

“Use of stents in esophageal cancer”

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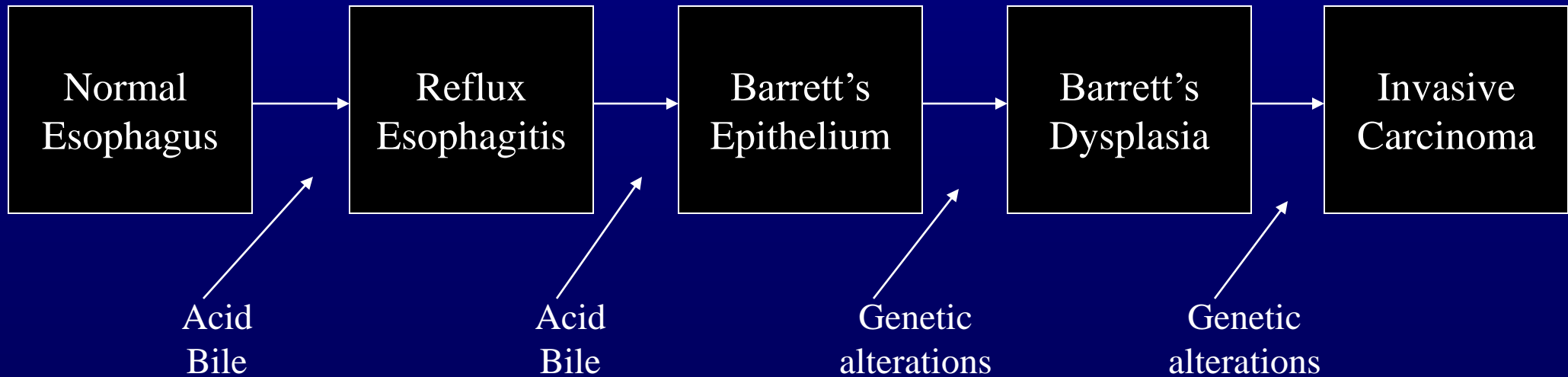
Features of esophageal cancer

- **Esophageal cancer is an abnormal growth that arises from the inner lining of the esophagus** (tube which brings food from the mouth to the stomach).
- **It usually develops in people over age 50 but can occur much younger**
- **The actual cause is unknown but it has been associated with smoking, heavy alcohol drinking and gastroesophageal reflux disease**

Cancer Statistics for USA

	Incidence	Deaths
Lung & Bronchus	215,020	161,840
Breast	184,450	40,930
Prostate	186,320	28,660
Colorectal	148,810	49,960
Gastric	21,500	10,880
Esophageal	16,470	14,280

Natural History of Esophageal Adenocarcinoma



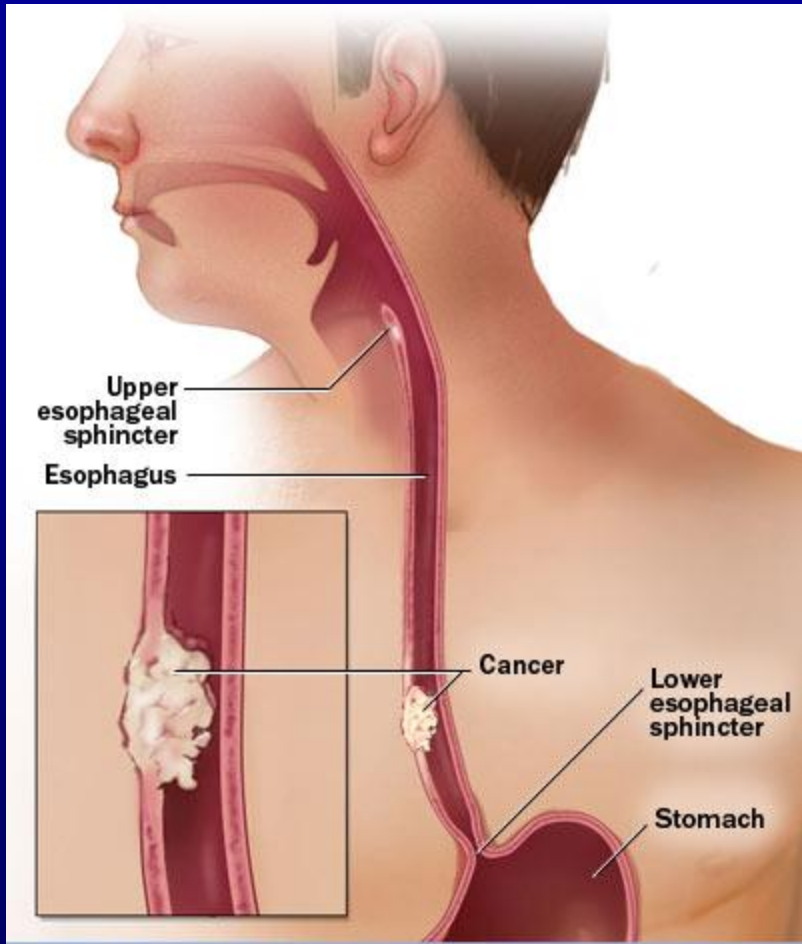
Causes of esophageal cancer symptoms

- **The 3 important characteristics of any cancer are growth, invasion and spread beyond its boundaries.**
- **With time, esophageal cancer grows, encircles the esophagus, invades and spreads to the lungs, liver, bones, etc.**
- **Symptoms are mostly caused by narrowing of the esophageal passage by the enlarging mass.**

Causes of esophageal cancer symptoms

- As the tumor grows it encircles the esophagus.
- In the area of the tumor the esophagus becomes stiff and narrow.
- When swallowed food reaches the tumor, it gets stuck and causes pain, gagging, possibly vomiting.
- Prolonged symptoms lead to weight loss.

Symptoms of advanced esophageal cancer



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Symptom	% of pts
Difficulty swallowing	80-96
Weight loss	42-46
Pain	6-20
Cachexia	6
Cough/ Hoarseness	3-4

Treatment of esophageal obstruction from cancer

- **Surgery**
- **Chemotherapy**
- **Radiation therapy**
- **Combination chemo/RT**
- **Endoscopic tumor ablation**
- **Esophageal stent placement**
- **Percutaneous endoscopic gastrostomy**

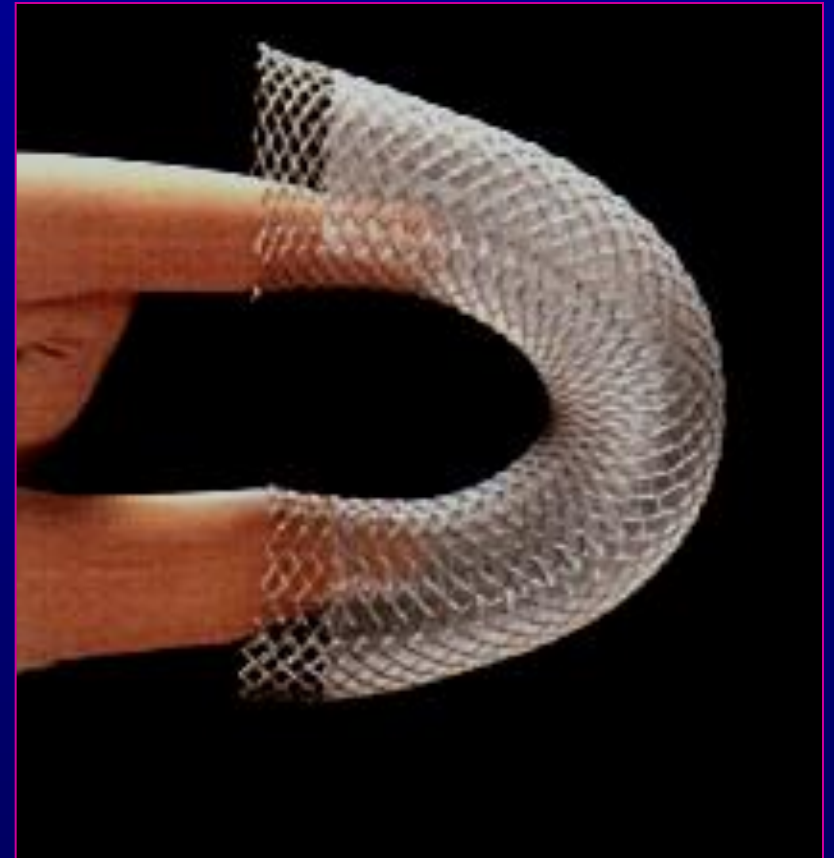
Treatment of esophageal obstruction with stents

- **Endoscopic treatment focuses on reopening the narrowed part of the esophagus**
- **Available stents now have a spring-like effect to stretch the esophagus open**
- **The large diameter of the stents allows solid food to pass easily**

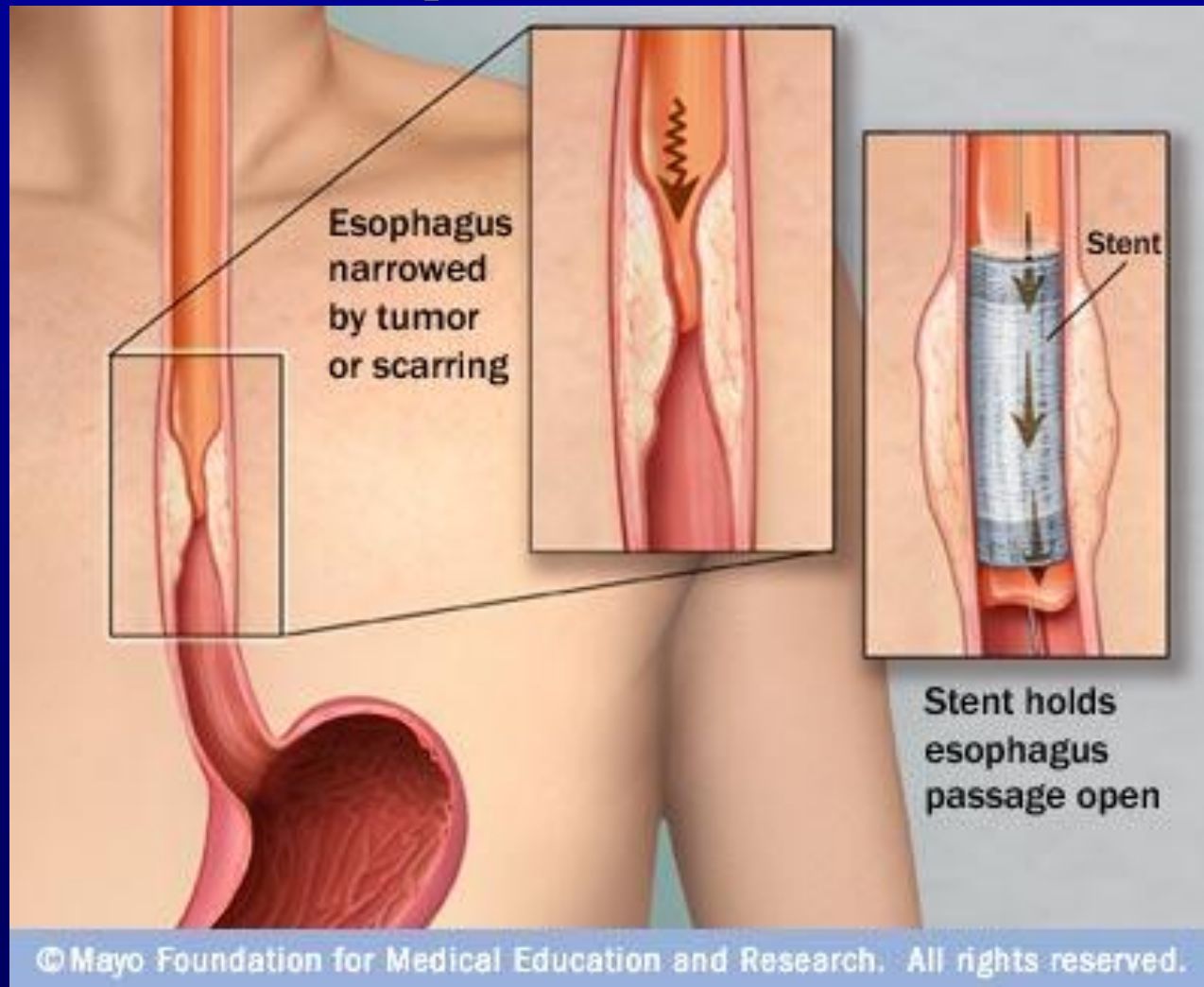
Esophageal Wallstent®



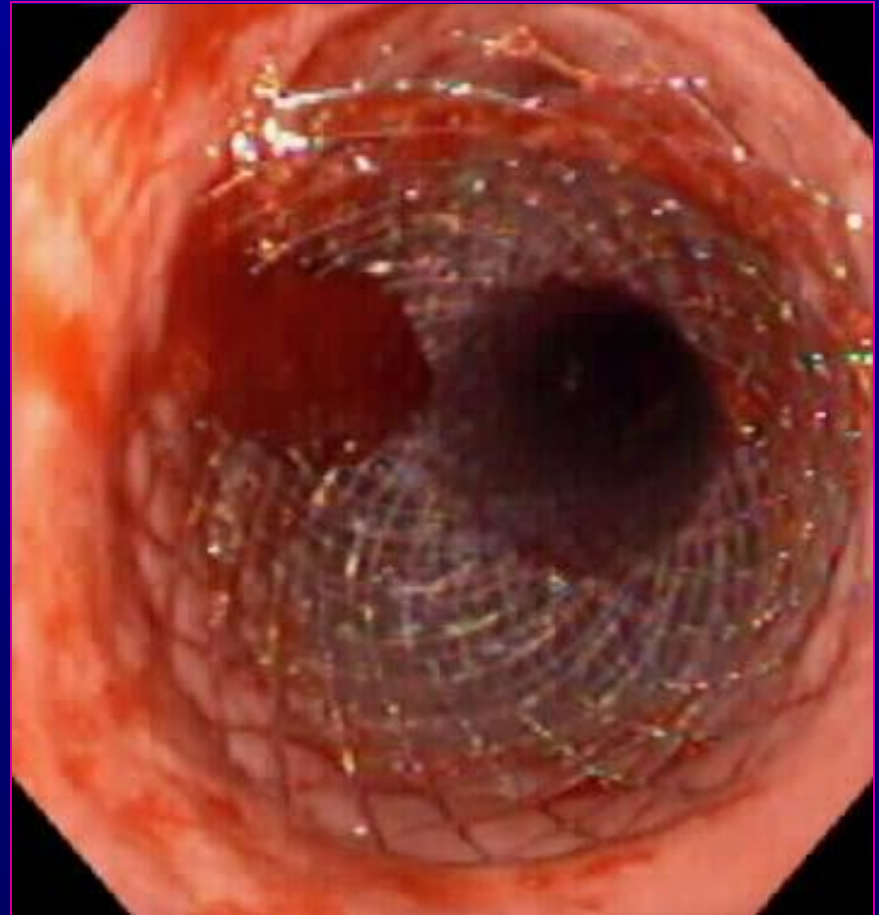
- Stainless steel
Or Nitinol
- Thin introducer
- Large diameter
16-23 mm
- Length 8-15 cm
- Silicone membrane



Picture of esophageal stent placement



Esophageal Wallstent



Why use metal esophageal stents?

- **Metal esophageal stents are self-expanding so they are easily inserted with an endoscopy procedure**
- **Metal stents have a thin introducer, require minimal dilation for insertion, resulting in a low complication rate**
- **Metal esophageal stents open the esophageal passage widely so food passes easily.**

How does it feel after stent is placed?

- The procedure is performed with sedation, so there is no pain.
- Most patients feel an awareness in the chest after the stent is placed.
- This usually disappears after a few days, but sometimes requires pain killers.
- Most patients can drink on the same day and eat solid food on the 2nd day.

Side effects of esophageal stents?

- The most common side effect is pain, usually with the larger stents (10-15%).
- Mild reflux occurs when the stent is low down in the esophagus (20-30%).
- Hard foods can get stuck in the stent if not chewed carefully (3-10%).
- The stent can slide into the stomach if the tumor shrinks (10-12%).

Are there complications from stents?

- **Bleeding (3-6%)**
- **Perforation (1-3%)**
- **Death (1%)**

Can the stent be removed?

- **Esophageal stents are designed for permanent placement.**
- **Sometimes the stent becomes partially embedded in the esophageal wall, making removal difficult.**
- **If designed for removal, they can usually be removed with endoscopy.**
- **When they slide into the stomach, they can be removed with endoscopy.**

Conclusions

- **Esophageal metal stents provide a quick and safe method of relieving obstruction from esophageal cancer.**
- **They allow people with esophageal obstruction to eat regular food.**
- **They can cause minor side effects that usually subside after a few days.**
- **Stent migration & tumor progression sometimes causes recurrence of symptoms.**