

Report on Expert Lecture

By Jhanvi Gajjar

(Panther Healthcare)

BIO MEDICAL INSTRUMENT

(Internal Surgical Stapler)



Faculty Coordinator:- Neelam B. Modi

INTRODUCTION:

Biomedical engineering is a multi-disciplinary field that combines biology and engineering.

In our college we planned a session regarding surgical internal staplers on 14/2/2024. We invited Jhanvi Gajjar -Sales Representative from Panther Healthcare to deliver expert lecture on different types of staplers used in Surgeries.

She explained in detail about different kind of internal staplers and their applications. Also, she's explained how to use that different stapler on different body organ and which kind of biomaterial used in the stapler pins .



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Types of internal surgical stapler:

- Linear cutter stapler
- Endo linear cutter stapler
- Circular stapler
- Haemorrhoid stapler
- Linear cutter with colour indicators
- Linear with knife

Linear cutter stapler:

That use for open surgery and anastomosis of different body organs (upper and lower GI Tract).

Application:

- GI Surgery

- Thoracic
- General surgery



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Endo linear cutter stapler:

It is universal stapler that used in laparoscopic as well open surgeries.

In this stapler have articulation of 90° that articulate 45° left and 45° right.

Endo linear cutter have different size and coloured of

reloading unit

Applications:

- Upper GI
- Lower GI
- Bariatric
- Thoracic



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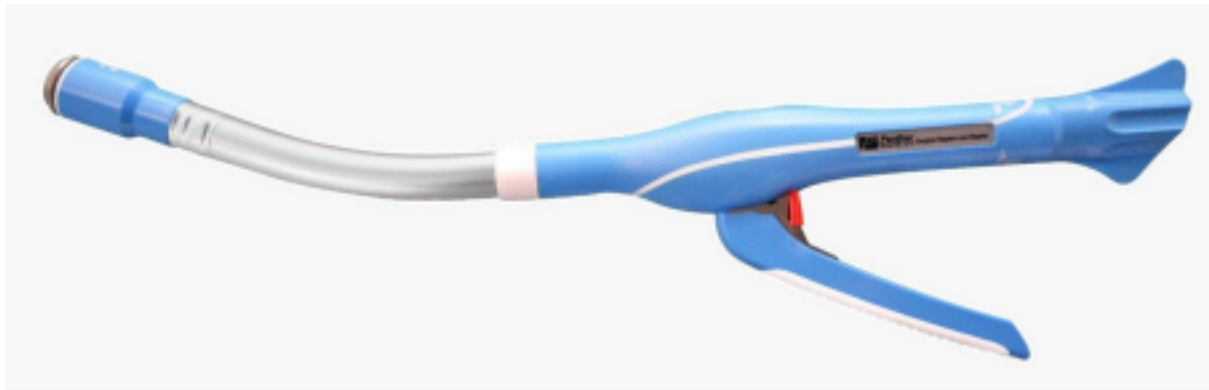
Circular Stapler:

It is use for end-to-end anastomosis like specially used in LAR (Lower anterior resection) procedure.

Application:

- Upper GI

- Lower GI
- Esophagectomy



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Linear cutter with colour indicator:

It is specially design for LAR Procedure. Where using this stapler we can easily removed sigmoid colon or rectum tumour. In this stapler indicate different position of stapler mechanism by different colour.

Application:

- Lower GI

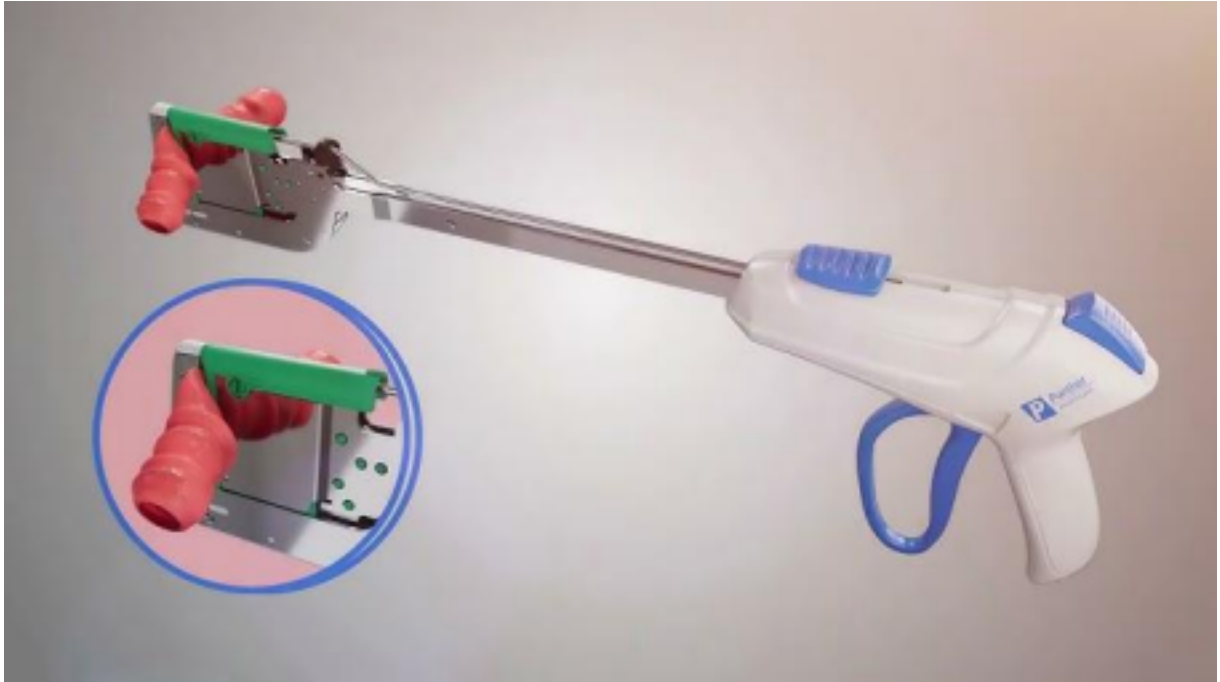


Linear cutter with knife:

It is also specially design for LAR kind of lower GI procedure. This stapler cut and staple tissue easily that's why the stapler's name is linear cutter with knife.

Application:

- Lower GI



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Haemorrhoid stapler:

This stapler is used for end-to-end anastomosis. Specially design for piles surgery.

Application:

- Piles surgery



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Conclusion:

Internal staplers are basically used for transection, resection and anastomosis of any body organ. There are basically four types of anastomosis like end-to-end anastomosis, side-to-side anastomosis, side-to-end anastomosis and end-to-side anastomosis. These staplers are manufactured using bio materials. It prevents from the bleeding and gives secure anastomosis or proper hemostasis.

There are many manufacturers of stapler in medical fields like, Panther health care, Johnson and Johnson, Medtronic, Lotus etc.

Thank you.