

Indications for and conduct of Enteral Nutrition PEG pros and cons

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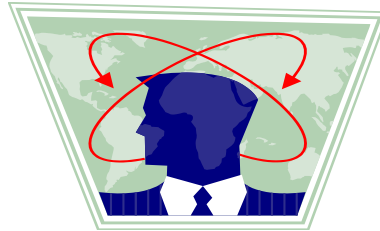
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Artificial Nutrition in advanced cancer

Difficult decision...

What 'ingredients' go into making these decisions?



Enteral Nutrition

■ Recommended:

- severe dysphasia
- severe anorexia
- decreased food intake

▶ Clinical indications:

- ✓ head & neck / esophagus tumours
- ✓ inoperable *fistulae*
- ✓ esophageal obstructions

(Boyd, 1994)

	Incurable patients: screening and assessment
STRONG	<i>Routinely screen advanced, incurable cancer patients - whether receiving or not receiving anti-cancer treatment - for inadequate nutritional intake, weight loss and low body mass index, and if found at risk, to assess these patients further for both treatable nutrition impact symptoms and metabolic derangements.</i>
Questions for research	Effects of malnutrition screening programs combined with multidisciplinary interventions on QoL in incurable cancer patients

Percutaneous Endoscopic Gastrostomy (PEG)

1980 - Gauderer

Gastrostomy via percutaneous technique

Percutaneous Endoscopic Gastrostomy (PEG)

- **PEG became the preferential enteral nutrition route**
- **In 2003 - 55000 PEG / year in USA**

Relevant Factors

- **Effect on life expectancy**
- **Effect on QoL**

Values/Beliefs:

- **Patients (may or may not be known)**
 - **Family**
 - **Clinical staff (physicians, nurses, speech therapists etc.)**
 - **Social/cultural belief**
- **Healthcare system**
 - **Effect on workload**
 - **Fear of recrimination**
- **Ethical**

	Incurable patients: nutrition support
STRONG	<i>Nutritional interventions in patients with incurable cancer after weighing together with the patient the expected benefit on QoL and survival vs the burden associated with nutritional care.</i>
Questions for research	Effects of nutritional care on QoL in incurable cancer patients

PEG

Indications

- **Neurological swallowing impairments**
- **Stroke**
 - **Dementia**
 - **Amyotrophic Lateral Sclerosis**
 - **Neuromuscle diseases**
- **Head and neck cancers**
- **Oesophagus cancers**

Who gets PEG tubes?

- **Top three** **N = 7369**
 - Organic, neurologic/dementia 28.6%
 - Stroke 18.9%
 - Head and neck cancer 15.7%
- **Procedural complication rate 4%**
- **Short-term mortality 23.5% died during hospitalization**
- **Median survival 7.5 months**

Cancer and Artificial Nutrition

Two separate issues:

- Mechanical blockage or inability to eat**
- Cancer cachexia/anorexia syndrome**

Mechanical Blockage/Difficulty Eating in Cancer

Bypassing obstruction indicated in

- **Early disease states**
- **High functional status**
- **Hunger and thirst present**
- **Temporary problem (ex. severe oesophagitis due to chemotherapy and radiotherapy)**

Cancer Anorexia/Cachexia Syndrome

- **Mediated by tumor-associated cytokines (TNF), IL-1, IL-6, PIF, LMF)**
- **Body shifts to catabolic state**
- **Significant physiologic differences from starvation**
- **Little evidence on enteral feeding (or TPN) effective in:**
 - **Improving functional status**
 - **Other quality of life measures**
 - **Prolonging life**

	Incurable patients: nutrition support
STRONG	<i>Nutritional interventions should be used in patients with incurable cancer only after assessing secondary nutrition impact symptoms, cancer anorexia-cachexia, and realistic options of anticancer treatment. The expected benefit and time needed of nutritional interventions need to be defined first, it needs to outweigh the potential harm and the patient needs to want it provided adequate illness understanding.</i>
Questions for research	Effects of nutritional care on QoL in incurable cancer patients

PEG Pros

- n Speed of insertion - 15 min**
- n No need for general anesthesia nor surgery**
- n Reduction in complication rate**
- n Reduction of mortality rate**

PEG Pros

- **Psychologically better accepted**
- **Reduction of accidental extubation**
- **No pharyngeal soreness**
- **No rapid material deterioration**
- **Similar rate of aspiration pneumonia**

PEG Cons

- n **Abdominal wall infection / inflammation**
- n **Tube displacement**
- n **Bleeding in the gastrostomy location**
- n **Peritonitis**

PEG Cons

- n **Aspiration pneumonia**
- n **Colic fistula**
- n **Burried bumper**
- n **Liquid drainage from the stoma**

Life Prolongation – What is the Evidence?

**Weakest
Cons**

**Strongest
Pros**



**Advanced, terminal
illness – Dementia,
Cancer**

**Acute,
catabolic
illness**

Life Enhancement

What is the Evidence?

**Weakest
Cons**

**Strongest
Pros**



**Patients with no
hunger, poor base-
line functional
status, terminally ill**

**Patients with hunger,
good functional
status, mechanical
barrier to eating**

	Very advanced terminal phase
STRONG	<i>In dying patients, treatment should be based on comfort. Artificial hydration and nutrition are unlikely to provide any benefit for most patients. However, a short and limited hydration can be used to rule out dehydration.</i>

	RT: Use of tube feeding
STRONG	<i>Tube feeding may be done using naso-gastric tubes or PEG in radiation-induced severe mucositis or in head-neck/thoracic cancers with obstructive tumor masses.</i>

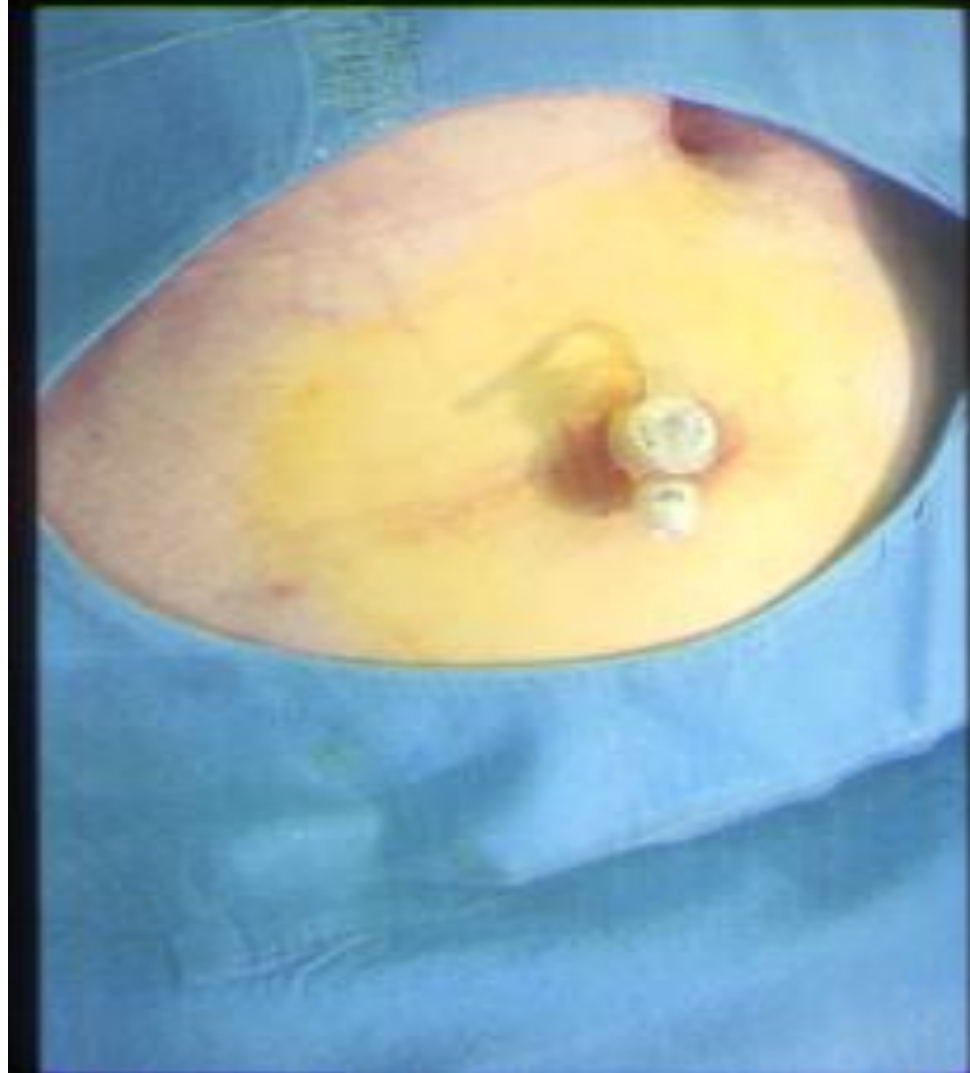
	RT: Maintaining swallowing function
STRONG	<i>Patients should be encouraged and educated on how to maintain their swallowing function during EN.</i>

Goals: patients living with advanced cancer

- ☐ **Quality of life**
 - ☐ **Independence**
 - ☐ **Ability to perform activities of daily living**
 - ☐ **Comfort**
 - ☐ **Symptom relief rather than reversal of malnutrition and weight gain**
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SUMMARY

- **Decisions regarding artificial nutrition and hydration are difficult for clinicians, patients and families**
- **The evidence base for PEG feeding in advanced, terminal illness is weak for both prolongation of life and improved QoL**
- **Decision making should incorporate patient and family values as well as informed consent regarding potential benefits, burdens and alternatives**



Palliative care reduces morbidity and mortality in cancer

Gabrielle B. Rocque and James F. Cleary

