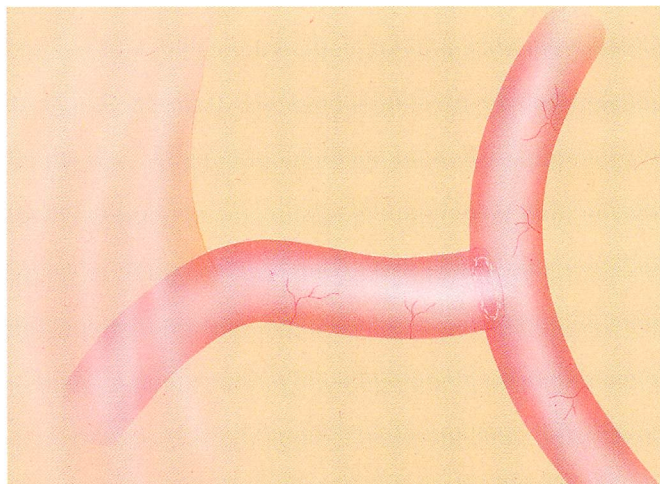


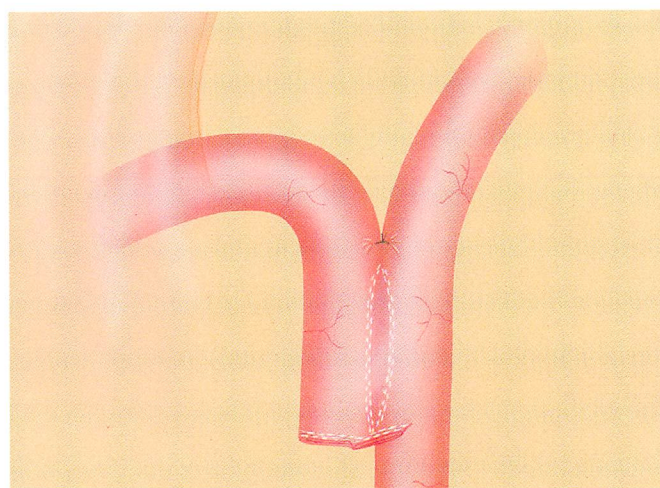
# Roux-en-Y Anastomosis

In this section, two techniques for creating a Roux-en-Y anastomosis are described and illustrated.



## Intraluminal Stapler Technique

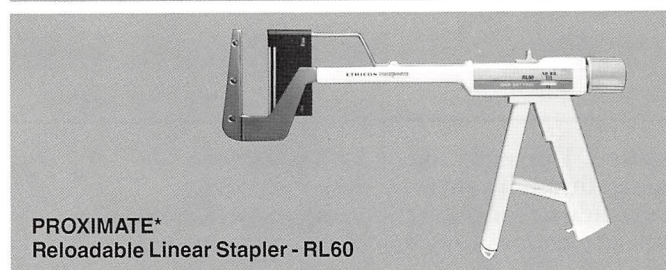
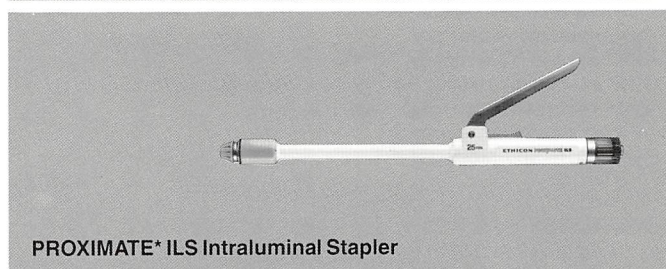
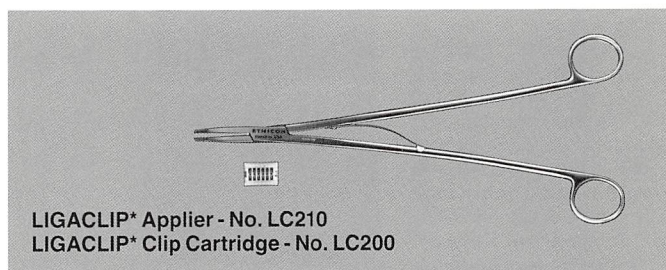
After the duodenum has been stapled and transected during the course of gastrectomy, a Y-anastomosis is created, in end-to-side fashion, with one application of an appropriately sized PROXIMATE\* ILS Intraluminal Stapler inserted through the open proximal end of the jejunal limb.



## Linear Cutter Technique

After the duodenum has been stapled and transected during the course of gastrectomy, the jejunum is stapled and transected with one application of the PROXIMATE\* Linear Cutter (PLC50). A Y-anastomosis is then created, in side-to-side fashion, with a second application of the PLC50 Linear Cutter. The common opening is then closed with the PROXIMATE\* Reloadable Linear Stapler (RL60).

Instruments and reloading units commonly used in these procedures



SEE PACKAGE INSERT FOR FULL PRODUCT INFORMATION.

## Intraluminal Stapler Technique

### Transecting the Jejunum

After the duodenum has been stapled and transected during the course of gastrectomy, place atraumatic clamps at convenient points on the proximal jejunum approximately 20-25cm distal to the ligament of Treitz. Then transect the jejunum (Figure 1), leaving the ends open. Place a purse-string suture, using PROLENE\* (polypropylene) suture, size 2/0, on the distal end of the duodenojejunal limb (Figure 2).

Fig. 1

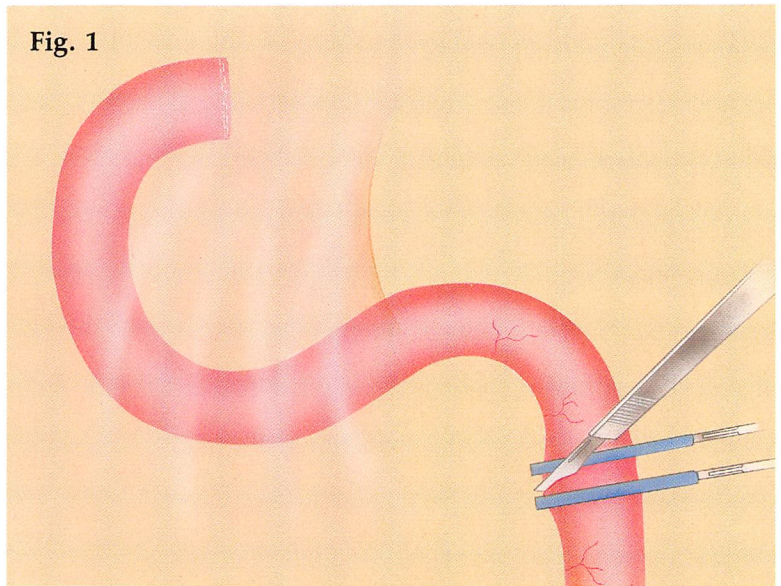
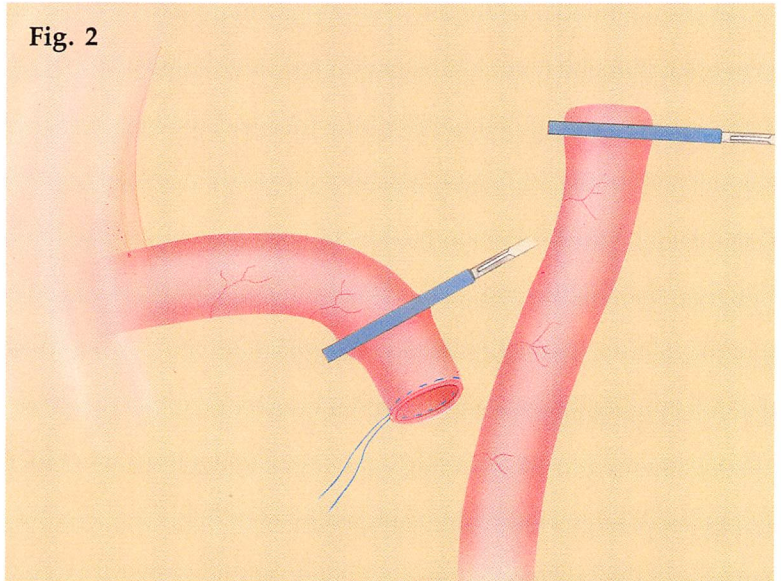


Fig. 2

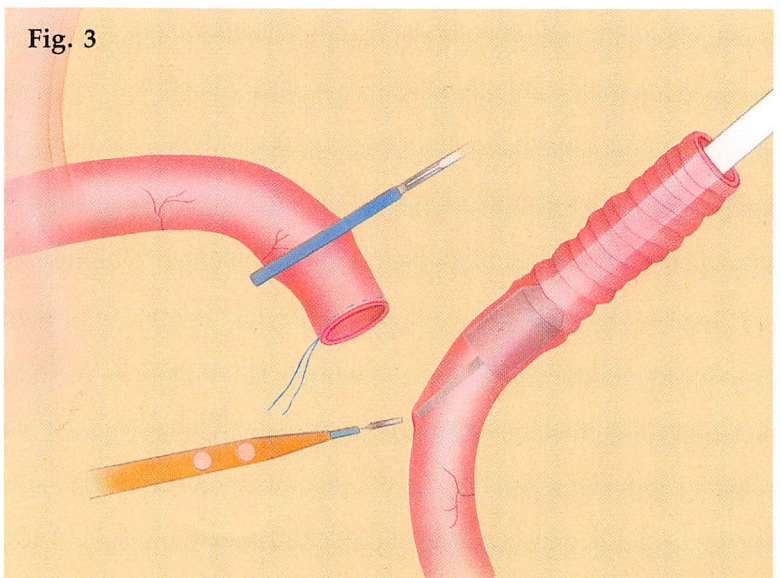


### Inserting the ILS Stapler

After choosing an appropriately sized ILS Intraluminal Stapler (on the basis of the surgeon's experience or with the aid of dilators or sizers), open the instrument approximately 4-5cm by turning the adjusting knob counter-clockwise. Remove the anvil from the center rod. After removing the clamp from the proximal end of the distal jejunal limb, insert the instrument into the lumen until the center rod is approximately 40cm from the transected end.

Lightly press the end of the center rod against the antimesenteric wall of the bowel (Figure 3). Touch the slightly tented area with an electrocautery or scalpel to create an opening just large enough to allow passage of the center rod. Replace and tighten the anvil on the center rod.

Fig. 3

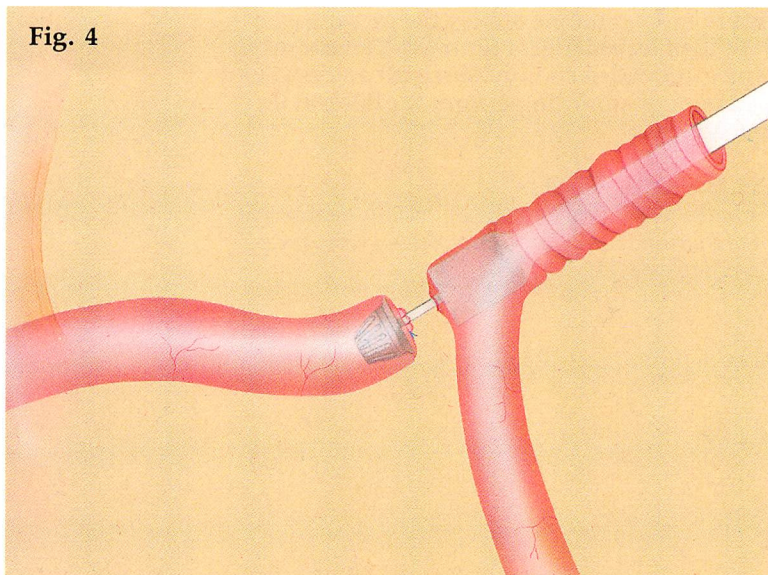


## Creating the Anastomosis

After replacing the anvil on the center rod of the ILS, insert it into the lumen of the distal end of the duodenojejunal limb. To facilitate insertion, the posterior wall of the bowel placed over the anvil with the aid of traction sutures or Allis clamps. Introduce the anvil far enough to allow the purse-string suture to be tightened securely around the center rod.

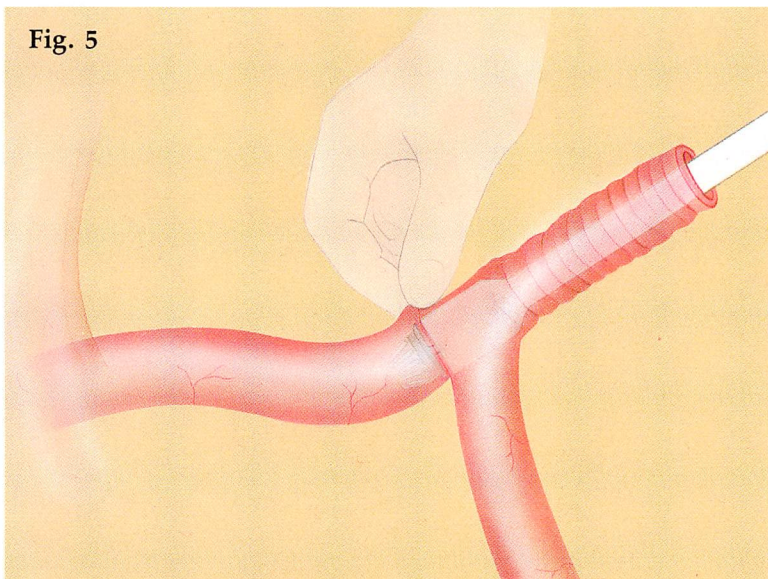
Once the anvil is in position, tie down the purse-string suture around the center rod (Figure 4). Being careful not to damage the purse-string, excise redundant tissue and excess suture from around the center rod.

After aligning the bowel segments, close the ILS and set the staple height. As the instrument is fired, staples are driven through the tissue and formed against the anvil; at the same time, a knife blade advances to cut a uniform stoma between the proximal and distal jejunal limbs.

**Fig. 4**

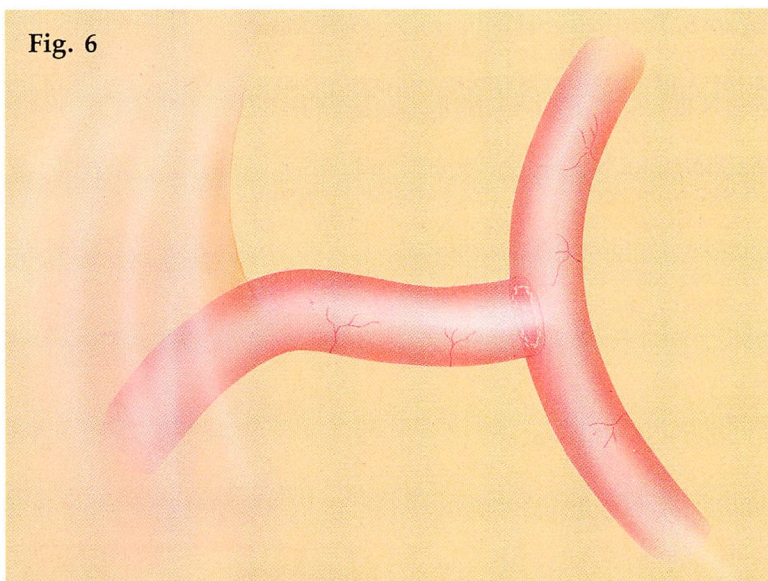
## Removing the ILS Stapler

Before attempting removal of the ILS, open the instrument slightly by turning the adjusting knob counterclockwise approximately 1/2 to 3/4 turn, and rotate the ILS 180° in either direction to insure tissue release. Then gently lift the anastomotic staple line over the lip of the anvil by hand or with a traction suture (Figure 5). Remove the instrument while slightly rotating or rocking it.

**Fig. 5**

## Completed Anastomosis

The completed Y-anastomosis is illustrated in Figure 6, with the anterior wall rendered transparent to illustrate the lumen and staple lines.

**Fig. 6**

## Example: Billroth II With Roux-en-Y

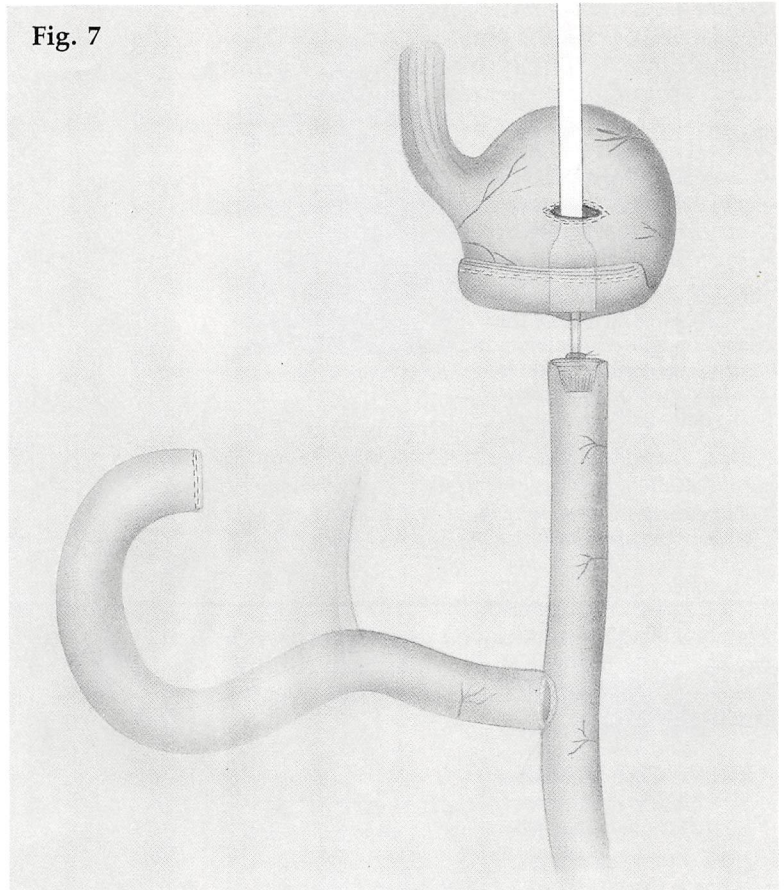
Figure 7 illustrates how the above described technique for Roux-en-Y anastomosis can be utilized in conjunction with an end-to-side gastrojejunostomy to perform the Billroth II procedure.

To create the gastrojejunostomy, an ILS Intraluminal Stapler, with the anvil removed, is introduced into the gastric lumen through a gastrotomy made with a single application of the PLC50 Linear Cutter. The center rod of the ILS stapler is then passed through a small opening made in either the anterior or posterior wall of the stomach. The anvil is then replaced on the center rod of the ILS.

After a purse-string suture is placed on the open end of the jejunal limb, the ILS anvil is introduced into the lumen, the purse-string suture is tied down snugly, and excess tissue and suture carefully trimmed. The ILS stapler is then closed, the staple height set and the instrument fired as described previously in this section.

The gastrotomy would be closed by a single application of the RL60 Linear Stapler.

Fig. 7



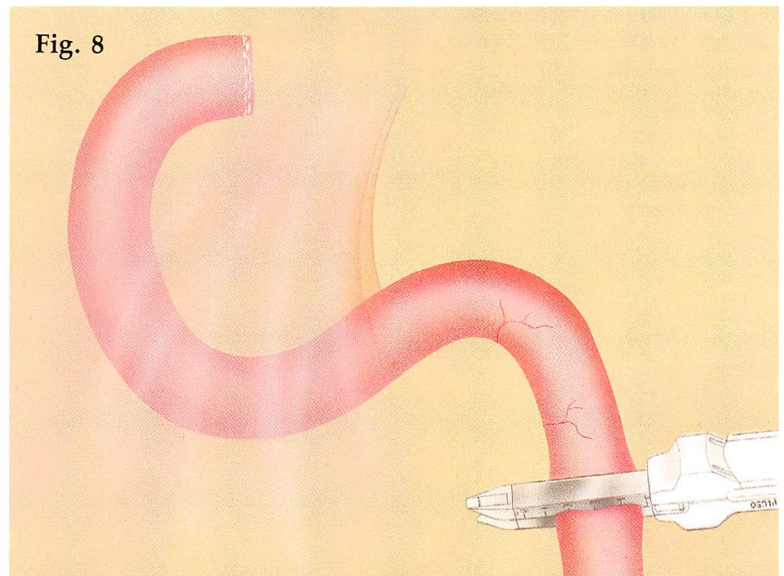
## Linear Cutter Technique

### Transecting the Jejunum

After the duodenum has been stapled and transected during the course of gastrectomy, the proximal jejunum is stapled and transected with one application of the PLC50 Linear Cutter at a convenient point approximately 20-25cm distal to the ligament of Treitz.

Create a window in the mesentery adjacent to the proposed transection site, then place the opened PLC50 across the bowel in a scissor-like fashion from either the mesenteric (Figure 8) or the antimesenteric border. Close the instrument and apply the staples by sliding the firing knob forward. Two double staggered staple lines are placed across the bowel; simultaneously, a knife in the PLC50 transects the jejunum between the two double staple lines.

Fig. 8



## Creating the Anastomosis

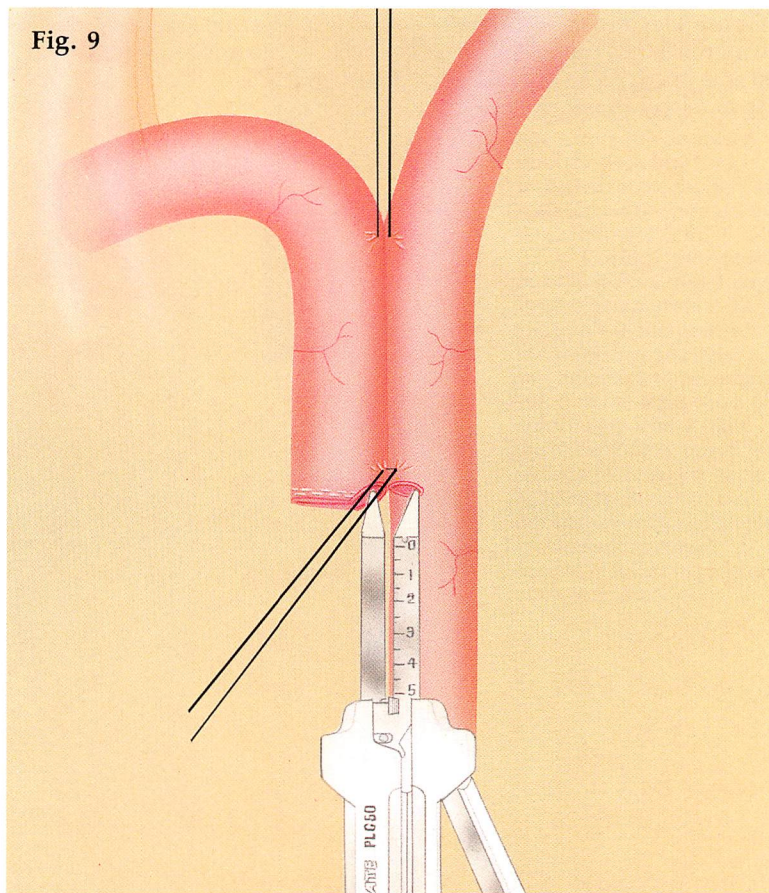
The Y-anastomosis is created with a second application of the PLC50 Linear Cutter, in side-to-side fashion, between the end of the duodenojejunal limb and the jejunal limb at a point approximately 40cm from the transected end.

Excise the antimesenteric corner of the staple line closure of the duodenojejunal limb. Approximate the antimesenteric walls of the bowel limbs with sutures and make an opening in the jejunum adjacent to the excised corner of the duodenojejunal limb (Figure 9). After reloading the PLC50 (See Technical Detail D), insert one fork of the instrument into each bowel lumen.

After the bowel edges have been aligned evenly on the PLC50 forks, join and lock the two instrument halves together and fire the stapler. To facilitate final alignment of tissue on the PLC50 forks, the instrument's locking lever can be placed in the intermediate "detent" position (see Technical Detail E). Two double staggered staple lines join the bowel walls; simultaneously, the knife blade in the instrument divides the walls between the two staple lines, creating a stoma.

Pull back the firing knob, open the PLC50 and withdraw the forks. Carefully inspect the anastomotic staple lines for hemostasis.

Fig. 9

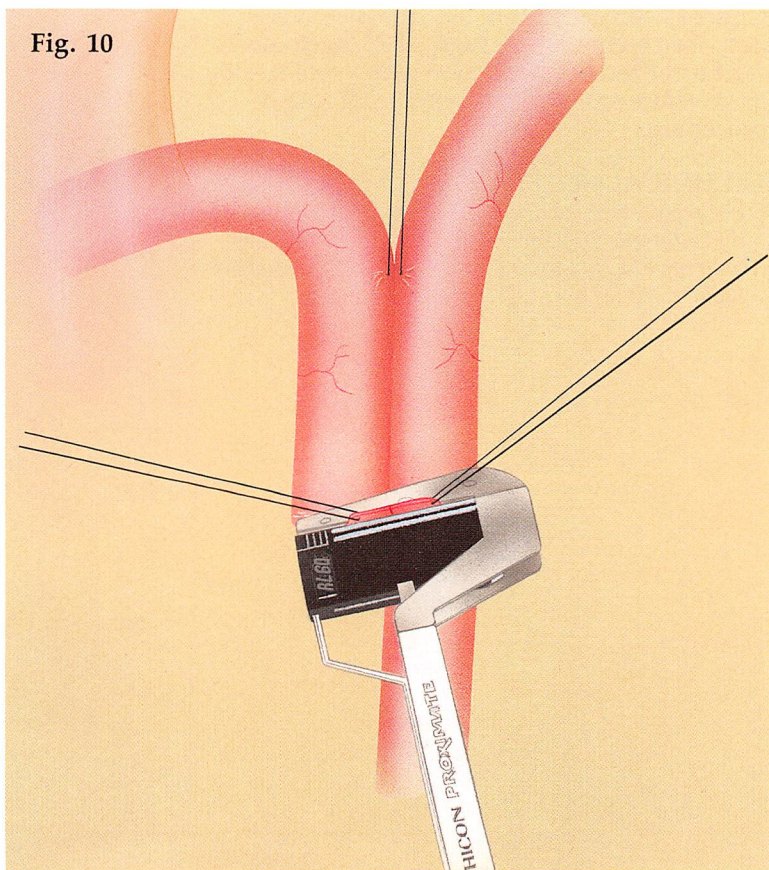


## Closing the Common Opening

The now common opening in the jejunal limbs is closed with one application of the RL60 Linear Stapler (Figure 10). Using traction sutures or clamps, align the tissue edges in an everted manner while slightly offsetting the PLC50 staple lines at the midpoint so as to avoid the intersection of three staple lines. Slip the opened jaws of the RL60 around the approximated tissue, making sure that all tissue layers are incorporated, and that the linear staple line will intersect both anastomotic staple lines. Push the retaining pin into place, close the jaws, release the safety and fire the stapler.

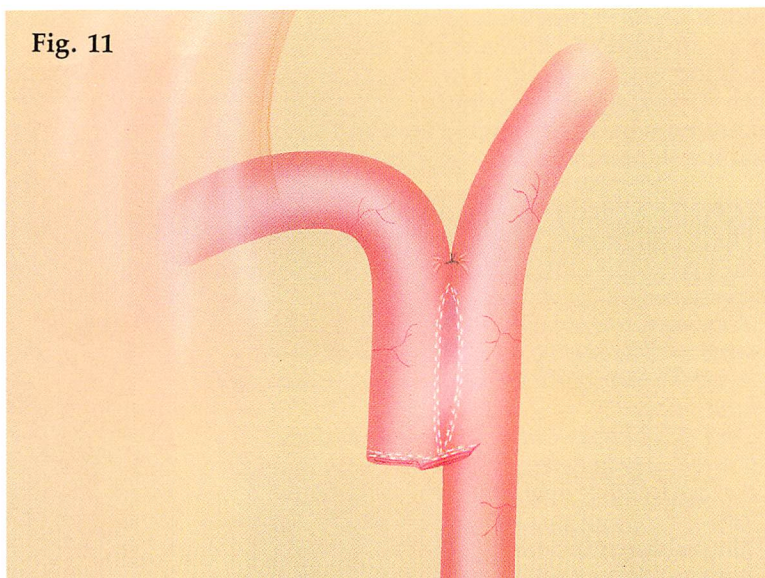
Prior to removing the stapler, use the cutting guide on the edge of the anvil as a guide to excise the redundant tissue protruding through the jaws.

Fig. 10



## Completed Anastomosis

The completed Y-anastomosis is illustrated in Figure 11, with the anterior wall rendered transparent to illustrate the lumen and staple lines.



## Example: Billroth II With Roux-en-Y

Figure 12 illustrates how the above described technique for Roux-en-Y anastomosis can be utilized in conjunction with a side-to-side gastrojejunostomy to perform the Billroth II procedure.

In this example, the gastrojejunostomy, performed with a third application of the PLC50 Linear Cutter, is created with the proximal end of the jejunal limb parallel with, and just anterior to, the greater curvature of the gastric pouch. The RL60 Linear Stapler is used to close the common opening remaining after creation of the anastomosis with the PLC50.

