

Palliative Surgery for Oncology Patients

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A National Cancer Institute
Designated Cancer Center



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Disclaimer

I have no conflict of interest to disclose

Objectives

- Palliative Care
- Palliative Surgery
- Gastric Outlet Obstruction
- Malignant Bowel Obstruction
- Colonic Obstruction
- Malignant Ascites
- Chronic TPN
- Multidisciplinary Approach



Palliative Care

is an approach that improves the **quality of life** of patients and their families facing the problem associated with life-threatening illness, through the **prevention and relief** of suffering by means of early identification and impeccable assessment and treatment of **pain** and other problems,

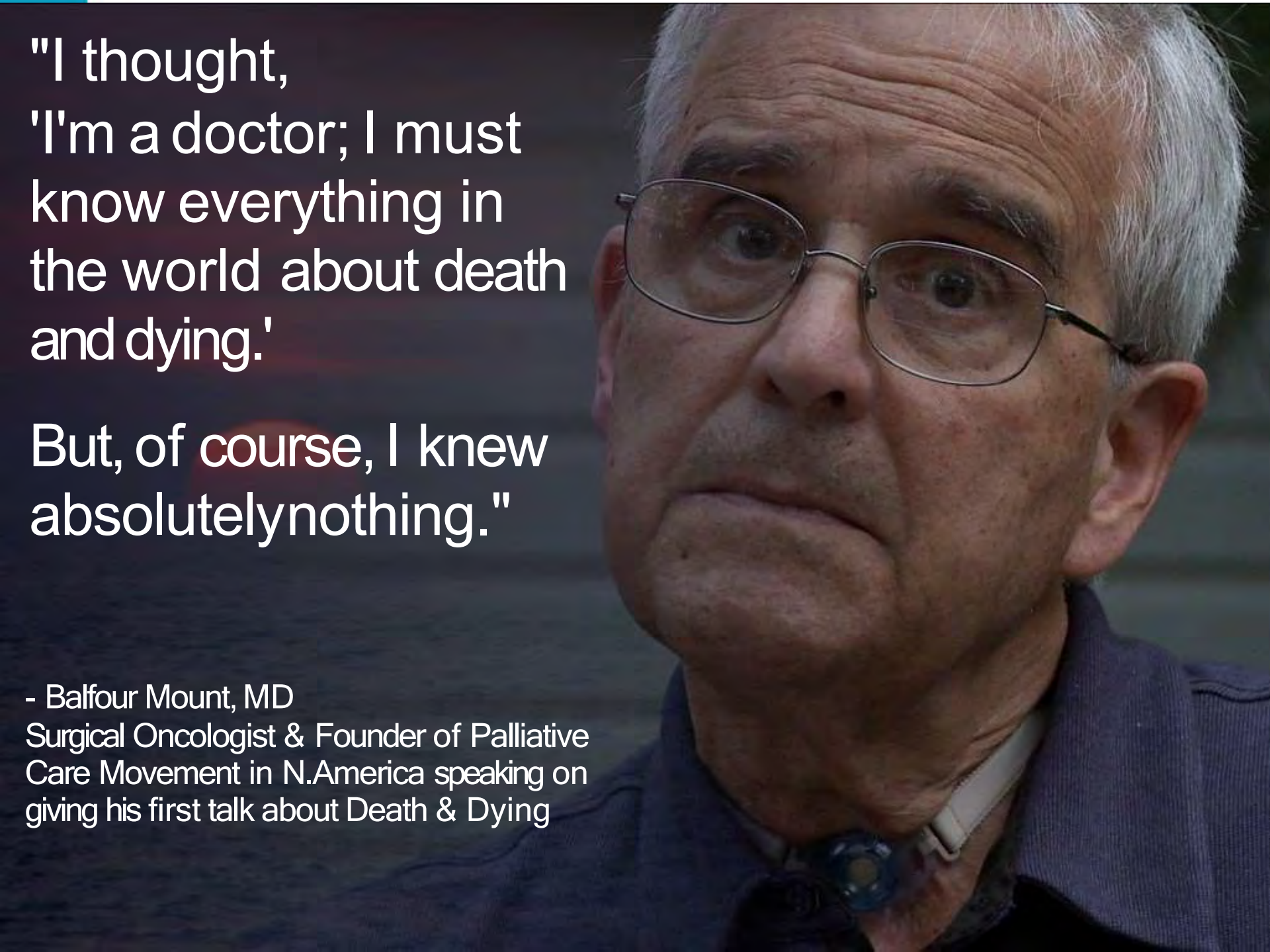


WHO

“few of us ever
adequately learn
how to care for
patients at the end
of life.”

-Pauline Chen, MD
Liver Transplant Surgeon



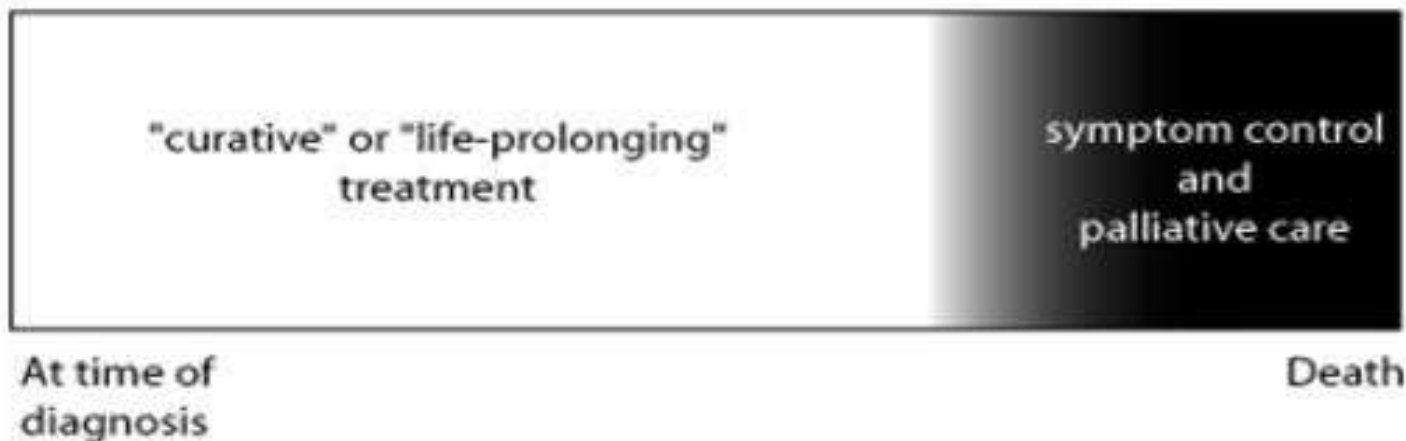


"I thought,
'I'm a doctor; I must
know everything in
the world about death
and dying.'

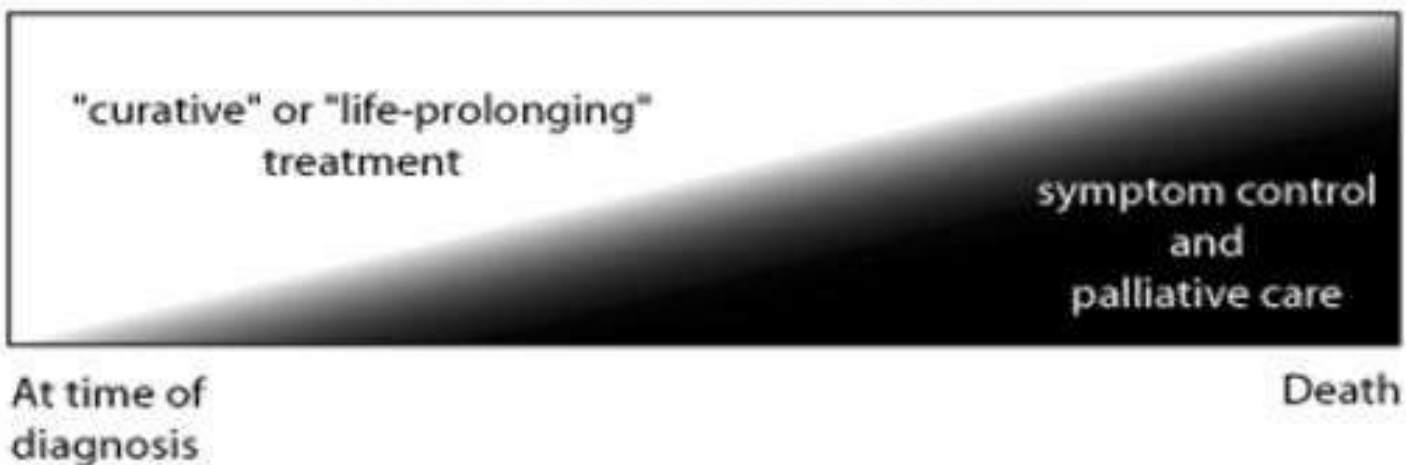
But, of course, I knew
absolutely nothing."

- Balfour Mount, MD
Surgical Oncologist & Founder of Palliative
Care Movement in N.America speaking on
giving his first talk about Death & Dying

Current Care Model



Proposed Care Model

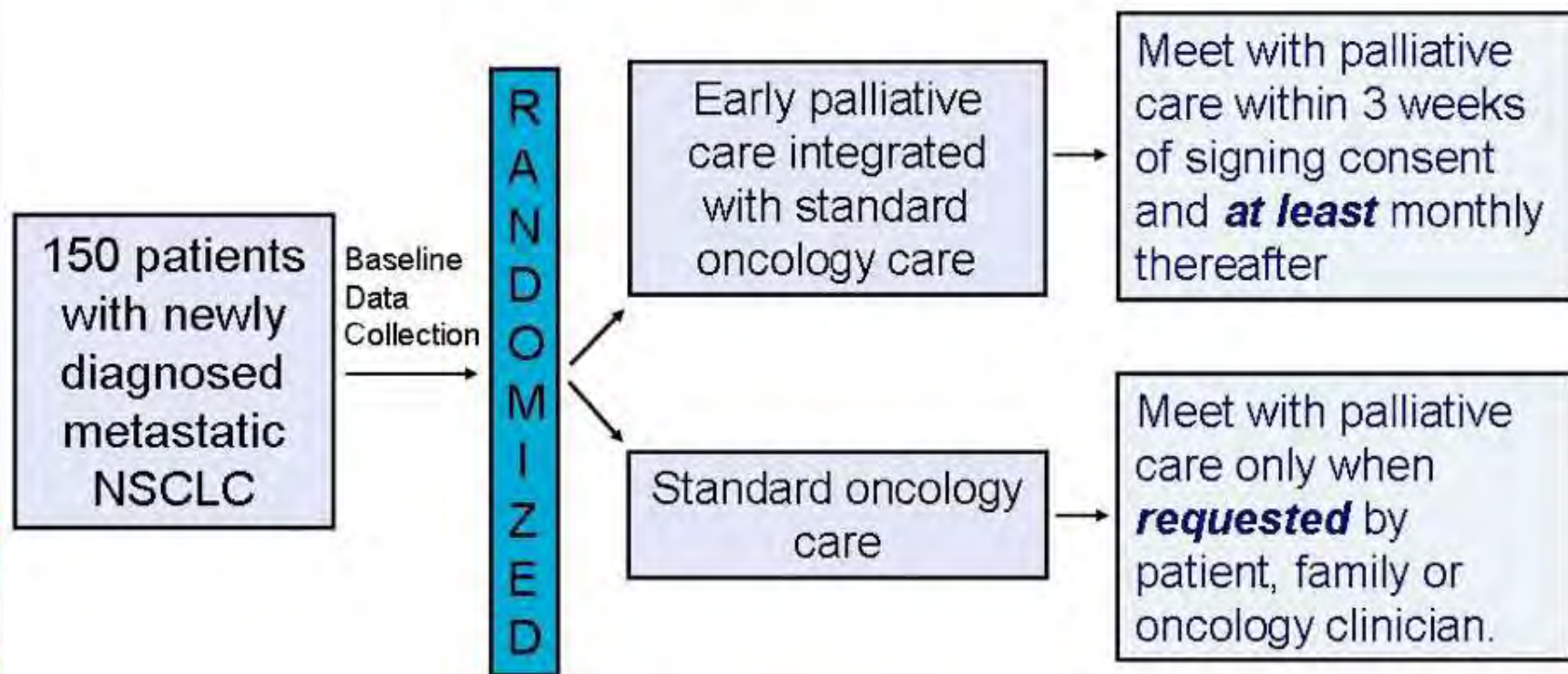


Shifting the paradigm:
not just end-of-life care



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Study Design



Temel - NEJM 2010, ASCO 2010



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Quality of EOL Care and Resource Utilization

ASCO Quality Measures

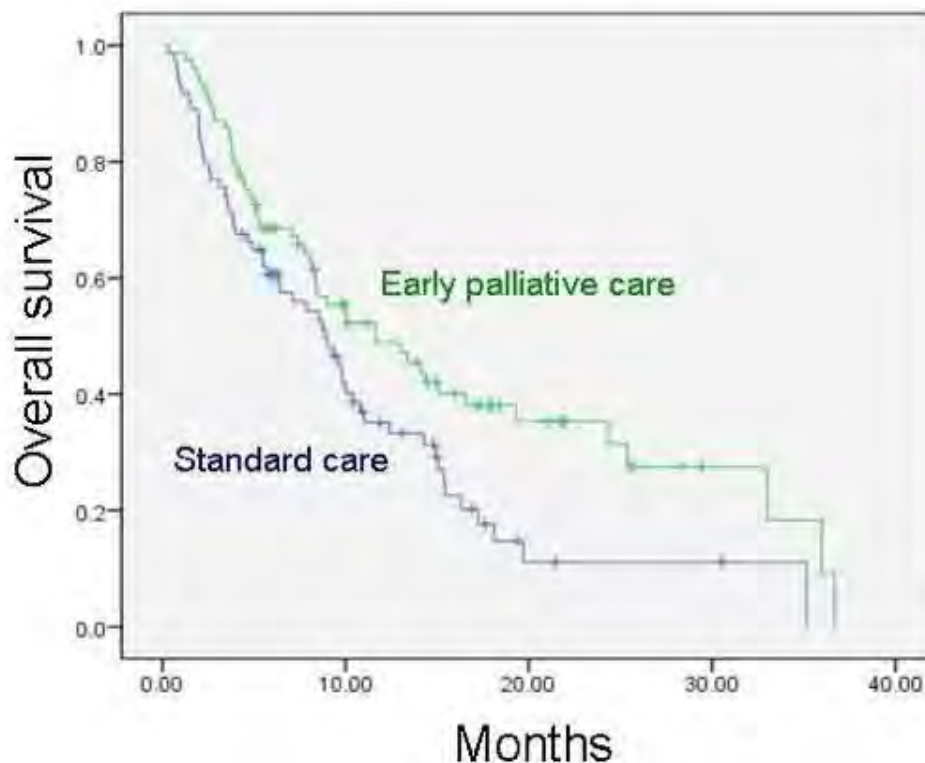
1. No hospice
2. Enrolled in hospice \leq 3 days before death
3. Chemotherapy within 14 days of death (DOD)

| Measure | Standard Care N (%) or Median | Early Palliative Care N (%) or Median | p-value |
|---|----------------------------------|--|-------------|
| Aggressive EOL Care | 30 (54) | 16 (33) | 0.05 |
| No hospice | 22 (39) | 15 (31) | |
| Hospice \leq 3 days | 5 (15) | 1 (3) | |
| Chemo within 14 DOD | 12 (24) | 7 (18) | |
| Hospital/ER Admissions within 30 DOD | 31 (55) | 19 (39) | 0.12 |
| Days on hospice | 4 (0-269) | 11 (0-117) | 0.09 |
| Documented Resuscitation Preference | 11 (28) | 18 (53) | 0.05 |

105 deaths at time of data analysis with data on chemotherapy within 14 DOD available on 90 patients



Survival Analysis



Median Survival
Early palliative care 11.6 mo
Standard care 8.9 mo
p=0.02

Controlling for age, gender and PS, adjusted HR=0.59 (0.40-0.88), p=0.01

Palliative Surgery:

A surgical procedure used with the primary intention of improving Quality of Life or relieving symptoms caused by advanced disease.

The effectiveness of palliative surgery is judged by the presence and durability of patient-acknowledged symptom resolution.



Palliative Surgery

"I hope we have taken another good step [gastrectomy] towards securing unfortunate people hitherto regarded as incurable or, if there should be recurrences of cancer, at least alleviating their suffering for a time."

- Theodor Billroth, MD, 1881



5 essential roles of Palliative Surgery

- Initial evaluation of the disease
 - Local control of the disease
- Control of discharge or hemorrhage
 - Control of pain
- Reconstruction and rehabilitation

Ball AB, Baum M, Breach NM, et al. Surgical palliation. In: Derek D, Hanks GWC, MacDonald N, eds. Oxford Textbook of Palliative Medicine. Oxford, England: Oxford Press, 1998:282-97.

Table 4. Case Examples of the Five Essential Roles of Palliative Surgery

| Essential Role* | Pertinent History | Intervention | Clinical Outcome | Length of Stay, d | Postoperative Survival |
|------------------------------------|--|--|--|-------------------|------------------------|
| Initial evaluation | 37-year-old woman with history of locally recurrent extremity melanoma with recent bloating and ascites; cytology of unclear origin | EGD† laparoscopy with peritoneal biopsies | Biopsy findings revealed melanoma, patient went home following day | 1 | Died at 16 months |
| Local control | 84-year-old woman with anemia, an invasive ampullary carcinoma, and multiple comorbidities | Ampullectomy/feeding jejunostomy/ gastrostomy tube placement | No further anemia/tumor recurrence | 14 | Alive at 13 months |
| Control of discharge or hemorrhage | 49-year-old woman with breast cancer and extreme shortness of breath owing to recurrent malignant effusions after multiple thoracenteses | Bronchoscopy/ thoracoscopic insertion of permanent drainage catheter | No further shortness of breath with intermittent drainage through catheter | 1 | Died at 1 month |
| Control of pain | 64-year-old woman with history of small cell carcinoma of the lung and painful chest wall incisional recurrence | Excision of chest wall mass | Complete pain relief | Outpatient | Died at 21 months |
| Reconstruction/ rehabilitation | 39-year-old man with recurrent glioma and frequent seizures | Craniotomy with tumor resection | Rare seizures with recurrent disease 10 months postoperatively and resection | 6 | Died at 12 months |



Is Palliative Surgery Safe?

Not always intuitive for patients or providers to consider surgery for palliative approach.

Poor performance status and short overall survival may increase surgical complications and lead to a prolonged recovery.

Miner et al 2004 reviewed 1022 palliative surgical procedures performed at MSKCC. 80% of patients achieved complete symptom resolution after surgery with acceptable morbidity.



Trajectories of Patient-Reported Outcomes After Palliative Gastrointestinal Surgery in Advanced Cancer *Is Good Quality of Life Sustainable?*

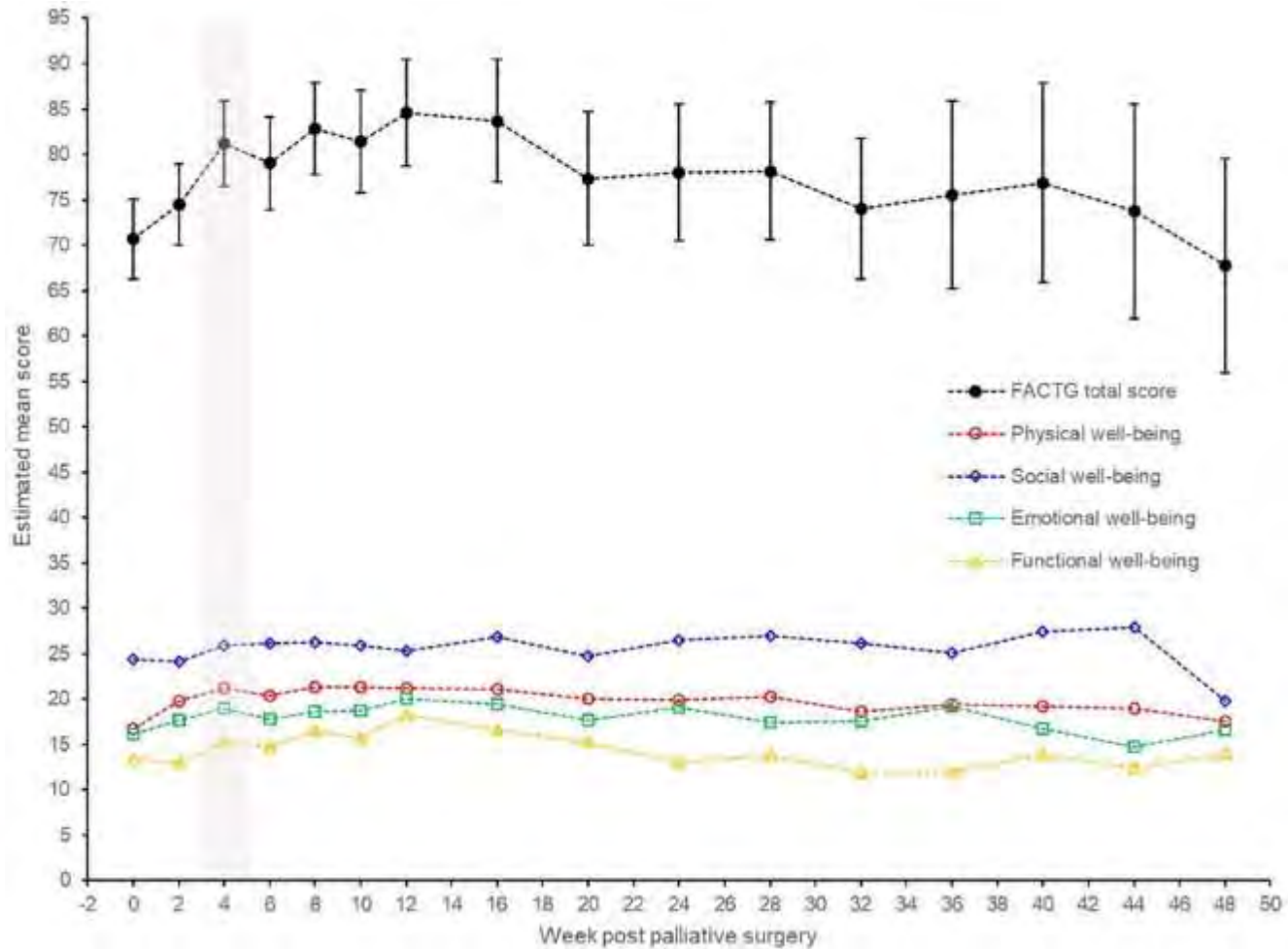
Wong et al Anal Surg Open 2022

- 65 patients prospectively recruited to complete functional assessment of cancer therapy (FACT-G) questionnaire before and at regular intervals after palliative GI surgery



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Is Palliative Surgery Safe?



Gastric Outlet Obstruction

Luminal Mass

- Gastric
- Duodenal

Infiltration

- Pancreatic
- Gallbladder

Extrinsic Compression

- Carcinomatosis



Gastric Outlet Obstruction

Treatment Options

- Resection

Palliative:

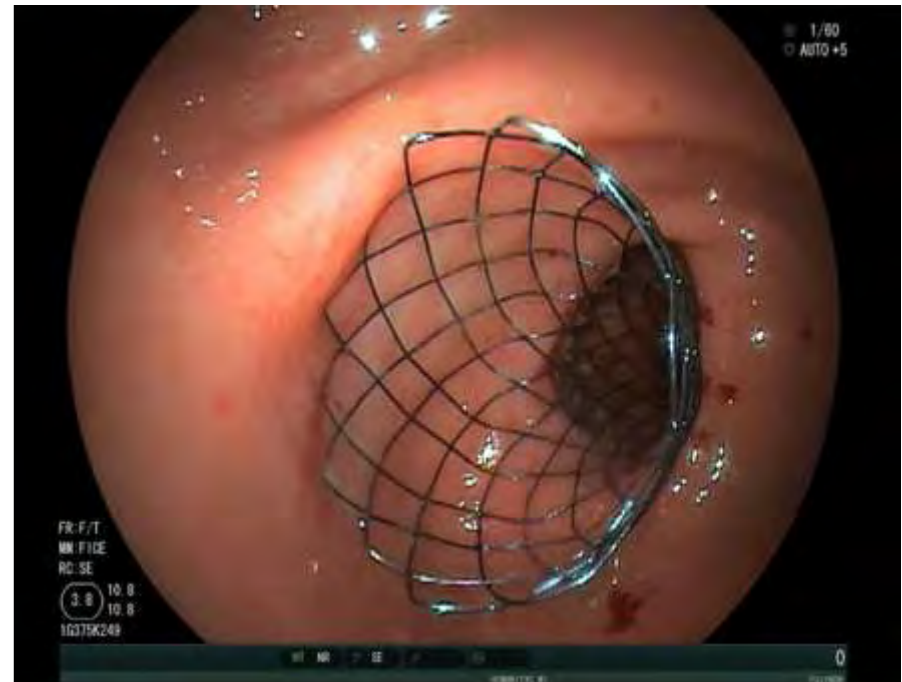
- GJ Tubes
- G Tube, J-Tube
- SEMS
- Surgical Bypass



Gastric Outlet Obstruction

SEMS

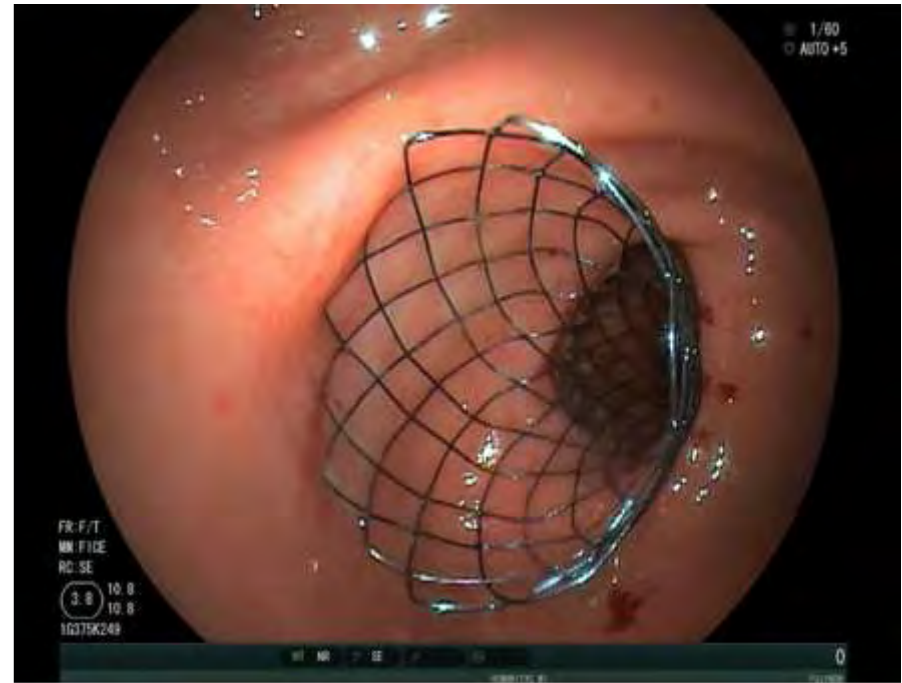
- Uncovered Nitinol
- Flexible with radial force
- 90% technical success rate
- 63%-97% clinical success rate
- Chemotherapy increases clinical success
- Carcinomatosis, Distal Strictures and 3 or more Strictures decreases clinical success



Gastric Outlet Obstruction

SEMS

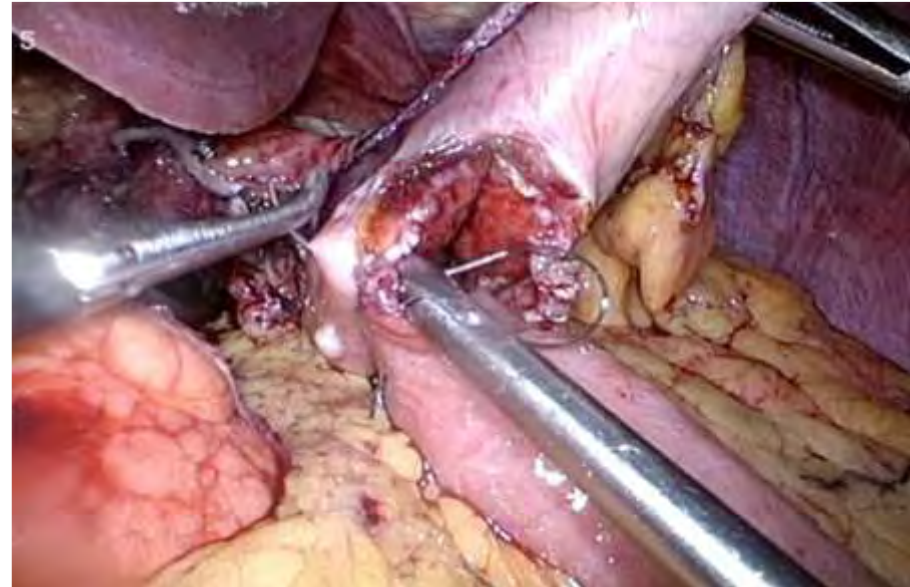
- Adverse Events
 - Bleeding
 - Perforation
 - Migration
 - Biliary Obstruction and Cholangitis
 - Tumor In-growth
- May complicate gastric surgery for curative intent



Gastric Outlet Obstruction

Palliative GJ Bypass

- Laparoscopic or robotic
- Less recurrent obstructive symptoms
- Must have good performance status
- May delay time to chemotherapy



Gastric Outlet Obstruction

EUS Guided GJ Bypass

- Lumen apposing metal stents (LAMS)
- Newer technique, technically challenging
- Success rates of 90% in small series
- Less stent failure than SEMS approach



Malignant Small Bowel Obstruction

One of the Toughest Consults



Malignant Small Bowel Obstruction

One of the Toughest Consults

VS



Malignant Small Bowel Obstruction

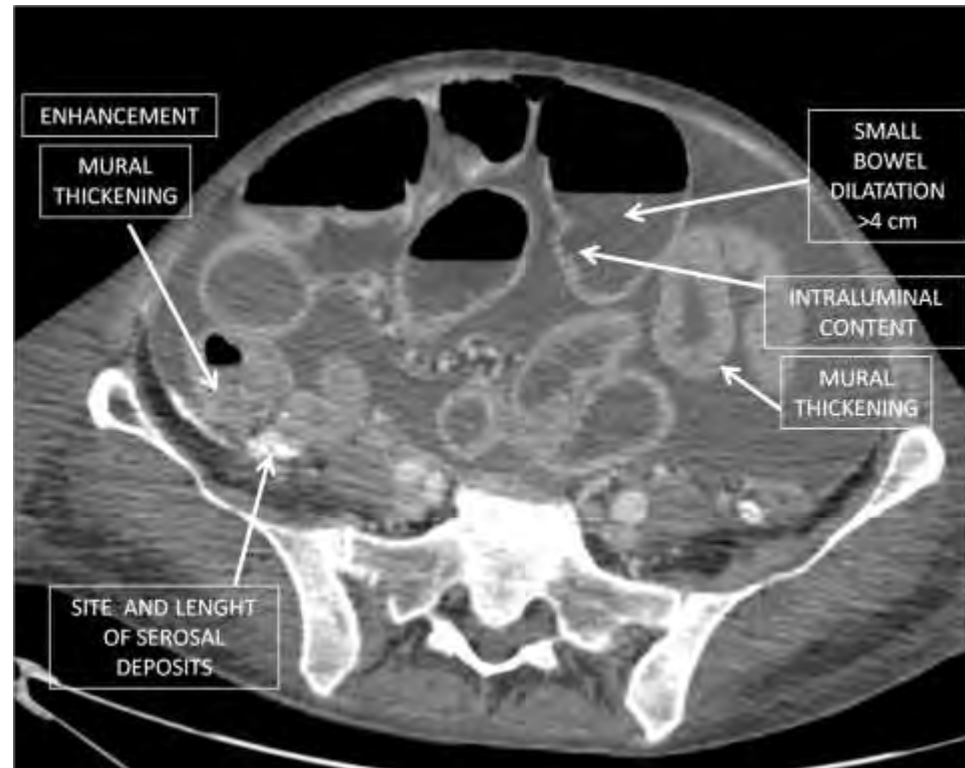
Treatment Options:

- **Medications**
 - Pain control
 - Anti-emetics
 - Anti-secretory
 - Corticosteroids
- **Nasogastric Drainage**
- **Venting G or GJ Tube**
- **Surgery**
 - Resection with anastomosis
 - Intestinal Bypass
 - Stoma
 - Venting G or GJ tube



Malignant Small Bowel Obstruction

- Decision to Operate:
 - Histology
 - Mucinous vs Non-mucinous
 - Low grade vs High grade
 - Response to chemotherapy
- Physical Exam
 - Soft vs. Rigid
- Imaging
 - Transition point?
 - Fixed and Diffusely Dilated ?
 - Ascites present?
 - Peritoneal protocol MRI



Malignant Small Bowel Obstruction

Palliative Surgery for Malignant Bowel Obstruction from Carcinomatosis: A Systematic Review

Olson et al *JAMA Surg.* 2014 April 1

- Review of 17 studies published between 1982 and 2012
- Malignant bowel obstruction from peritoneal carcinomatosis
- 868 total patients

- Relief of obstructive Symptoms – 32-100%
- Tolerance of Diet – 45-75%
- Rates of Re-obstruction – 6-47%
- Serious Morbidity – 7-44%
- 30-Day Mortality – 6-32%
- Remaining time spent in Hospital – 11-26%
- Median Survival – 154-192 days



Malignant Small Bowel Obstruction

Adverse Events

- Enterocutaneous Fistula
- Anastomotic Leak
- Wound Infection
- Wound Dehiscence
- Early Obstruction
- High Output Ostomy
- MI/CHF
- Pneumonia
- DVT/PE

“Palliative Surgery Comes at the Cost of High Morbidity, Mortality and Prolonged Hospital Stays”



Malignant Small Bowel Obstruction

SWOG S1316 Trial

Surgical vs. Non-surgical Management of Patients with Malignant Bowel Obstruction: a pragmatic comparative effectiveness trial

Krouse et al Lancet Gastro and Hepato Oct 2023

- 30 Hospitals in North and South America
- Randomly assigned to surgical vs non-surgical treatment
- Patients who declined randomization were offered observational patient choice pathway
- Primary outcome was number of days alive and out of hospital “good” days
- 221 patients enrolled between 2015-2020
 - 49 randomized (24 surgery and 25 non-surgery)
 - 150 patient choice pathway (58 surgery and 92 non-surgery)

SWOG S1316

- No difference was seen between surgery and non-surgery groups for “out of hospital, good days” at 91 days

42.6 days randomized surgery

43.9 days randomized non-surgery

54.8 days patient choice surgery

52.7 days patient choice non-surgery

- May help to inform patient decision making



Malignant Colonic Obstruction

- 10-18% of patients with colon cancer present with obstruction at diagnosis
- Predominately left sided, sigmoid tumors
- Less common right sided and rectal tumors
- Treatment will depend on patient fitness, site of obstruction, stage of tumor and curative intent



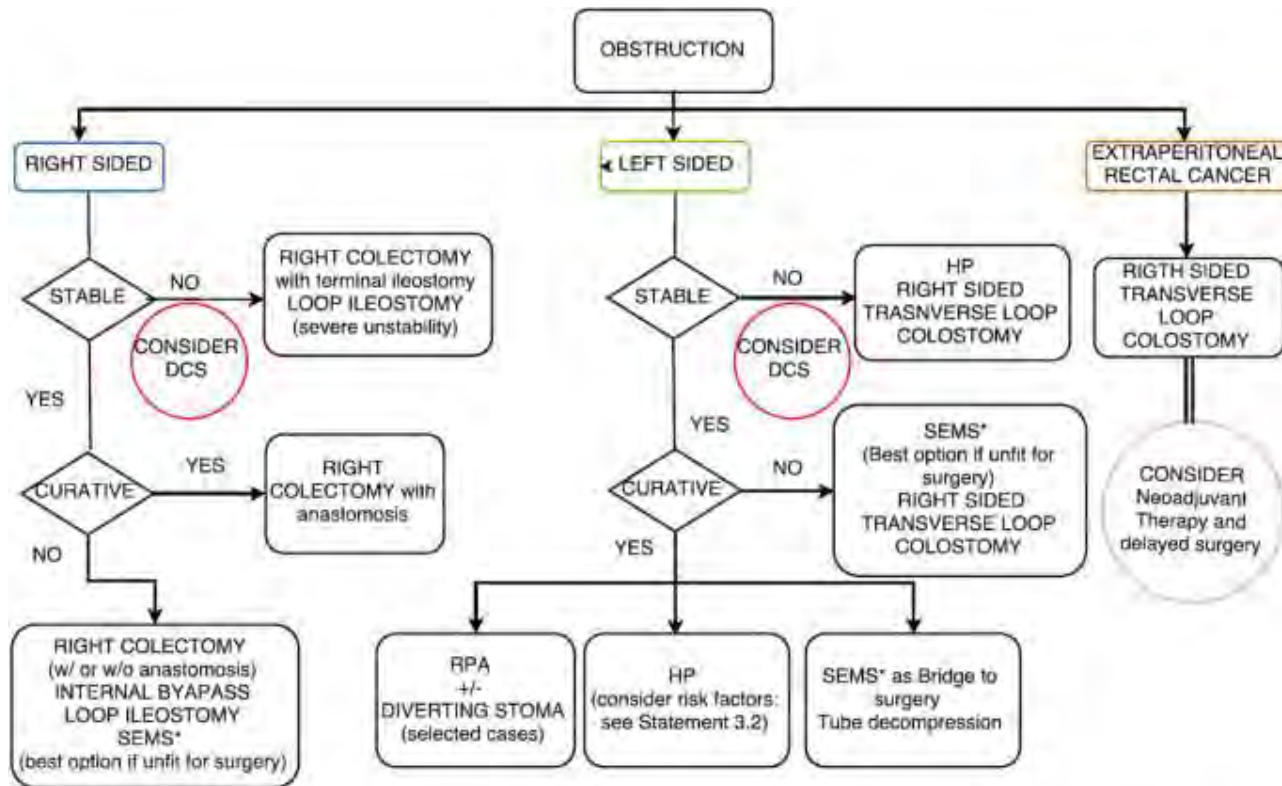
Malignant Colonic Obstruction

General Principles

- No anastomosis in unstable setting
- Right colectomy has lower leak rate. Ok for anastomosis, in unprepped colon without diversion in stable setting
- SEMS may be used as definitive treatment or as bridge to resection and anastomosis
- Avoid bevacizumab with colonic SEMS in place



Malignant Colonic Obstruction



DCS: Damage Control Surgery; HP: Hartmann's procedure; RPA: resection and primary anastomosis

SEMS: self expandable metallic stents; * not suggested in case of Bevacizumab therapy



Malignant Ascites

10% of all ascites cases

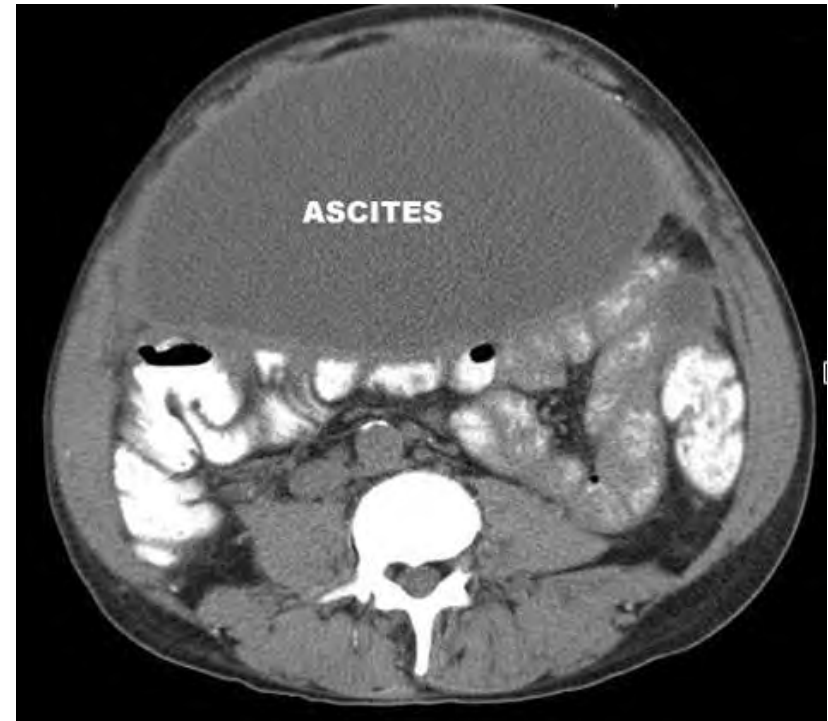
Increased vascular permeability
and lymphatic obstruction

Pain, Nausea, Dyspnea,
Anorexia, Reduced Mobility

Positive Cytology
High Protein
Low SAAG

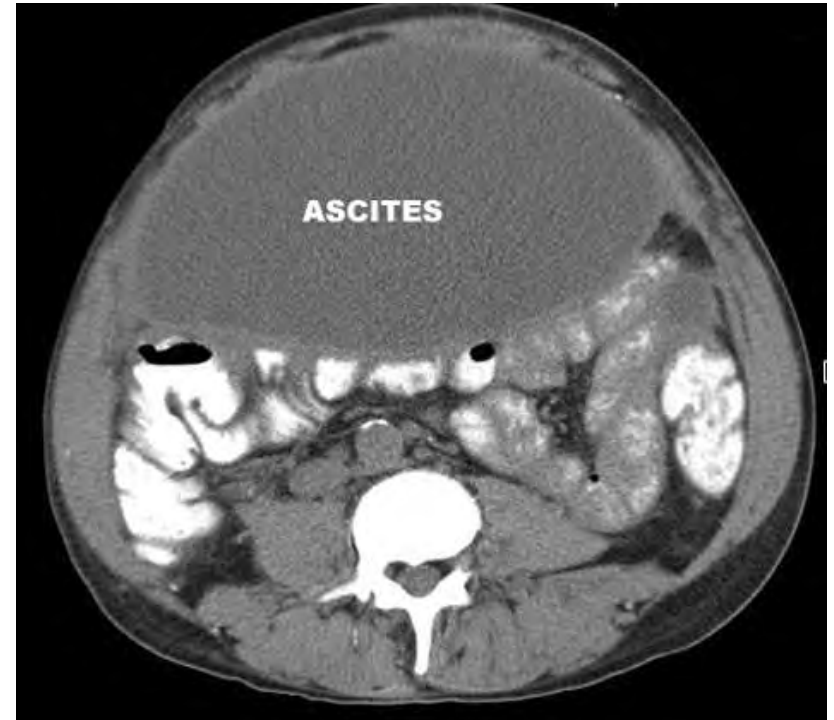
Colorectal
Appendiceal
Mesothelioma
Ovarian
Primary Peritoneal
Gastric
Pancreatic
Breast

Often short Overall Survival



Malignant Ascites

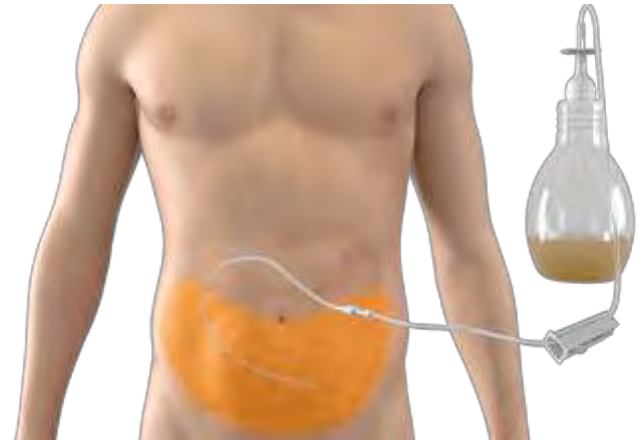
- Medication – less effective in MA
- Paracentesis – temporary relief
- Pleurex Catheter
- Systemic Chemotherapy and Immunotherapy
- HIPEC



Malignant Ascites

Pleurex Catheter

- Percutaneous placement, high success rate
- Allows management at home and better QOL
- Electrolyte abnormalities
- Hypoalbuminemia
- Wound drainage
- SBP



Malignant Ascites

HIPEC

- 90% effective
 - Hyperthermia is synergistic with the chemotherapy
 - MIS approach
 - May be repeated
 - May be accompanied with omentectomy, resection of bulky disease
-
- Appendix – Mitomycin - C
 - Colon – Mitomycin-C
 - Ovarian – platinum
 - Mesothelioma – platinum
-
- Patient selection and High Volume Center



TPN in Palliative Setting

- TPN in palliative setting can be fraught with clinical and ethical arguments
- Consider patient choice, quality of life and cost
- Line Sepsis risk
- General Guidelines:
 - A. Proven gut failure
 - B. Karnofsky score $>50\%$
 - C. Prognosis > 3 months
 - D. Good Social Support
- Median Overall Survival of 5 months when PN started in palliative setting



Multidisciplinary Approach

Palliative gastrointestinal surgical oncology—outcomes after palliative care consultation: retrospective observational study

Laitarnaki et al BMJ Supportive and Palliative Care, 2022

- Consecutive patients undergoing palliative care at a single institution compared over 2 years
- Those undergoing surgery with or without palliative care consultation were compared
- Outcomes included patient's functional status, morbidity and overall survival
- 312 Patients
 - 173 underwent surgery
 - 77 endoscopic care
 - 62 conservative treatment
- 173 Surgery patients
 - 149 surgeon's assessment alone
 - 24 had multidisciplinary assessment



Multidisciplinary Approach

Multidisciplinary assessment was associated with:

- **Reduced morbidity** (8.3% vs 23%, $p=0.111$)
- **Reduced in-hospital mortality** (8.3% vs 17%, $p=0.05$)
- **Reduced rate of hospital readmissions** (8.3% vs 21%, $p=0.05$)
- **No difference in median survival** 49 (2–440) vs 45 (1–971) days ($p=0.949$)



Disparities in Palliative Surgery

Racial/ethnic minorities and rural populations experience worse care in palliative care domains such as symptom management, quality of life (QOL) improvement, advanced care planning, and alignment of doctor and patient healthcare goals.

Factors:

- Cultural preferences for end-of-life care
- Misconceptions about palliative care
- Communication Barriers
- Financial/Insurance Barriers



Summary

- Surgeons have historically played an important role in palliation of symptoms
- Patient selection, Goals of Care and Informed Decision making is Paramount
- Communication is both a procedure and an art
- Surgery and Palliative Care is a Partnership in Alleviation of Suffering
- Surgeons should receive more training in palliative care techniques



“Sure, we try to put out fires. But, if we can't put out the fire, a good physician takes the patient's hand and walks with him through the flames.”

- *Atul Gawande, MD*
Letting go. *The New Yorker*
July 26, 2010





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