follow-up 2).

**Conclusion**
Our data lend support to the idea that this probiotic preparation has the potential to improve the vaginal microbiota of affected breast cancer patients and avoid the genitourinary syndrome of menopause. Further research in larger cohorts is highly warranted to confirm our findings.

The use of VGN probiotic vaginal cream for the treatment of acute Candida vaginitis: A proof of concept study.

In vitro studies suggest that certain probiotic strains have potential effects against opportunistic vaginal infections such as Candida. This by direct anti-microbial effects as inhibition of growth by nutrient competition and/or adhesion to the epithelium can also be of importance. There are very few trials performed in vivo on humans using only probiotics in acute Candida vaginitis (CV).

**Aim**
In this "proof of concept" study, a cocktail of special selected lactobacilli strains was tested in Belgian women suffering from acute Candida vaginitis.

**Methods**
Twenty women suffering from acute, symptomatic CV were included in the study after written consent. A newly designed vaginal probiotic VGN cream containing at least 1010 CFU/g cream of a mixture of Lactobacillus pentosus YUN-V1.0 and Lactobacillus rhamnosus YUN-S1.0 was administered during 10 days intravaginally, while in recumbent position, before bedtime. Vaginal rinsing fluid, culture swab and vaginal smear were collected at 7, 14 and 28 days after start of treatment. At any time during the study, symptomatic patients were entitled to receive 200mg fluconazole three times a week as rescue medication. Here we report on the clinical outcome findings, tolerance and safety data of the study.

**Results**
Participating women were on average 39 years old, and had an history of a mean 5 vaginal infections yearly of which 95% was CV. Nine women (45%) completed the study without the need for rescue medication. Women who needed rescue treatment had double as much Candida infections in the past. A negative correlation was found between the clinical composite score and the time to use rescue medication (R2=0.127). 74% of participants found the cream easy to use and comfortable, while 42% of all women would use the tested cream again for this indication. No safety issues emerged.

**Conclusion**
45% of women were treated for acute CV with the probiotic study cream with clinical success. The remaining participants needed rescue treatment. The tested cream was tolerated well and has no safety signals. Most suitable indication and application modus needs to be further studied.
OC07
The female urinary microbiome and its contribution to lower urinary tract symptoms – a review
Veit-Rubin N₁, Schneeweiss-Friedl J₁, Koch M₁, Umek W₁
₁Department of Obstetrics and Gynecology, Medical University of Vienna, Vienna, Austria

Introduction
The term microbiome describes the symbiotic microbial colonization of healthy organs. Understanding the relative importance of individual organisms has the potential to improve our understanding of lower urinary tract (LUT) dysfunction, including common conditions such as incontinence and infection. This is a review of the literature, specifically of microbiomes in relation to urogynecological disease.

Methods
We performed a systematic review of the literature to identify articles on the microbiome of the female LUT. We searched the electronic metadatabases Ovid MEDLINE® and Embase® until 2017 for the keywords: microbiome, microbiota, bacterial colonization, microbiology, commensal bacteria, and in combination with LUT symptoms, urogenital symptoms, urinary tract infection, overactive bladder and urinary incontinence. We retrieved a total of 426 papers and included 33.

Results
There is strong evidence for the existence of a “core” urinary microbiome for the female LUT, particularly emerging with age and significant variance between individuals and between age groups. Microbiota in the LUT of individuals with urological symptoms and those without differ significantly in terms of type and proportion of commensal Lactobacillus spp.

Conclusion
The changing science of the urinary microbiome has both clinical and research implications with a need to establish the scope across the range of normality and clinical presentations. Proteomics may be necessary to study enzymatic and other functions, since different bacteria may have overlapping phenotypes. The discovery of bacteria in the urine of healthy individuals may have implications for future therapies for LUT symptoms.

P07
Effect of a yoghurt drink containing Lactobacillus strains on bacterial vaginosis in women – a double-blind, randomized, controlled clinical pilot trial
Linnerth B₁, Arendarski P², Kneifel W³, Papazova E⁴, Schrezenmeir J⁴,⁵, Pannenbeckers A⁴, Domig K³, Laue C⁴, Liesegang A⁴, Petricevic L⁶
₁Dairyfem, Tuchlauben 18/12, 1010 Vienna, Austria, ²LADR, Lauenburger Str. 67, 21502 Geesthacht, Germany, ³BOKU – University of Natural Resources and Life Sciences, Vienna, Austria, ⁴Clinical Research Center, Schauenburgerstraße 116, 24118 Kiel, Germany, ⁵University Medicine, Langenbeckstraße 1, 55131 Mainz, Germany, ⁶Department of Obstetrics and Fetal Maternal Medicine, Medical University of Vienna, Währinger Gürtel 18-20, 1090 Vienna, Austria

Background
In this study we assessed the effect of a yoghurt drink containing Lactobacillus strains on bacterial vaginosis (BV).

Methods
Using Amsel criteria BV was diagnosed in 36 adult women with stable menstrual cycle or menopause. They were treated with oral metronidazole for 7 days (2x500 mg/d) and consumed twice daily either verum or placebo during 4 weeks. Verum was 125g yoghurt containing (besides L. delbrueckii ssp. bulgaricus and S. thermophilus) living strains L. crispatus LbV 88 (DSM 22566), L. gasseri LbV 150N (DSM 22583), L. jensenii LbV 116 (DSM 22567) and L. rhamnosus LbV96 (DSM 22560), each at least 1x10⁷ CFU/ml; placebo was 125g chemically acidified milk.

Results
After 4 weeks of intervention 0 of 17 had BV in the verum group versus 6 of 17 in the control (0.018 in Fisher Exact test). Amsel score decreased during the intervention period by 4.0 (median) (4.0;3.0)(25th;75th percentile) in the verum group compared to 2.0 (4.0;0.0) in the control group (p=0.038 in Mann-Whitney test). Discharge and odor (Amsel criteria 2+3) also decreased by 2.0 (2.0;1.0) in the verum compared to 1.0 (2.0;0.0) in the control group (p=0.01) and differed after 4 weeks intervention between the groups 0.0 (0.0;0.0) versus 1.0 (0.0;2.0)(p=0.001). Nugent score decreased during the intervention period by 5.5 (7.0;2.3) in the verum compared to 3.0 (6.0;0.5) in the control group (p=0.158). Conclusion: Additional intake of yoghurt containing these probiotic strains improved the recovery rate and symptoms of BV and tended to improve the vaginal microbial pattern.
PO8
Incidence of endometritis post partum at the tertiary institution
Mijailovic A1, Novakovic S1, Milovanovic Z1, Zecevic N1,2, Rakic S1,2, Nikolic M1, Mihajlovic S1,2, Vangelov M, Petricevic L1
1Gynecology And Obstetrics Clinic Narodni Front, Belgrade, Serbia, 2Medical School University of Belgrade, Belgrade, Serbia, 3Medizinische Universitat Wien, Vienna, Austria

Introduction
Postpartum infections are pregnancy-related infections occurring between the onset of rupture of membranes in labor and the 42nd day after delivery.

The aim of our study was to evaluate the incidence of postpartum endometritis in our hospital, to determine the most common microorganisms which are the cause of infection.

Methods and materials
We conducted a retrospective descriptive study and included all the patients who were admitted to the hospital with the diagnosis of endometritis, during the period of 12 month. Records were reviewed from paper charts and electronic medical records. The patients underwent full clinical and ultrasound evaluation, vaginal and cervical smear was taken, and all the patients underwent explorative curettage, and endometrial histological examination was done.

Results
Our study group was formed out of 15 patients. Mean age was 29 years old. Mean time since the time of delivery to the first signs of infection was 14 days. 82% woman delivered vaginally. Mean endometrial thickness before the explorative curettage was 11mm, endometrium was heterogeneous and with increased vascularity. The commonest bacteria isolated from cervical and vaginal smear were Escherichia Coli, Enterococcus spp, Proteus Mirabilis, and all were treated by antibiotics, mostly by double-agent therapy.

Mean length of hospital stay was 6 days.

Conclusion
We evaluate less than 1 % of Postpartum endometritis in our hospital. However endometritis is associated with increased maternal mortality due to septic shock, and should be treated promptly with targeted antimicrobial and supportive therapy.

PO9
PREVALENCE OF SEXUALLY TRANSMITTED INFECTIONS (STIS) IN A COHORT OF HIV-POSITIVE WOMEN
Donders G2,3,4, Xavier J1, Vieira-Baptista P1, Lima-Silva J1, Malheiro F3, Melo C2, Falcão V1, Beires J1
1Centro Hospitalar de São João, Porto, Portugal, 2Antwerp University Hospital, Antwerp, Belgium, 3Regional Hospital Heilig Hart, Tienen, Belgium, 4Femicare, Clinical Research for Women, Tienen, Belgium

Introduction
Having one STI is a risk for having another one. In order to have a cost-effective screening policy, the reality of infection rates in each community must be known. This study aimed at evaluating the prevalence of other STIs in HIV women.

Material and methods
A cohort of 123 consecutive HIV women followed at least once a year at our department, were evaluated by serology (syphilis, hepatitis B, hepatitis C, and herpes simplex 1 and 2), direct examination (warts), PCR (C. trachomatis [CT], N. gonorrhoea [NG], and T. vaginalis [TV]), cervical and anal Pap test and high-risk HPV test (HR-HPV) (Roche® cobas HPV).

Results
HIV1 (95.1% [117/123]), anti-retroviral therapy (97.5% [119/122]), and acquirement through sexual transmission (90.8% [109/120]) were most frequent.

Test type Diagnosis Prevalence % (n/Tot)
Clinical examination Warts 4.9% (6/123)
Serology Syphilis (TPPA) 17.5% (20/114)
Hepatitis B virus 9.9% (8/81) 16.3% (13/80), Herpes simplex virus 1 56.3% (36/64)
Herpes simplex virus 2 0% (0/116)
PCR C. trachomatis 0.9% [1/116]
N. gonorrhoea 0% [0/116]
T. vaginalis 22.5% (27/120)
Pap test Cervix ≥ASC-US >LSIL 0.9%(1/109)
≥ASC-US >LSIL 5.6% (17/109)
15.4% (16/104)
1.0% (1/104)
Roche® cobas HPV Cervical Any HR-HPV 2.7% (3/111)
HPV16 2.7% (3/111)
HPV18 14.4% (16/111)
Other HR-HPV 33.0% (34/103)
Anal Any HR-HPV 10.7% (11/104)
HPV16 4.8% (5/104)
HPV18 30.8% (32/104)
Other HR-HPV 17.1% (19/111)
Conclusions
Screening of syphilis, hepatitis, herpes, and TV are of utmost importance in HIV women. The high prevalence of herpes and TV require special attention and specific management.
While cervical cancer screening remains a challenge; also anal cancer screening seems to be extremely relevant in these women.

**P10**

Pelvic actinomycosis mimics ovarian cancer – A case report

Davidovic-Grigoraki M¹, Mandic A¹, Solajic N¹, *Kokanov D¹*

¹Oncology Institute of Vojvodina, Novi Sad, Serbia

Pelvic actinomycosis is a rare disease in gynecological practice. Specially, it is rarely seen in gynecological oncology department. We present a case of 55 years old patient with adnexal tumor and ipsilateral pelvic and para-aortic lymphadenomegaly which was addressed in Institut of Oncology. Diagnosis was made on ultrasound and MRI. Tumour markers were insignificant. Patient underwent laparotomy and frozen section procedure showed presence of Actinomycotic abscesses. Antibiotic therapy was started immediately and case was hands over to infectologist for further management.
P11
The "VG-Test" as diagnostic tool at point of care, or at bedside in hospitals.

Golan M1,2
13QBD Ltd, Arad, Israel
2National Hospital, Rishon Le Zion, Israel

Objective
At least one third of women aged of 15-45 will suffer from vaginal infectious diseases. With the time constraints of modern clinical practice, many gynecologists are in need of rapid and precise diagnostic tools for vaginal diseases. Better understanding of micro-organisms and their biochemistry has led us to develop new technologies for detection of multi-infectious diseases, more accurately and much faster than the conventional lab processes.

Technology and Process
Enzymatic activities of micro-organisms are known to degrade amino acids within cells to form molecules known as biogenic amines or polyamines. In the VG-Test, the volatile biogenic amines emanating from the sample, are ionized and transported by an electrical field toward a detector, where they are counted. The relative quantities of these molecules form a unique fingerprint that corresponds to specific groups of the pathogenic micro-organisms. Within 1 minute, the infection can be precisely diagnosed and its severity assessed. The procedure is automatic, so there is no need for any skill to get the test results.

Results
We tested 112 subjects from central Europe (Slovenia) using the VG-Test. The subjects were divided in two groups: Group "A" included 64 women with the symptoms, such as discharge, burning and itching; Group "B" consisted of 44 asymptomatic women. All women underwent a physical examination by a gynecologist, and some 8 samples were taken from their vaginal discharge by swabs. The following data have been collected: pH, whiff test, discharge color, clue cells, Nugent score, different cultivation at different media for lactobacilli, aerobic pathogens, anaerobic bacteria, candida, chlamydia and trichomonas, VG-Test and PCR. The overall accuracy of the VG-Test was 93.4% comparing to the final decision of the gynecologist based on reviewing of all results, including 2 cases where the VG-Test and culture diagnosed as healthy, but PCR diagnosed as candidiasis. Removing these 2 cases, we will had an accuracy of 95.3%, which is remarkable.

Conclusion
The results of this study demonstrate that VG-Test can be used for screening of large populations with limited operating personnel. Since the ionization power of the VG-Test is limited, severe cases of BV may preclude diagnosis of other infections. In such cases, after treatment of BV, the patient shall be retested for diagnosis of additional possible diseases. So far, the VG-Test cannot detect chlamydia vaginal infections. VG-Test has potential to detect GBS and vaginal cancer as well. We need to run more tests with a higher number of test subjects with and without symptoms.

P12
Vaginal semisolid products: technological performance and in vitro evaluation under a safety perspective

Machado R1,2, Palmeira-de-Oliveira A1,2, Martinez-de-Oliveira J1,3, Palmeira-de-Oliveira R1,4
1University of Beira Interior, Health Sciences Research Center (CICS-UBI), Covilhã, Portugal, 2LabFit - Health Products Research and Development, Lda, Covilhã, Portugal, 3Child and Woman’s Health Department, CHCB - Cova da Beira Hospital Center, Covilhã, Portugal, Covilhã, Portugal, 4Pharmacy Department, CHCB - Cova da Beira Hospital Center, Covilhã, Portugal

BACKGROUND
Vaginal semisolid products characterization methods, especially those designed concerning the target epithelia, are key tools to predict in vivo performance. The aim of this work is to apply physiologic parameters to traditional characterization methods to disclose in vitro toxicity of 12 vaginal semisolid formulations.

METHODOLOGY
Commercial products (Gino-canesten®, Sertopic®, Dermofix®, Gyno-pevaryl®, Lomexin®, Gino Travogen®, Dalacin V®, Ovestin® and Blissel®) were evaluated in terms of pH, buffering capacity, osmolality, textural parameters and viscosity, using a physiologic approach that considered the body temperature and dilution in a vaginal fluid simulant (VFS). Universal Placebo gel and Replens® were used as controls. Cytotoxicity was studied on VK2 E6/E7, HeLa and HEC-1A cells; tissue explants were obtained from porcine vaginal epithelium.

RESULTS
Antimicrobial formulations exhibited lower pH than topical oestrogens. Buffering capacity in VFS conducted to better predictions of what happens in vivo. Products osmolality after dilution in VFS were below the upper limit advised by the WHO. The antimicrobials had similar textural behaviours while topical oestrogens varied in textural parameters. For all formulations a slight decrease in viscosity was observed after dilution with VFS while maintaining their pseudoplastic behaviour. Concerning cytotoxicity, VK2 E6/E7 and HEC-1A cells presented relatively higher viabilities than HeLa cells over the tested product concentrations. However, tissue viability results were much higher than those obtained for the cellular models.

CONCLUSIONS
The inclusion of these methodologic adaptations at early stages of product development may optimize cost-efficiency of new formulations development by predicting products performance related with efficacy and safety profiles.
Background
Vaginal atrophy (VA) is a frequent problem after menopause, due to decreased oestrogen ovarian production. The aim of this study was to develop a bioadhesive aqueous polymer-based formulation to vehicle estriol promoting hydration and lubrication on VA.

Methods
The formulation was prepared by dispersing the aqueous components of the aqueous phase (glycerol, sorbic acid and water). The oily phase (mineral oil, 1mg/g estriol) was then added using Tween 80 as emulsifier, to obtain an O/W emulsion. The formulation was characterized in terms of organoleptic characteristics; texture; pH and buffering capacity; osmolality; microbiological quality and preservative efficacy; toxicity studies were performed using HeLa cells and an acute mucosal irritation test; and, estriol permeation studies using Franz Cells and HPLC-UV as quantification method. Stability studies were carried during 12 months.

Results
VEC exhibited pH compatibility with the vaginal milieu, extensive acid-buffering capacity, and showed to be more adhesive than the comparative commercial product under in vitro tests using porcine vaginal tissue. Nonetheless, the formulation was hyperosmolar. Total aerobic microorganisms counts were in accordance with standards and preservative efficacy was high. A potential non-irritant effect on vaginal tissue was observed for this product using both the 3D reconstructed epithelium and HeLa cells. Permeation studies showed that the formulation does not enhance estriol permeation. Furthermore, VEC showed a favourable stability profile over one year.

Conclusions
VEC might represent an improved formulation, more comfortable and safer for the topical hormonal treatment of menopause VA.

P14
Peritoneal tuberculosis in immunocompetent reproductive-aged patients.

Mihai D1, Comandasu D1, Brătîlă E1,2, Mitran M1,2, Cîrstoianu M1,2, Berceanu C3, Mehedintu C4
1Clinical Hospital Of Obstetrics And Gynecology "prof. Dr. Panait Sârbu", Bucharest (romania), Bucharest, Romania;
2 „Carol Davila” University of Medicine and Pharmacy, Department of Obstetrics and Gynecology, Bucharest, Romania;
3 University Emergency Hospital, Department of Obstetrics and Gynecology, Bucharest, ROMANIA;
4 Craiova University of Medicine and Pharmacy, Obstetrics Gynecology, Craiova, Romania

Background
Peritoneal tuberculosis is a very rare location even in high TB endemic countries. It may involve intestinal tract, liver, spleen, genital tract, omentum, peritoneum and it has nonspecific presentation (abdominal distension, ascites, tenderness, fever and weight loss). This pathology is an important differential diagnosis for cancer in women with ascites. The correct diagnosis is essential due to the very specific treatment needed to be applied.

Methods
We present two cases of immunocompetent female patients with peritoneal tuberculosis, with no previous record of pulmonary TB. One is a 27-year-old young patient, with small abdominal lymphadenopathy and unknown cause ascites, originally labeled as carcinomatous lymphangitis. The second case is a 25-year-old patient that gave birth of a healthy normal baby, that presented at two months after delivery with abdominal pain and ascites. Biopsies were taken during the exploring laparoscopy, where the intraperitoneal aspect was extremely similar to peritoneal carcinoma.

Results
Tuberculous etiology confirmation by biopsy and / or BK bacteriological test is the "gold standard" for diagnosis. The therapeutic regimen includes four anti-TB drugs for a period of minimum 6 months and corticosteroid association in the first months of treatment. Under therapy, the prognosis is very favorable and the disease regression and ascites disappearance takes place quickly, in 2-3 weeks.

Conclusions
Even if in many countries tuberculosis is considered an eradicated disease, BK infection is still present and this diagnosis must be taken in consideration. Usually it is a delayed diagnosis due to insidious clinical course and nonspecific clinical, citological and imagistic examinations results.
ASYMPTOMATIC BACTERIAL VAGINOSIS: A MYTH OR REALITY? A CROSS-SECTIONAL INVESTIGATION TO ASSESS THE PREVALENCE AND RISK FACTORS IN FLANDERS.

Bellen G1,2, Meynendonckx S2, Jacquemyn Y3, Donders G1,2,3,4
1Femicare vzw, Research for Women, Tienen, Belgium, 2University of Antwerp, Faculty of Medicine and Health Sciences, Antwerp, Belgium, 3University hospital Antwerp, Department of gynaecology, , Antwerp, Belgium, 4Regional hospital, H. Hart Tienen, Department of gynaecology, , Tienen, Belgium

Introduction

Bacterial vaginosis (BV) develops when the balance of a healthy vaginal flora is disrupted by overgrowth of anaerobic bacteria. Signs like foul-smelling and increased vaginal discharge are typical, but BV can also present without any symptoms (asymptomatic BV, aBV). The need for a more preventive policy is high to avert consequences of BV, such as increased risk of acquiring sexual transmitted diseases, surgical wound infections or ascending infections in pregnancy. Therefore, it is useful to investigate the prevalence and risk factors of aBV.

Method

A cross-sectional trial was performed in two Dutch-speaking Belgian hospitals. Women without vaginal complaints who presented for medical care, were asked to complete a coded questionnaire after consent. The presence of foul vulvovaginal smell was evaluated and a wet mount microscopy reading was performed on vaginal smears.

Results

Normal vaginal flora was found in 31% of participating women. BV was present in 26% of the subjects, of which 79% were without any symptoms. Symptoms such as vaginal discharge and foul smell had low predictive value for aBV (positive predictive value 20.1%). Smoking (OR 2.75), the use of vaginal probiotics (OR 6.73) and number of children (OR 1.68) were high-risk factors for having aBV. Low impact, low-risk factors were a history of symptomatic BV (OR 1.02) and frequency of sexual contact (OR 1.08). Association with known STD risk factors could not be found in this population.

Conclusion

26% of women presenting without vaginal complaints had BV. Smoking, the use of vaginal probiotics, parity, and less pronounced the frequency of sexual contact and a history of symptomatic BV were associated with increased risk of having aBV. There was no evidence found that aBV is a sexual transmitted infection
Lactobacillus gasseri-dominated microbiome is associated with increased cervicovaginal bacterial load.

**Background**

Bacterial communities in human vagina modulate local immunity and may protect women against genital tract diseases. Vaginal microbiome can be clustered into five community state types (CST), according to the most abundant Lactobacillus species. In CST-I L. crispatus is the most abundant, L. gasseri predominates in CST-II, L. iners in CST-III, L. jensenii in CST-V, while CST-IV is not lactobacilli-dominated. Bacterial diversity differs significantly according to CST type. However, it is not known if such differences are accompanied by changes in the bacterial load in the cervicovaginal environment. Thus, our objective was to compare the cervicovaginal bacterial load in different types of microbiome.

**Methods**

In this cross-sectional study 115 Brazilian women in reproductive age were enrolled. Mid-vaginal samples were used for microbiome assessment by 16S rRNA sequencing in Illumina platform. Total bacterial loads were counted in cervicovaginal samples using flow cytometry. Bacterial loads were compared among the CST groups using Kruskal-Wallis non-parametric test, followed by Dunn’s post test, with p<0.05 as significant.

**Results**

Thirty participants of each CST I, III and IV, and 20 of CST-II were successfully evaluated for cytometric bacterial count. Only 5 women had CST-V and were then excluded. Bacterial load in CST-II (1.9E+05 bacteria/ul) was higher when compared with CST-I (2.8E+04 bacteria/ul) and III (4.1E+04 bacteria/ul) (p<0.01). In addition, CST-IV had increased bacterial load (5.6E+04 bacteria/ul) when compared with CST-I (p<0.01).

**Conclusion**

L. gasseri-dominated microbiome is accompanied by increased bacterial load and may be more beneficial for women’s reproductive health. Financial support: FAPESP(Grants 2012/10403-2, 2012/16800-3, 2016/02390-9).
P16
INFLUENCE OF EXTRA-VAGINAL SITE COLONIZATION WITH CANDIDA SP. ON THE RESPONSE TO INDIVIDUALISED FLUCONAZOLE MAINTENANCE THERAPY IN WOMEN WITH RECURRENT CANDIDA VULVO-VAGINITIS

Bellen G¹, Grinceviciene S¹,², Ruban K¹, Donders G¹,³
¹Femicare vzw, Tienen, Belgium, ²University Institute of Biotechnology, Department of Bio-thermodynamics and Drug Design, Vilnius, Lithuania, ³Department of OB/Gyn, Antwerp University, Antwerp, Belgium

Background
Candida infection can possibly be transmitted through the gastrointestinal reservoir. Oral fluconazole maintenance therapy is designed to eradicate Candida from all body sites, but it is not clear if Candida carriage in extra-vaginal locations is related to non-response to fluconazole maintenance therapy in women with recurrent Candida vulvo-vaginitis.

Methods
Data of 117 patients from the ReCiDiF trial were analyzed. Before starting therapy, Candida cultures were performed on specimens taken from vagina, perineum, urine, anus, nose and mouth at the inclusion visit. At the end of the trial, patients were divided in optimal responders, suboptimal responders, and non-responders (NR). Odds ratios were calculated with 95% confidence intervals. Binary logistic regression analysis was used to assess independent risk factors for non-response to therapy.

Results
Anal Candida carriage was related to poor response to therapy (OR = 3.23; CI95% 1.35-7.72), but not with perineal (OR = 2.36; CI95% 0.74-7.57), urinary (OR = 2.8; CI95% 0.89-8.86) or nasal colonisation (OR = 0.96; CI95% 0.92-1.01). Patients with 3 to 5 positive extra-vaginal sites positive were less likely not respond to therapy (OR = 3.0; CI95% 1.2 – 7.4)

Conclusion
Non-response to therapy is associated with Candida colonisation in multiple sites, particularly in the anus. Risk for non-response to therapy was times higher in women carrying anal Candida.

P17
IS SENSITIZATION TO ATOPIC REACTION RELATED TO NON-RESPONSE TO FLUCONAZOLE MAINTENANCE THERAPY FOR RECURRENT CANDIDA VULVO-VAGINITIS (RCVV)?

Donders G¹,², Grinceviciene S¹,³, Bellen G¹, Jaeger M⁴, ten Oever J⁴, G. Netea M⁴
¹Femicare vzw, Tienen, Belgium, ²Department of OB/Gyn Antwerp University, Antwerp, Belgium, ³Vilnius University Institute of Biotechnology Department of Biothermodynamics and Drug Design, Vilnius, Latvia, ⁴Department of Internal Medicine and Radboud Center for Infectious Diseases, Radboud University Medical Center, Nijmegen, Netherlands

Background
Specific genetic mutations causing autoimmune disorders are related to recurrent Candida infections. We tested if non-response to fluconazole maintenance therapy in RCVV patients is related auto-immune deviations like atopy.

Method
Analysis of ReCiDiF trial data of optimal (OR) and non-responders (NR) to fluconazole maintenance treatment. The medical history, physical status, family history and vaginal immune response of non-responders was compared to responders to detect a link with the presence of sensitivity of atopic reactions.

Results
Body mass index, age, number of children and pregnancies, debut and duration of symptoms did not differ between 33 NR and 38 OR women. NR had received higher number of different treatments (mean difference 1.6 different treatments (95% CI 0.20-2.97), p = 0.03) and had more episodes of disease (p<0.05). Multivariate regression analysis showed that family history of atopy (OR 4.9, CI 95% 1.1-22.2), duration of symptoms (OR 1.2, CI 95% 1.02-1.5), and the presence of vulvar excoriation (OR 3.6, CI 95% 1.4-9.3) were related to non-response. Concentration of different vaginal cytokines were not related with non-response or with the presence of atopy n women with RCVV.

Conclusion
Women with RCVV with vulvar excoriations, high intensity and longer duration of RCVV or with a family history of atopic disease are at increased risk not to respond to maintenance fluconazole treatment.
**Characterization of the vaginal microbiome of healthy reproductive-aged Brazilian women**

**Methods**

Recent studies on vaginal microbiome showed that despite the great bacterial diversity that colonizes the vaginal environment, local microbiome can be classified into five possible bacterial community state types (CST). Lactobacillus crispatus predominates in CST-I, L. gasseri in CST-II, L. iners in CST-III and L. jenseni in CST-V, while in CST-IV Lactobacillus spp. are partially or completely depleted. Frequency of the CST varies according to the ethnicity, menopause status and presence of coinfections. Lack of Lactobacillus sp. in vaginal microbiota has been associated with increased risk for acquisition of sexually transmitted infections (STI) over the years, which has been reinforced by microbiome studies. Although STI prevalence in Brazilian women is high, vaginal microbiome of this population has never been investigated.

**Objectives**

To characterize the vaginal microbiome of reproductive-aged Brazilian women.

**Methods**

In this cross-sectional study, 500 women attending primary health clinics for Pap-testing in the 5 geographic regions of Brazil were enrolled. Microbiome assessment was performed in mid-vaginal swabs by 16S rRNA sequencing using Illumina platform.

**Results**

In the 500 women tested, the vast majority (n= 476, 95.2%) showed microbiome consistent with either CST-I (n=153, 30.6%), CST-III (n=187, 37.4%) or the lactobacillus-depleted CST-IV (n=136, 27.2%). Only few women had CST-II (n=18, 3.6%) or CST-V (n=6, 1.2%).

**Conclusion**

Vaginal microbiome of reproductive-aged Brazilian women is dominated by either L. crispatus or L. iners. Nearly one-third of this population lacks vaginal Lactobacillus spp. and may be at increased risk for STI acquisition.
Posterior vestibulectomy in the treatment of localized provoked vulvodynia - A long-term follow-up study

**Objective**
To evaluate safety and effectiveness of posterior vestibulectomy in the treatment of severe localized provoked vulvodynia (LPV).

**Design:** A cohort study.

**Population:** Ninety-two women treated by posterior vestibulectomy for severe LPV during 1995 – 2013 at the University Hospital, Helsinki.

**Methods**
All operated women were invited to attend to a long-term follow-up study. Patient characteristics, baseline visual analogue scale (VAS) for dyspareunia, and data of the postoperative period were collected. At the follow-up visit, face-to-face interview including documentation of the current VAS score for dyspareunia was conducted, and a gynecological examination with swab-touch test for vestibular tenderness was carried out. Sexual problems were evaluated with the McCoy questionnaire.

**Main outcome measures:** Short-term and long-term complication rates, dyspareunia by VAS score, vestibular tenderness, sexual problem index, and overall patient satisfaction.

**Results**
Seventy patients attended to a follow-up visit and the remaining 22 were interviewed on the telephone after a 44 months follow-up period. Ninety percent of the patients were satisfied with the outcome. VAS for dyspareunia decreased from a median of 9 to a median of 2.8, (p < 0.001). Posterior vestibular tenderness was absent in 43 of 70 examined patients (61.4%). Ten (11.1%) patients developed postoperative bleeding and 13 (14.4%) patients developed mild wound infection.

**Conclusion**
Posterior vestibulectomy is safe and effective in the treatment of severe LPV and provides long-term patient satisfaction.
NON-RESPONSE TO MAINTENANCE TREATMENT FOR RECURRENT VULVOVAGINAL CANDIDOSIS (RCVV) IS NOT RELATED TO THE IMPAIRED GLUCOSE METABOLISM

Grinceviciene S1,2, Bellen G1, Ruban K4, Donders G1,3

1Femicare vzw, Tienen, Belgium, 2Department of Biothermodynamics and Drug Design, Vilnius University Institute of Biotechnology, Vilnius, Latvia, 3Department of OB/Gyn, Antwerp University, Antwerp, Belgium

Background
Glucose level in blood is an important risk factor for RCVV in diabetes patients. However, it is not clear if impaired glucose metabolism is related to response to fluconazole maintenance therapy.

Methods
In the ReCiDiF trial, women with RCVV were given a regressive regimen with fluconazole according to their clinical, microscopic and mycological response. Data obtained from optimal, suboptimal and non-responding patients were used for secondary analysis of medical history, physical status and family history for potential glucose impairment.

Results
Sociodemographic characteristics, family, personal history of diabetes were not different between optimal (OR), suboptimal (SR) and non-responders (NR). The average HbA1c concentration was 5.1±0.3% in OR, 5.0±0.4% in SR, and 5.1±0.3% in NR (p=1.0). There was no difference among groups in fasting glucose concentration, nor after 30 min, 60 min or 120 min during the oral glucose tolerance test (OGTT) (p=0.6). Area under the OGTT curve did not differ within groups (p=0.8), nor was the deviation from the normal cut-off value any different (p=0.8). Glucose concentration in vaginal rinsing fluid showed no correlation with responsiveness to treatment (p=0.7).

Conclusion
Glucose metabolism, BMI, personal or family history of diabetes are not related to non-response to maintenance treatment with fluconazole for patients with RVVC.

Mycoses. 2017;00:1–6. https://doi.org/10.1111/myc.12626
OC11
Cervico-vaginal placental alpha-microglobulin-1 (PAMG-1) combined with cervical length accurately predict preterm birth in women with threatened preterm labor
Mueller M1, Radan A1, Heverhagen A1, Polowy J1, Simillion C1, Raio L1, Schleussner E1, Surbek D1
1Department of Obstetrics and Gynecology, University Hospital Bern and University of Bern, Bern, Switzerland,
2Department of Obstetrics and Gynecology, University Hospital Bern, Bern, Switzerland,
3Department of Obstetrics and Gynecology, University Hospital, Jena, Germany

Introduction
Preterm birth is a major cause of neonatal morbidity and mortality. There is an urgent need to accurately predict imminent delivery to enable necessary interventions such as tocolytic, glucocorticoid and magnesium sulfate administration. We aimed to evaluate a new placental alpha microglobulin – 1 (PAMG-1) diagnostic kit in the prediction of preterm birth (PTB).

Material and Methods
We performed a prospective observational trial in patients with intact membranes between 24 0/7 and 36 6/7 weeks’ gestation. We included both patients with and without threatened preterm labor (PTL) symptoms. We evaluated the test performance of PAMG-1 measurements in cervicovaginal fluid regarding 3 different presentation-to-delivery intervals: < 2 days, < 7 days, < 14 days. In addition, we calculated PAMG-1 performance with in combination with other variables (prognostic factors) such as ultrasonographic cervical length (CL) measurements.

Results
We included a total of 126 women in the study. We detected high specificity (97-98%) and negative predictive value (89-97%) for PAMG-1 at all time intervals. We assessed PAMG-1 in combination with CL measurements (< 15mm) in the subgroup of patients presenting with threatened PTL symptoms (n=63) and detected high positive predictive values (100%) for 7 and 14 presentation-to-delivery intervals as well.

Conclusions
Our study provides evidence that PAMG-1 testing in cervicovaginal fluid in combination with CL measurements accurately predicts PTB in women with PTL symptoms. This novel test combination may be used clinically to triage patients presenting with PTL and overtreatment and unnecessary hospitalizations may be avoided.

OC12
PREGNANT WOMEN WITH CYTOMEGALOVIRUS INFECTION - OBSTETRICAL AND NEONATAL OUTCOME
Ribeiro A1, Pedrosa S, Boia M, Almeida M, Neto S, Oliveira M
1Centro Hospitalar do Baixo Vouga, , Portugal

Introduction
Cytomegalovirus (CMV) is the most frequent congenital viral infection, and the leading infectious cause of sensorineural deafness and mental retardation. Over the years, there has been a pronounced effort in the development of prenatal diagnosis, nevertheless, meaningful advances in the treatment and prognosis of the disease are still lacking. The aim of this study is to analyze the obstetric and neonatal outcomes of pregnant women diagnosed with CMV infection in Centro Hospitalar do Baixo Vouga, during last year.

Materials and Methods

Results
During 2016, nine pregnant women had CMV infection in our hospital, seven of them in the first trimester and two during the second trimester, all of them were primary infections. The average age of the patients was 34,4 years old, with range between 21 and 35. Amniocentesis was performed in all women, 8 tested negative and 1 positive for CMV DNA in amniotic fluid. The latter eventually underwent medical pregnancy interruption. All other pregnancies evolved without intercurrences. The mode of delivery was cesarean section in two cases and vaginal delivery in six. None of the eight newborns were infected.

Conclusions
The high frequency of congenital cytomegalovirus infections and their prognosis justify systematic screening during pregnancy, allowing more frequent ultrasound surveillance, and offering progenitors adequate prenatal counseling. Systematic screening makes it possible to identify seronegative pregnant women who should be alerted to primary prevention measures.
P23
Management of pregnancy and birth in HIV positive mothers – 20 years of experience in „Panait Sirbu” Clinical Hospital of Obstetrics & Gynecology, Bucharest

Mitran M1,2, Puia S2, Velicu O2, Comandasu D2, Bratila E1,2
1 „Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania, 2 „Panait Sirbu” Clinical Hospital of Obstetrics & Gynecology, Bucharest, Romania

BACKGROUND
Modern medicine has advanced through the development of antiviral treatment, to the point that life expectancy in HIV positive groups is nearly the same as the general population. This aspect is one of the reasons for which today in Romania we have 2971 female patients pertaining to the age group 25-29 years old, the majority belonging to the cohort infected during 1989-1990. We find ourselves in front of another 10 years of births from HIV positive mothers, so a correct management of pregnancies is necessary with the purpose of obtaining a HIV negative newborn.

METHODS
The experience of the „Panait Sirbu” Clinical Hospital of Obstetrics & Gynecology, Bucharest, in dealing with HIV positive pregnancies extends on the last 22 years (1995-2016). During this period 349 pregnancies were followed and resulted in 351 live newborns that we reviewed in this paper.

RESULTS
There was a total of 66.18% cesarean births. The number of HIV positive new-borns sums 35 (11.25%), with a descending trend in 2005-2011, with no cases of vertical transmission were reported when a cesarean section was used as method of birth. Early diagnosis of the HIV positive mothers also helped in lowering the transmission, as appropriate treatment was given to both the mother and the newborn.

CONCLUSIONS
This paper comes to highlight the necessity of protocols for the management of pregnancies in HIV positive mothers. A close interdisciplinary collaboration between obstetrics, infectious diseases and neonatology specialists is the only way to obtain a very low vertical transmission rate.

P24
SEROPREVALENCE OF ANTI-CHLAMYDIA TRACHOMATIS IGM IN NEONATAL RESPIRATORY TRACT INFECTIONS IN HUNGARY, 2008-2016

Balla E1, Petrovay F1, Donders G2,3
1 Department of Bacteriology II., National Public Health Institute, Budapest, Hungary, 2 Femicare Clinical Research for Women, Tienen, Belgium, 3 Department of Obstetrics and Gynecology, University Hospital Antwerp, Edegem, Belgium

Background
Respiratory tract infection (RTI) is one of the most common neonatal diseases, caused by a wide range of pathogens and via different transmission routes. The infected birth canal itself may act as a source of vertical transmission of frequently transmitted non-STI bacteria (streptococci, enteric bacilli etc.) and Chlamydia trachomatis (CT). The objective of the present study was to determine the seroprevalence of specific IgM indicative of respiratory tract infection due to CT among symptomatic infants. The potential role of Bordetella pertussis that may cause clinically similar conditions was also investigated.

Methods
A descriptive study was conducted on young infants up to 5 months old in the Bacterial STI Reference Laboratory of the National Centre for Epidemiology, Budapest, covering the period 2008-2016. Serum samples from infants suffering from RTI were screened with a micro-immunofluorescence (MIF) test for the presence of anti-Chlamydia trachomatis specific IgM. A parallel screening was performed by an indirect immunofluorescence test (IIFT), detecting anti-Bordetella pertussis specific IgM.

Results
Of the 262 neonates with RTI, CT-specific serum IgM was highly reactive (observed in dilution titre ≥32) in 50 (19.1%), while all proved negative for Bordetella pertussis specific-IgM. Hospitalization rate of CT infected babies was as high as 80%, showing male dominance (25 males vs 15 females).

Conclusions
Vertically transmitted CT must be regarded as a frequent pathogen among symptomatic neonates with RTI in Hungary. Routinely performed screening and treatment of pregnant women could be one option to prevent these conditions. Focussed laboratory testing based on raised clinical awareness should enable early diagnosis and correct therapy of symptomatic infants.
**P25**

**DISTRIBUTION OF CONJUNCTIVAL CHLAMYDIA TRACHOMATIS GENOTYPES IN OPHTHALMIA NEONATORUM IN HUNGARY, 2008-2016**

**Balla E**, Petrovay F, Erdős T, Donders G

1Department of Bacteriology II., National Public Health Institute, Budapest, Hungary, 2Department of Phage and Molecular Typing, National Public Health Institute, Budapest, Hungary, 3Femicare Clinical Research for Women, Belgium, 4Department of Obstetrics and Gynecology, University Hospital Antwerp, Edegem, Belgium

**Background**

The risk of Chlamydia trachomatis (CT) infection does not only involve the sexually active adult population, but due to vertical transmission from the cervix also the neonates of infected mothers. The objectives of the present study were to determine the frequency and age-distribution of different CT genotypes causing ophthalmia neonatorum (ON) in Hungary.

**Methods**

A descriptive study was conducted on conjunctival samples from symptomatic infants up to 3 months old suffering from ON referred from all over Hungary to the Bacterial STI Reference Laboratory of the National Centre for Epidemiology in Budapest during the period 2008-2016. Conjunctival swabs were tested with an in-house PCR, while the CT genotypes were further identified by sequencing.

**Results**

CT tested positive in 30 of 76 conjunctival samples (39.5%). The sequencing of the CT positive samples was successful in all but one and resulted in 48% dominance of genotype E (14/29). The distribution of the other genotypes is as follows: genotype G in 24% (7/29), J in 10% (3/29), K and F in 6.9% (2/29) and H in 3.4% (1/29). Genotypes D and I were not identified.

**Conclusions**

CT must still be regarded as a common pathogen causing neonatal conjunctival infections in Hungary. Routine screening and treatment of pregnant women or prophylactic measurements in neonates can be recommended to prevent these conditions. For the latter, increased clinical awareness and early diagnosis of symptomatic infants is needed to result in fewer chronic, untreated cases. Further research is needed to explain this observed dominance of conjunctival genotype E, followed by genotype G.

---

**P26**

**GENITAL BACTERIAL INFECTION, POTENTIAL CAUSE OF PRETERM DELIVERY**

**Bogavac M**, Ilic Đ, Ivanovic L, Novakovic Z

1University Of Novi Sad, Medical Faculty, Clinical Centre Vojvodina, Department Of Obstetrics And Gynecology Novi Sad, Se, Novi Sad, Serbia, *Primary Helath Care Bac, Serbia, Bac, Serbia*

**Background**

Preterm delivery is a major problem in obstetrics and associated with high mortality and morbidity worldwide. The Etiology of preterm delivery is very complex. Last data indicate that ascending genital bacterial infection is important cause of preterm delivery. The Aim of this prospective study was to investigate does cervical bacterial infection can be early marker of preterm delivery.

**Materials and Methods**

Study included 61 pregnant women between 16 and 19 week of pregnancy (WG). Study group consisted of (N 21) women delivered preterm (in 34-36 WG) and control group (N 41) women delivered in term (37-42 WG). In all pregnant women we conducted bacteriological tests of cervical smear with specific tests.

**Results**

Bacterial cervical infection was statistically significant more present in study group 9/20 (45%) than in control group 3/41 (8%) (x² test p<0.05). Ureaplasma was statistically significant more present in 7/20 (35%) women delivered preterm in correlation to the women delivered in term 1/41 (2.4%), (x² test p<0.05). Mycoplasma was statistically significant more present in study group in 6/20 (30%) patients in correlation to the control group 1/41 (2.4%), (x² test p<0.05). Chlamydia Trachomatis was found statistically significant more present in 9/20 (45%) women delivered preterm in correlation to the women delivered in term 2/41(4.8%) (x² test p<0.05).

**Conclusion**

Results of research indicate that cervical bacterial infection, infection caused by Chlamydia Trachomatis, Mycoplasma and Ureaplasma, are statistically significant more present in early second trimester in women delivered preterm in correlation to the women who delivered in term.
P27

Two cases of preterm premature rupture of membranes (pPROM) and preterm birth with different outcome: still a challenge for clinical management.

Falcone V1, Pateisky P1, Helmer H1, Farr A1, Kiss H1, Petricevic L1
1Frauenheilkunde, Medizinische Universität Wien, Wien, Austria

BACKGROUND
Premature rupture of membranes occurs in three percent of pregnancies, with approximately 0.5 percent of cases below 27 weeks of gestation. The pathogenesis comprises vaginal infections, bleeding or mechanical drain. The balancing between prolonging pregnancy and inducing labour is the main challenge in managing these cases in order to prevent complications.

CASES
We report two cases with Escherichia coli infections with similar gestational ages, but different courses. The first woman was admitted at our department with pPROM at 25+4 weeks of gestation. At 26+2 weeks of gestational age she developed contractions and undergone cesarean section. The neonate presented an Escherichia coli sepsis, which was successfully treated. The mother displayed signs of chorioamnionitis, however, also successfully treated. The second woman was admitted at 23+3 weeks of gestation due to cervical insufficiency with pPROM and intrauterine growth retardation. Despite antibiotics, she developed signs of infection and severe abdominal pain. She underwent cesarean section at 25+0 weeks of gestation. The neonate was transferred to the neonatal intensive care unit, but died on the sixth day of life. The woman developed fever and was treated with antibiotics, still she developed a wound infection with need of daily irrigation. She was discharged 20 days after delivery.

Discussion/Conclusion
Women experiencing pPROM require close monitoring for signs of chorioamnionitis (e.g. body temperature, CRP) in order to minimize the risk of neonatal and maternal complications. The constant balancing of potential neonatal benefits from pregnancy prolongation with the risk of infection for the mother and infant are the main clinical challenges.

P28

Is bacterial surveillance of the upper and lower respiratory tract important in pediatric primary dyskinesia patients?

Diesner S1, Falcone V2, Nissen A1, Bannert C1, Gruber S1, Nachbaur E1, Renner S1, Eiwegger T1, Szepfalusi Z1
1Department of Pediatrics and Adolescent Medicine, Medical University of Vienna, Vienna, Austria; 2Department of Obstetrics and Gynecology, Medical University of Vienna, Vienna, Austria.

BACKGROUND
Primary ciliary dyskinesia (PCD) is a congenital disease affecting the airways from birth on, leading to recurrent respiratory infections. The keystones of medical care comprise regular follow-ups with microbial surveillance and adequate treatment (inhalation-, physiotherapy and antibiotic therapy). In this retrospective analysis, we analyzed the bacterial colonization of pediatric PCD patients in a 10-year period and in a cross-sectional analysis comparing the upper and lower airways.

Methods and results
Twenty-two pediatric PCD patients (15 male/7 female, median age of diagnosis 1.79a) had regular follow-ups at our outpatient clinic. In a 10-year follow-up period, microbial colonization of the lower respiratory tract revealed Staphylococcus aureus (86% of patients), Haemophilus influenza (68%) and Pseudomonas aeruginosa (50%) as the most prevalent pathogens. Multi-resistant pathogens were primarily Serratia marcescens (18%), Stenotrophomonas maltophilia (23%), which did not lead to chronic colonization in this cohort.

In a cross-sectional approach analyzing data of 1 year, upper (nasal) and lower (cough swab/sputum) respiratory samples of 19/22 patients were compared. Haemophilus influenza, Staphylococcus aureus and Moraxella catarrhalis were concomitantly found in the upper and lower airways. In up to 10% of patients, Pseudomonas aeruginosa was only detected in the upper airways representing a reservoir for this pathogen, which is hard to eradicate and can cause severe lower tract infections.

Conclusion
Surveillance of both, the upper and lower airways is important in PCD to identify highly pathogenic germs as early as possible in order to initiate adequate antibiotic treatment and prevent bacterial reservoirs and chronic colonization.
Evaluation of the vaginal flora in pregnant women with opioid-maintenance therapy: a matched case-control study

Farr A1, Holzer I1, Kiss H1, Hagmann M1, Husslein P1, Petricevic L1
1Medical University of Vienna, Vienna, Austria

Background
Vaginal infections increase the risk for preterm delivery. In this study, we aimed to evaluate the vaginal flora of pregnant women receiving opioid-maintenance therapy (OMT).

Methods
A total of 3763 women with singleton pregnancies who underwent routine screening for asymptomatic vaginal infections between 10+0 and 16+0 gestational weeks were examined. Vaginal smears were Gram-stained and microscopically evaluated for bacterial vaginosis, candidiasis, and trichomoniasis. In a retrospective analysis, data of 132 women with OMT were matched for age, ethnicity, parity, education, previous preterm delivery, and smoking status to the data of 3631 controls. The vaginal flora at screening served as the primary endpoint. Secondary endpoints were gestational age and birthweight.

Results
In the study group, 62/132 (47%) women received methadone, 39/132 (29.5%) buprenorphine, and 31/132 (23.5%) slow-release oral morphine. Normal or intermediate flora was found in 72/132 OMT women (54.5%) and 2865/3631 controls [78.9%; OR 0.49 (95% CI, 0.33–0.71); p<0.001]. Candidosis occurred more frequently in OMT women than in controls [OR 2.11 (95% CI, 1.26–3.27); p<0.001]. Findings were inconclusive regarding bacterial vaginosis (± candidosis) and trichomoniasis. Compared to infants of the control group, those of women with OMT had a lower mean birthweight [MD = -165.3 g (95% CI, -283.6 to -46.9); p = 0.006].

Conclusions
Pregnant women who receive OMT have an increased risk of asymptomatic vaginal infections and in particular of candidosis. In order to avoid the accumulation of risk factors, these women should undergo routine screening to detect asymptomatic vaginal infections.

Late Onset Candida Colonization and Preterm Birth

Holzer I1, Farr A1, Kiss H1, Hagmann M2, Petricevic L1
1Division of Obstetrics and Fetomaternal Medicine, Department of Obstetrics and Gynecology, Medical University of Vienna, Waehringer Guertel 18-20, Vienna, 1090, Austria, Wien, Austria; 1Section for Medical Statistics (IMS), Center of Medical Statistics, Informatics and Intelligent Systems, Medical University of Vienna, Vienna, Austria.

Background
Vaginal colonization with Candida species (spp.) during pregnancy has been associated with adverse pregnancy outcome. There is a reduction of the preterm birth rate in women with recurrent colonization of Candida spp., who were treated with clotrimazole. The aim of our study is to evaluate the effect of the trimester of vulvovaginal colonization with Candida spp.

Methods
We retrospectively analyzed data of all pregnant women with vaginal colonization with Candida during the first or second trimester of pregnancy at the Medical University of Vienna between 2005 and 2014.

Results
In 673 women (63%) who were tested positive for vaginal Candida colonization during the first trimester of pregnancy, the rate of preterm birth was 10% (N=64). In 393 women (37%) who were diagnosed with Candida spp. during the second trimester of pregnancy, the preterm birth rate was 18% (N=71, p=0.0002). The mean birthweight of the neonates of women, who presented with vulvovaginal Candida colonization during the first trimester, was 3243 g, compared to 2989 g of the neonates of women with a colonization of Candida spp. during the second trimester (p=0.0001).

Conclusion
Asymptomatic vaginal Candida colonization is more harmful in the second trimester of pregnancy. Women with a vaginal Candida spp. colonization during the second trimester of pregnancy have higher rates of preterm birth and a lower neonatal birthweight compared to those with Candida spp. colonization during the first trimester. Screening programs for asymptomatic vaginal infections in pregnancy should be implemented at the beginning of the second trimester of pregnancy.
P31
Risk of vaginal infections at early gestation in patients with diabetic conditions: a retrospective cohort study

Marschalek J1, Farr A1, Kiss H1, Hagmann M2, Göbl C1, Marschalek M1, Petricevic L1
1Department of Obstetrics and Gynaecology, Medical University of Vienna, Wien, Austria, 2Section for Medical Statistics (IMS), Centre of Medical Statistics, Informatics and Intelligent Systems at the Medical University Vienna, Vienna, Austria

Background
Pregnant women with gestational diabetes mellitus (GDM) are reported to be at increased risk for infections of the genital tract. This study aimed to compare the prevalence of asymptomatic bacterial vaginosis (BV) and Candida colonization at early gestation between pregnant women with and without diabetic conditions during pregnancy.

Methods
We included data from 8,486 singleton pregnancies that underwent an antenatal infection screening programme at our department. All women with GDM or pre-existing diabetes were retrospectively assigned to the diabetic group (DIAB), whereas non-diabetic women served as controls (CON).

Results
Prevalence for BV and Candida colonization was 9% and 14% in the DIAB group, and 9% and 13% in the CON group, respectively (n.s.). No significant difference regarding stillbirth and preterm delivery was found.

Conclusion
We could not assess an increased risk of colonization with vaginal pathogens at early gestation in pregnant women with diabetes, compared to non-diabetic women. Large prospective studies are needed to evaluate the long-term risk of colonization with vaginal pathogens during the course of pregnancy in these women.

P32
Prevalence and characteristics of active hepatitis B in pregnant women in Switzerland – a survey from two sites

Mosimann B1, Aebi-Popp K3, Fischer T2, Gebhardt J5, Amylidi-Mohr S1, Suter F3, Raio L1, Kahlert C4, Surbek D1
1Department of Obstetrics and Gynecology, University Hospital and University of Bern, Bern, Switzerland, 2Frauenklinik Kantonsspital St. Gallen, St. Gallen, Switzerland, 3Department of Infectious Diseases, University Hospital and University of Bern, Bern, Switzerland, 4Infektiologie Kantonsspital St. Gallen, St. Gallen, Switzerland, 5Gynäkologie und Geburtshilfe Spital Wil, Wil, Switzerland

Background
A high viral load (vl) in active hepatitis B infection (HepB) increases mother-to-child-transmission (MTCT) despite timely postpartum active and passive vaccination. Antiviral treatment in the third trimester decreases MTCT significantly. The aim of this study is to obtain epidemiological information about the prevalence and vl of HepB in Switzerland.

Material and Methods
We included pregnancies that were tested for HBsAg at the university hospital of Bern and the cantonal hospital of St. Gallen between 2005 and 2015. All pregnancies that tested HBsAg positive were further investigated, using the clinical data systems.

Results
27'084 pregnancies were included, 12'030 from Bern and 15'054 from St. Gallen. 184 HBsAg positive pregnancies were diagnosed, corresponding to a prevalence of 0.68%. HepB vl was tested in 72/184 (39.1%), of which 12 (16.7%) showed a vl of >1'000'000 copies/ml. 9/12 (75%) were of eastasian ethnicity and 3/12 (25%) originated from eastern Europe. None of the pregnancies with a high vl resulted in preterm birth, but 4/12 (33.3%) in a birth weight below the 10th percentile. 2/12 women received antiviral treatment during the pregnancy.

Conclusion
A significant proportion of women that test HBsAg positive in pregnancy have a high vl, of those most women are of eastasian origin. Recently antiviral treatment in pregnancies with high vl has been proposed and should nowadays be discussed. The risk of low birth weight is increased, however further studies are needed to prove causality.
How reliable are WBC count and CRP to monitor for intra-amnionic infection?

Kiss H1, Aulona G1, Petricevic L1, Pateisky P1
1Medizinische Universität Wien, Universitätsklinik für Frauenheilkunde, Wien, Austria

Intra-amniotic infection is a serious complication associated with preterm birth and significant perinatal and maternal morbidity. The accurate diagnosis based on clinical signs of the infection in the pregnant mother is often made at a time when the infection has generalized and sepsis has ensued. The delayed detection of the early signs of intrauterine infection is probably the repercussion of the immunologic tolerance developed toward the fetus during pregnancy as well as the barrier function of the placenta and membranes. Therefore, we are able to diagnose a chorioamnionitis only later in its course, when the fetal health and sometimes even the maternal health have already been compromised. In lack of other accurate and safe diagnostic procedures to detect the early signs of intrauterine infection, we often rely on serial measurement of White Blood Cell (WBC) count and C Reactive Protein (CRP) to monitor for chorioamnionitis in patients at risk. But how reliable are these parameters really? Can they detect a local intrauterine infection before it is generalized?

To answer this, we analysed retrospectively cases where diagnosis of intra-amniotic infection syndrome was ascertained clinically, histologically or both. These patients were women admitted in our tertiary setting university clinic or followed up in the outpatient care department, diagnosed with cervical incompetence or at imminent risk for preterm birth.

The aim of the study was to find out whether there is a significant and clinically useful change of these two blood parameters in the 48 hours preceding the clinical diagnosis of intra-amniotic infection.

Only patients from which we had at least two results of each WBC Count and CRP from blood samples withdrawn in the period from one week to 48 hours prior to the diagnosis of chorioamnionitis were included in the study. The earliest blood results obtained one week to 48hrs prior to the diagnosis of chorioamnionitis was set to 100% and served as control. In women receiving a course of steroids, an increase of 4,000 /m3 in WBC count was considered normal to account for glucocorticoid induced leucocytosis and thus subtracted before analysis. In addition, we also compared the values of CRP and WBC count after the clinical diagnosis, to their pre-diagnosis measurements.

We found that only the values of the WBC count and CRP obtained after the clinical diagnosis of intra-amniotic infection showed a significant increase compared to the controls. Thus, this increase most probably reflected the generalized infection in the mother rather than the local chorioamnionitis. Our conclusion underscores once more the need to establish better feto-placental specific diagnostic tools to monitor the risk of intrauterine infection.
<table>
<thead>
<tr>
<th>A</th>
<th>P32</th>
<th>Amylidi-Mohr, S</th>
<th>P32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aeby-Popp, K</td>
<td></td>
<td>Arendarski, P</td>
<td>P07</td>
</tr>
<tr>
<td>Alemay, L</td>
<td>P03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Almeida, M</td>
<td>OC12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alves, R</td>
<td>P18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>OC03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bacalbasa, N</td>
<td>P24, P25</td>
<td>Berza, N</td>
<td>P02</td>
</tr>
<tr>
<td>Bala, E</td>
<td>P06a</td>
<td>Bogavac, M</td>
<td>P26</td>
</tr>
<tr>
<td>Balsyte, R.</td>
<td>P09, P21</td>
<td>Boia, M</td>
<td>OC12</td>
</tr>
<tr>
<td>Bannert, C</td>
<td>OC01</td>
<td>Bolpetti, A</td>
<td>P19</td>
</tr>
<tr>
<td>Bastos, L</td>
<td>P19</td>
<td>Bosmans, E</td>
<td>OC01</td>
</tr>
<tr>
<td>Beert, J</td>
<td>P06, P14</td>
<td>Bot, M</td>
<td>P05</td>
</tr>
<tr>
<td>Beireis, J</td>
<td>OC02</td>
<td>Brand, S</td>
<td>P15</td>
</tr>
<tr>
<td>Bekos, C</td>
<td>OC06, OC08, OC09, P16, P17, P22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bellen, G</td>
<td></td>
<td>Bratila, E</td>
<td>P06, P23</td>
</tr>
<tr>
<td>BERCEANU, C</td>
<td>P14</td>
<td>BRĂTLĂ, E</td>
<td>P14</td>
</tr>
<tr>
<td>C</td>
<td>P18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carvalho, N</td>
<td>P06a</td>
<td>Comandasasu, D</td>
<td>P06, P23</td>
</tr>
<tr>
<td>Cellesiute, J</td>
<td>P14</td>
<td>COMANDAŞU, D</td>
<td>P14</td>
</tr>
<tr>
<td>CÎRSTOIU, M</td>
<td></td>
<td>Cretoiu, D</td>
<td>OC03</td>
</tr>
<tr>
<td>Claes, I</td>
<td>OC06, OC09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>P10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Davidovic-Grigoraki, M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degenhardt, T</td>
<td>P15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depuydt, C</td>
<td>OC01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>de Sanjose, S</td>
<td>P03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>OC04, P04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eglite, L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elweger, T</td>
<td>P28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>P09, P21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Falcão, V</td>
<td>P27, P28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Falcone, V</td>
<td>OC05, P27, P29, P30, P31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farr, A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>P32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gebhardt, J</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gensthaler, L</td>
<td>P03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Göbl, C</td>
<td>P31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Golan, M</td>
<td>P11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Golim, M</td>
<td>OC10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>P29, P30, P31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hagmann, M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helmer, H</td>
<td>P27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neverhagen, A</td>
<td>OC11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>P26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ilie, D</td>
<td>P02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isajevs, S</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>OC/P0 Code</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jacquemyn, Y</td>
<td>OC08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jaeger, M</td>
<td>P17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jermakova, I</td>
<td>OC04, P04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joura, E</td>
<td>OC02, P03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kahlert, C</td>
<td>P32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kanopiene, A.</td>
<td>P06a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiss, H</td>
<td>OC05, P27, P29, P30, P31, P33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kneifel, W</td>
<td>OC05, P07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Koch, M</td>
<td>OC07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kokanov, D</td>
<td>P10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kroica, J</td>
<td>OC04, P04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kunicina, D</td>
<td>OC04, P04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laue, C</td>
<td>P07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lebeer, S</td>
<td>OC06, OC09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leite, S</td>
<td>P18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liepniece-Karele, I</td>
<td>OC04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liesegang, A</td>
<td>P07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lima, M</td>
<td>P18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lima-Silva, J</td>
<td>P09, P21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linnerth, B</td>
<td>P07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machado, R</td>
<td>P12, P13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malheiro, F</td>
<td>P09, P21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandic, A</td>
<td>P10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marconi, C</td>
<td>OC10, P18, P19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marschalek, J</td>
<td>OC05, P31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marschalek, M</td>
<td>OC05, P31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Martinez-de-Oliveira, J</td>
<td>P12, P13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matulienė, J.</td>
<td>P06a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEHEDINŢU, C</td>
<td>P14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melo, C</td>
<td>P09, P21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nachbaur, E</td>
<td>P28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neto, S</td>
<td>OC12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netea, M</td>
<td>P17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nikolic, M</td>
<td>P08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nissen, A</td>
<td>P28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oerlemans, E</td>
<td>OC06, OC09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oliveira, M</td>
<td>OC12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paavonen, J</td>
<td>P20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palmeira-de-Oliveira, A</td>
<td>P12, P13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palmeira-de-Oliveira, R</td>
<td>P12, P13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pannenbeckers, A</td>
<td>P07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Papazova, E</td>
<td>P07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parada, C</td>
<td>P18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pateisky, P</td>
<td>P27, P33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedrosa, S</td>
<td>OC12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person, K</td>
<td>P15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petricevic, L</td>
<td>OC05, P07, P08, P27, P29, P30, P31, P33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petroška, D</td>
<td>P02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petrovay, F</td>
<td>P24, P25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pils, S</td>
<td>P03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinto, G</td>
<td>P19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plisko, O</td>
<td>OC04, P04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poletti, J</td>
<td>P19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polowy, J</td>
<td>OC11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polterauer, S</td>
<td>OC02, P03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pop, L</td>
<td>P01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puia, S</td>
<td>P23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radan, A</td>
<td>OC11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raio, L</td>
<td>OC11, P32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rakic, S</td>
<td>P08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ravel, J</td>
<td>P18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reinthaller, A</td>
<td>OC02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renner, S</td>
<td>P28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rezeberga, D</td>
<td>OC04, P04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ribeiro, A</td>
<td>OC12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ruban, K</td>
<td>OC06, P16, P22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Code</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salembier, G</td>
<td>OC01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schleussner, E</td>
<td>OC11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schneeweiß-Friedl, J</td>
<td>OC07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schotzinger, R</td>
<td>P15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schrezenmeir, J</td>
<td>P07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senfelde, I</td>
<td>P02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silva, M</td>
<td>OC10, P18, P19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simillion, C</td>
<td>OC11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singer, C</td>
<td>OC05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sivina, D</td>
<td>OC04, P04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tavakkol, A</td>
<td>P15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ten Oever, J</td>
<td>P17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toader, O</td>
<td>OC03, P01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Umek, W</td>
<td>OC07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unkila-Kallio, L</td>
<td>P20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaitkienė, D.</td>
<td>P06a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vanden Broeck, D</td>
<td>OC01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vangelov, M</td>
<td>P08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vansevičiute, R.</td>
<td>P06a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veit-Rubin, N</td>
<td>OC07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wittouck, S</td>
<td>OC06, OC09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xavier, J</td>
<td>P09, P21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zecevic, N</td>
<td>P08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sobel, J</td>
<td>P15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solajic, N</td>
<td>P10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stani, J</td>
<td>P03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suciu, I</td>
<td>OC03, P01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suciu, N</td>
<td>OC03, P01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sukovas, A.</td>
<td>P06a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surbek, D</td>
<td>OC11, P32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suter, F</td>
<td>P32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Szepfalusi, Z</td>
<td>P28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tommola, P</td>
<td>P20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tronco, J</td>
<td>P19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uspele, L</td>
<td>P02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Velicu, O</td>
<td>P06, P23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verstraete, L</td>
<td>OC01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vieira-baptista, P</td>
<td>P09, P21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vladareanu, R</td>
<td>P05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vladareanu, S</td>
<td>P05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wuyts, S</td>
<td>OC06, OC09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Žodžika, J</td>
<td>OC04, P02, P04</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>