

# Fertility Preservation for Serous Borderline Ovarian Tumour Recurrence



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## INTRODUCTION

There is increasing demand for fertility preservation surgery for women diagnosed with malignancy of reproductive organs. This is a case of a Twenty One year old woman diagnosed with a Serous Borderline Ovarian Tumour recurrence (BOTR). Preservation of one ovary was possible due to the use of a novel intraoperative ultrasound technique to preserve the remaining ovary.

## CASE REPORT

Following diagnosis of Serous Borderline Ovarian Tumour, initial full surgical staging surgery was performed. This included a right salpingo oophorectomy with infracolic omentectomy and preservation of the uterus and left ovary. Patient was disease free for 4 years, during which she did not try to conceive. The first recurrence was detected in the left ovary. This was successfully treated with an ovarian cystectomy using intraoperative ultrasound guidance, to preserve fertility and the left ovary. Less than 12 months later, surveillance imaging suggested a second two centimeter recurrence with enhancement on MRI in the preserved ovary. MDT decision was to remove the remaining ovary. Intraoperative ultrasound was performed. The MDT decision to remove the ovary was over ruled when laparoscopy and transvaginal intraoperative scan did not raise suspicion of a significance recurrence. Biopsies from periovarian adhesions and ovarian surface were taken and reported as negative. The ovary was preserved for a second time and this woman successfully conceived a spontaneous pregnancy.



Figure 1: First Recurrence after 4 years

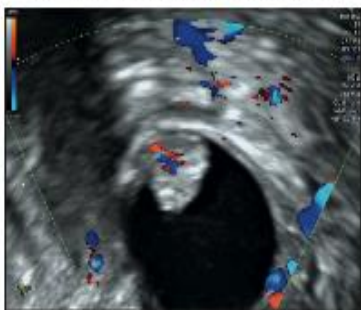


Figure 2: First Recurrence after 4 years

## INTRAOPERATIVE ULTRASOUND

Intraoperative ultrasound has been described in published literature for the management of recurrent serous borderline ovarian tumours (sBOTs). Particularly useful when the recurrence in the ovary is too small to be seen at laparoscopy. To perform the ultrasound the Pouch of Douglas (POD) is filled with normal saline creating an acoustic window followed by transvaginal ultrasound to image the ovaries. This case was different in that we used sharp laparoscopic scissors dissection to avoid the ultrasound scan artifacts can be caused by electrosurgery. We also suggest using transrectal ultrasound as it gives better images after filling POD with normal saline as it is a lower scanning probe in the pelvis compared to vaginal US. This variation has not previously been described.



Figure 3: A corpus luteum in the same ovary intraop US was done to take out the BOT recurrence only

## DISCUSSION

This case illustrates a novel technique which can be utilised to determine areas of recurrent disease within ovaries. The key benefit is fertility is preserved enabling women to conceive spontaneously. The technique we described is different to previous work published and believe this enhances the images produced allowing easier surgical removal of disease. This technique requires sound ultrasound and surgical skills in order for a satisfactory outcome to be achieved. Intraoperative ultrasound is a procedure that should be considered for all cases of ovarian disease requiring fertility preservation especially when preoperative imaging is inconclusive.

## Reference:

Jones, BP, Saso, S., Farren, J. El-Bahrawy, M et al. Ultrasound-Guided Laparoscopic Ovarian Wedge Resection in Recurrent Serous Borderline Ovarian Tumours. *Int J Gynecol Cancer*. 2017 Nov;27(9):1813-1818. doi: 10.1097/IGC.0000000000001096