Conclusions: High-definition ultrasound does not reduce the number of women characterised as having a PUL amongst women attending and early pregnancy unit.

OC092
The appearance and behaviour of ectopic pregnancies in the 'pregnancy of unknown location' population

E. Kirk[1], A. T. Papageorghiou[2], A. Daemen[3], G. Condous[4], D. Timmerman[5], T. Bourne[1]

[1]Early Pregnancy Unit, St George's, University of London, London, United Kingdom, [2]Fetal Medicine Unit, St George's, University of London, London, United Kingdom, [3]Department of Electrical Engineering (ESAT-SISTA),, Leuven, Belgium, [4]Early Pregnancy and Advanced Endosurgery Unit, Nepean Clinical School, University of Sydney, Sydney, Australia, [5]Department of Obstetrics and Gynaecology, University Hospital Gasthuisberg, K.U. Leuven, Leuven, Belgium

Objectives: Transvaginal ultrasound (TVS) has a high sensitivity for the detection of ectopic pregnancy (EP), however not all are detected on the initial examination and some women may initially be classified as a pregnancy of unknown location (PUL). It has been suggested that these EPs are less likely to be associated with complications. The aim of this study was to compare the appearance and behaviour of EPs initially classified as PULs to those visualised on the initial TVS examination.
Methods: An observational study over a 4-year period on women undergoing a TVS prior to diagnosis of a tubal EP. Demographic details, presenting symptoms, TVS findings, serum hCG and progesterone levels were recorded at the time of the initial TVS and at the time of diagnosis of the EP in those initially classified as a PUL.
Results: 411 women with a tubal EP underwent a TVS prior to treatment. 85.9% (353/411) had their EP visualised on the initial TVS and 14.1% (58/411) were initially classified as PULs. Those initially classified as PULs had a lower mean gestational age, lower mean initial serum hCG and a higher mean progesterone level at presentation than those where the EP was visualised on the initial TVS ($P < 0.005$). 60.3% (35/58) of the PULs had their EP subsequently visualised on TVS. At the time of diagnosis these EPs were significantly smaller ($P < 0.0001$). However, the appearance of the ectopic pregnancies, serum hCG and progesterone levels at the time of visualisation on TVS were not significantly different from those visualised on the initial TVS.
Conclusions: EPs arising from the PUL population have a higher mean progesterone level at presentation than those visualised on the initial, although their actual appearance on TVS is not different to those visualised on the initial TVS. EPs in this group are therefore more likely to be actively growing and may be of more clinical significance than previously thought.

OC093
The impact of introducing a new Acute Gynaecology Unit on the management of women with ectopic pregnancy

T. Bignardi, D. Alhamdan, G. Condous

Nepean Centre for Perinatal Care and Research, Univeristy of Sydney, Penrith, Australia

Objectives: To evaluate the impact of the introduction of a new Acute Gynaecology Unit (AGU) on the management of ectopic pregnancy.
Methods: Acute Gynaecology Unit (AGU) is a dedicated service that provides quick and easy accessibility to diagnosis and treatment of acute gynaecological and early pregnancy complications. The AGU was set up in Novembre 2006 at Nepean Hospital. Prior to setting this model of care, we prospectively collected data on all ectopic pregnancies managed at the Nepean Hospital between August 2004 and November 2006. We then collected data on all women who presented to the AGU with an ectopic pregnancy between Dec 2006 and Feb 2008. Main outcome measure was successful treatment of ectopic pregnancy.
Results: We review in total 127 complete records of women treated for ectopic pregnancy in the two study periods. After the unit was established, we observed a significant reduction in laparoscopic salpingectomy rate and a significant increase in expectant management. There was a trend in reduction of laparotomic salpingectomy rate and a trend in increased use of MTX, however not statistically significant (see table 1).
Conclusions: The Acute Gynaecology Unit has changed the way we manage ectopic pregnancies with a shift towards more conservative approaches. This is potentially due to high-quality ultrasound and subsequently earlier diagnosis of ectopic pregnancy. High surgical rate for ectopic pregnancy before the introduction of the AGU is highlighted to support the need for greater emphasis on medical and expectant management.

	Before AGU (#60)	*After AGU (#67)*	*P-value (Chi-square test)*
laparotomic salpingectomy	10/60 (17%)	8/67 (12%)	0.459
laparoscopic salpingectomy	34/60 (57%)	24/67 (36%)	0.019
instrumentation of the uterus (D&C)	14/44 (32%)	7/32 (22%)	0.438
MTX	16/60 (27%)	23/67 (34%)	0.35
expectant management	0/60 (0%)	12/67 (18%)	0.001

OC094
The timing of serum human chorionic gonadotrophin measurements to predict the outcome of pregnancies of unknown location

E. Kirk[1], L. Tan[2], G. Condous[3], C. Bottomley[2], B. Van Calster[4], S. Van Huffel[4], D. Timmerman[5], T. Bourne[2]

[1]St George's, University of London, London, United Kingdom, [2]Early Pregnancy Unit, St George's, University of London, London, United Kingdom, [3]Early Pregnancy and Advanced Endosurgery Unit, Nepean Clinical School, University of Sydney, Sydney, Australia, [4]Department of Electrical Engineering (ESAT-SISTA), K.U. Leuven, Leuven, Belgium, [5]University Hospital Gasthuisberg, K.U. Leuven, Leuven, Belgium

Objectives: Previous work has shown that it is possible to predict the outcome of a pregnancy of unknown location (PUL) on two serum hCG levels taken 48 hours apart using an hCG ratio (hCG 48hrs/hCG 0hr). Although we have shown that it is possible to diagnose a failing PUL within 48 hrs, a final diagnosis of intra-uterine pregnancy (IUP) or ectopic pregnancy (EP) is often not made until at least 168 hours (7 days) after presentation. The aim of this study was to see if PUL outcome prediction could be improved by incorporating an hCG level taken at day 7.
Methods: Women classified as PULs on transvaginal scan (TVS) had serum hCG levels taken at 0 hours, 48 hours and 168 hours (day 7). All women were followed up until the final clinical outcome was known. The following hCG ratios were calculated for all women: 48 hrs/0hr, 168hrs/0hr and 168 hrs/48hrs. The performance of these ratios to predict each pregnancy outcome was evaluated using receiver operator characteristic (ROC) curves.
Results: Data was collected on a total of 251 PULs. The final clinical outcomes were 136 (54.1%) failing PULs, 87 (34.7%) IUPs and 28 (11.2%) EPs. The hCG ratio 48hrs/0hr gave an area under the curve (AUC) of 0.964 for failing PUL, 0.966 for IUP and 0.866 for EP. The hCG ratio 168hrs/0hr gave an AUC of 0.973 for failing PUL,