

# Ruminant Exploratory Laparotomy

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## Intra-Operative Procedure for a Left Flank Approach

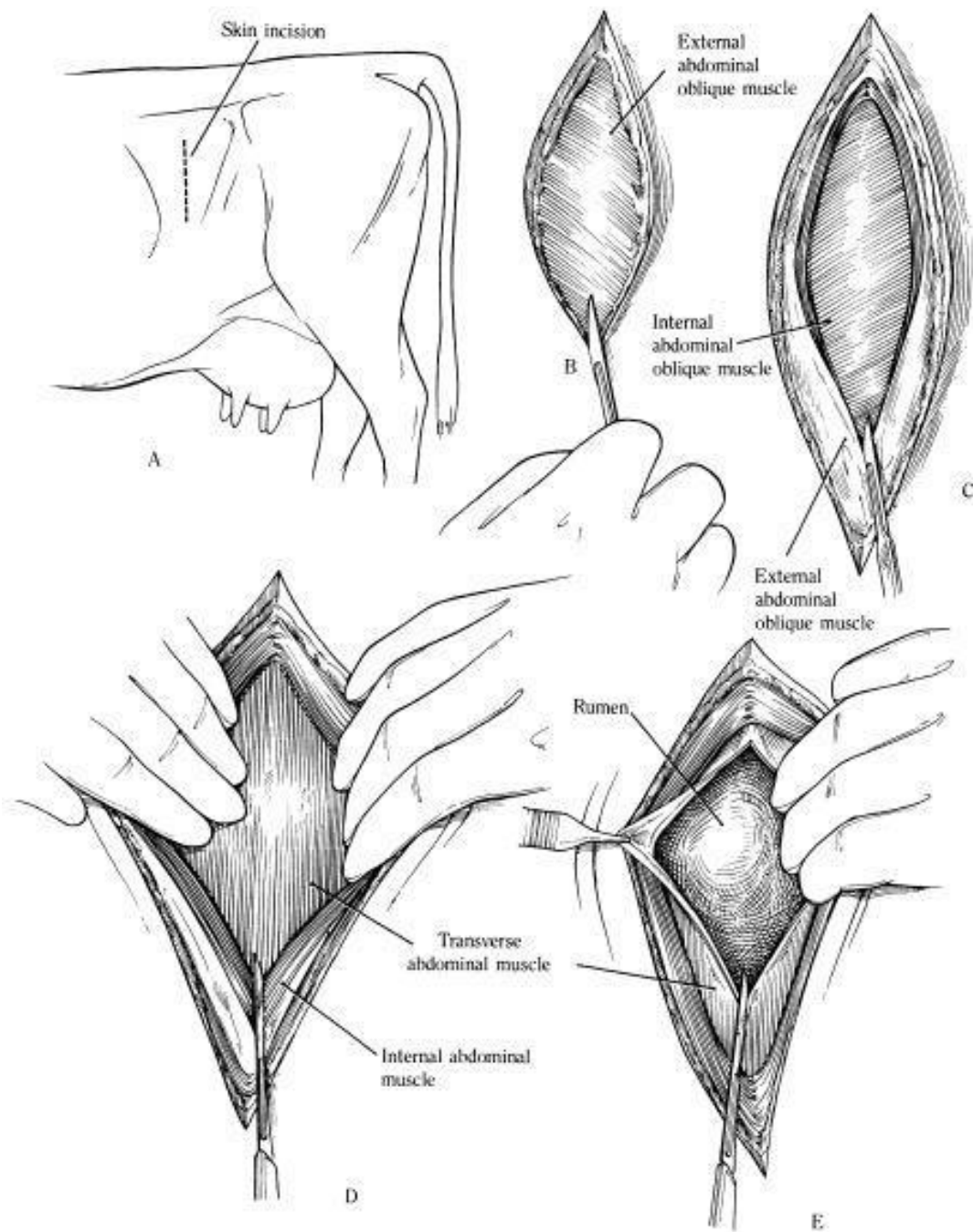
After surgical preparation, a vertical incision is made in the middle of the paralumbar fossa extending from 3 to 5 cm ventral to the transverse processes of the lumbar vertebrae for a distance of 20 to 25 cm. To incise the skin, reasonable pressure should be exerted on the scalpel to ensure complete penetration. This incision is continued ventral, so the skin is opened in one smooth motion. Separation of the skin and subcutaneous tissue reveals fibres of the external abdominal oblique muscle and fascia. This layer is incised vertically to reveal the internal abdominal oblique muscle. A similar incision through the internal abdominal oblique muscle reveals the glistening aponeurosis of the transverse abdominal muscle. Then the muscle is picked up with tissue forceps and is nicked with a scalpel in the dorsal part of the incision to avoid cutting the rumen. The incision through the transverse abdominal muscle and peritoneum may be extended with scissors or a scalpel for entrance into the peritoneal cavity.

A thorough, systematic examination of the abdomen should always be carried out before specific surgical manipulation is performed on a viscus. Unless a left displacement of the abomasum is present, the rumen will be visible following completion of the left-flank laparotomy incision, and the colour of its serosa may be noted. The rumen is palpated to determine the nature of its contents. The left kidney is pendulous and also can be palpated straight in from the incision if the rumen is empty. If the rumen is full, the kidney is located by passing a hand around caudal to the dorsal sac of the rumen. Passing a hand forward on the left side of the rumen, the spleen, reticulum, and diaphragmatic area may be palpated, and the presence of adhesions or abscesses in this area may be ascertained. Moving behind the rumen over to the right side, the viscera within the omental bursa are palpated. Further forward on the right side, it is possible to palpate the caudate lobe of the liver and the gallbladder.

The pelvic region, including the uterus (in a cow) and bladder, should also be palpated. It is questionable whether routine palpation of the ovaries and fimbriae of the uterine tubes is appropriate in the cow, especially if peritonitis is present in the abdomen. It is possible that local infection and adhesions could result in problems with reproduction. Following this exploration, any specific procedures indicated are performed.

### **Precautions:**

1. Moisten tissue intermittently with sterile saline to prevent drying out of the tissue and creation of adhesions.
2. Ensure gentle manipulation of structures and tissues to prevent haemorrhage.



13.1. A-H. Flank laparotomy and abdominal exploration.

To close the incision, the peritoneum and transversus abdominis are sutured closed with a simple continuous pattern using 2-0 vicryl. The internal and external abdominal oblique muscles are closed as a single layer, using a simple continuous pattern as well. The cutaneous trunci and skin can also be closed as one layer using 2-0 vetafil/barunamid in a ford interlocking suture pattern. Drainage is allowed by using 2 simple interrupted sutures at the distal end of the incision.

