

## INTRAOPERATIVE CELL SALVAGE FOR ENDOSCOPIC SURGERY

### **KEY MESSAGES**

Intraoperative cell salvage (ICS) is safe to use in endoscopic assisted surgery. Current evidence shows its effectiveness in laparoscopic surgery for ectopic pregnancy, splenic and abdominal trauma.

Clinical teams and ICS operators should assess any risks associated with the options below on a case by case basis.

### **TARGET STAFF GROUP**

All staff involved in the cell salvage process and the theatre practitioner for the procedure.

### **PROCEDURE**

As with all ICS procedures it is essential that anticoagulant is used, and the reservoir primed before commencing cell salvage. The reservoir can be primed by connecting anticoagulant via a giving set attached to the top port of the reservoir. All fluid used for irrigation must be suitable for intravenous use.

There is no specific endoscopic set that is designed for ICS. There are many different configurations of endoscopic sets but most will have 2 tubes, one for irrigation (often marked in a colour) and one for suction (which is clear).

The endoscopic set suction tubing is connected directly to the ICS reservoir; this should be primed with anticoagulant. The advantage of this set up is that it is easy to perform, but the disadvantage is that anticoagulant is only mixed with the blood in the reservoir, not the tubing.

Any modification of endoscopic equipment to fit cell salvage would not be recommended by manufacturers.

### **Points to note:**

Blood travels through the narrow bore endoscopic instrument before entering the suction tubing, it may be necessary to increase the suction to allow for the aspiration of blood through this narrow instrument.

During laparoscopic surgery continuous suction may prevent the abdomen being insufflated to a sufficient pressure for the surgery, so having aspirated the initial blood loss the surgeon may request the suction be turned off.

Care should be taken to prevent red cell haemolysis. To reduce haemolysis the vacuum pressure should always be set as low as practicable, typically between -100 and -150 mmHg (avoid excess pressures).

## **REFERENCES**

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The information contained in this ICS Technical Factsheet has been sourced from members of the UK Cell Salvage Action Group (UKCSAG) and is generally agreed to be good practice.  
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