ESOPHAGEAL ADENOCARCINOMA PREHABILITATION, A CLINICAL CASE

M. CARMEN FERNANDEZ, TANIA FLEITAS

HOSPITAL CLÍNICO UNIVERSITARIO, VALENCIA

INCLIVA | VLC

Instituto de Investigación Sanitaria

CLINICAL CASE

66 YO, Male

Former smoker

Alcohol consumption: one cup of wine + 2 measures of whisky /day

Reflux symptoms for 15 years. 15 years taking BPI

No previous endoscopies

<u>Symptoms:</u>

- 6 month of progressive dysphagia, only tollerating liquids at the moment of the visit.
- 15 kg loose of weight

CLINICAL CASE

- Endoscopy: Stenosis 33 cm with 6 mm of smooth edges that does not allow the clamp to pass to 36 cm of hard consistency at that level. Circumferential ectopic mucosa up to 27 cm with a limit of one tongue at 24 cm

- Pathology report: Esophageal adenocarcinoma + intestinal metaplasia

- Clinical staging: by CT scan and PET scan (EUS not possible) **cT3N+**

- Multidisciplinary team board decision: perioperative FLOT+ surgery

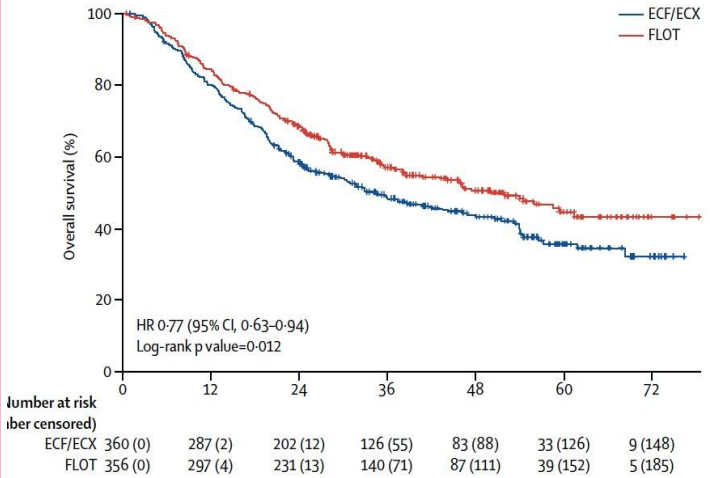
TREATMENT DECISION

MULTIDISCIPLINARY TEAM APPROACH

- Multidisciplinary team board decision: perioperative FLOT+ surgery

	ECF/ECX (n=360)	FLOT (n=356)
Age (years)		
Median	62 (52–69)	62 (54–69)
<60	160 (44%)	155 (44%)
60–69	113 (31%)	116 (33%)
≥70	87 (24%)	85 (24%)
Sex		
Male	265 (74%)	268 (75%)
Female	95 (26%)	88 (25%)
ECOG		
0	254 (71%)	246 (69%)
1	103 (29%)	109 (31%)
2	3 (1%)	1 (<1%)
Location		
GEJ Siewert type 1*	85 (24%)	80 (23%)
GEJ Siewert type 2 or 3	115 (32%)	118 (33%)
Stomach	160 (44%)	158 (44%)
cT-stage†		
T1	2 (1%%)	3 (1%)
T2	59 (16%)	49 (14%)
T3	253 (70%)	267 (75%)
T4	33 (9%)	28 (8%)
unclear	13 (4%)	9 (3%)
cN-stage†		
N-	70 (19%)	77 (22%)
N+	290 (81%)	279 (78%)
Barrett's carcinoma‡		
Yes	54 (15%)	53 (15%)
No	297 (83)	301 (85%)
Unclear or unknown	4 (1%)	2 (1%)
Missing	5 (1%)	0 (0)
Lauren's type		
Diffuse	96 (27%)	95 (27%)
Intestinal or mixed	163 (45%)	159 (45%)
Not evaluable according to Lauren	72 (20%)	70 (20%)
Missing	29 (8%)	32 (9%)

(Table 1 continues in next column)



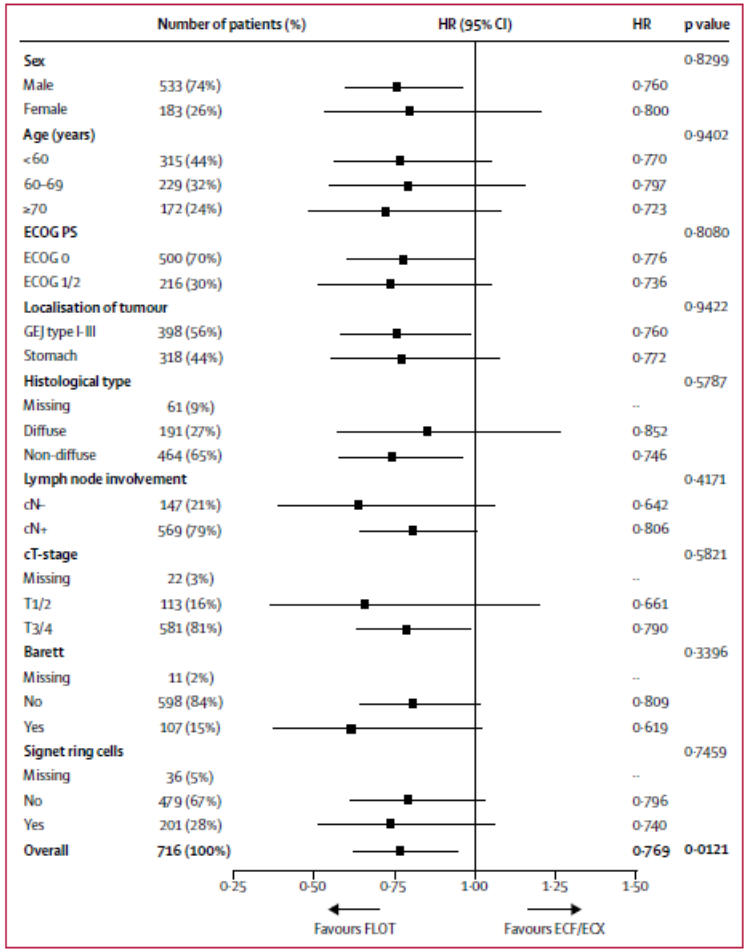


***Figure 3*: Treatment effect on overall survival according to the baseline characteristics of the patients**
The forest plot shows hazard ratios for death (oblongs) and 95% confidence intervals (I bars). p values stand for test for interaction between treatment and subgroup variable. Non-diffuse type includes the intestinal type, the mixed types, and the types not evaluable according to Lauren. GEJ=gastro-oesophageal junction. ECOG=Eastern Cooperative Oncology Group. HR=hazard ratio. CI=confidence interval. cN+=nodal positive. cN–=nodal negative.

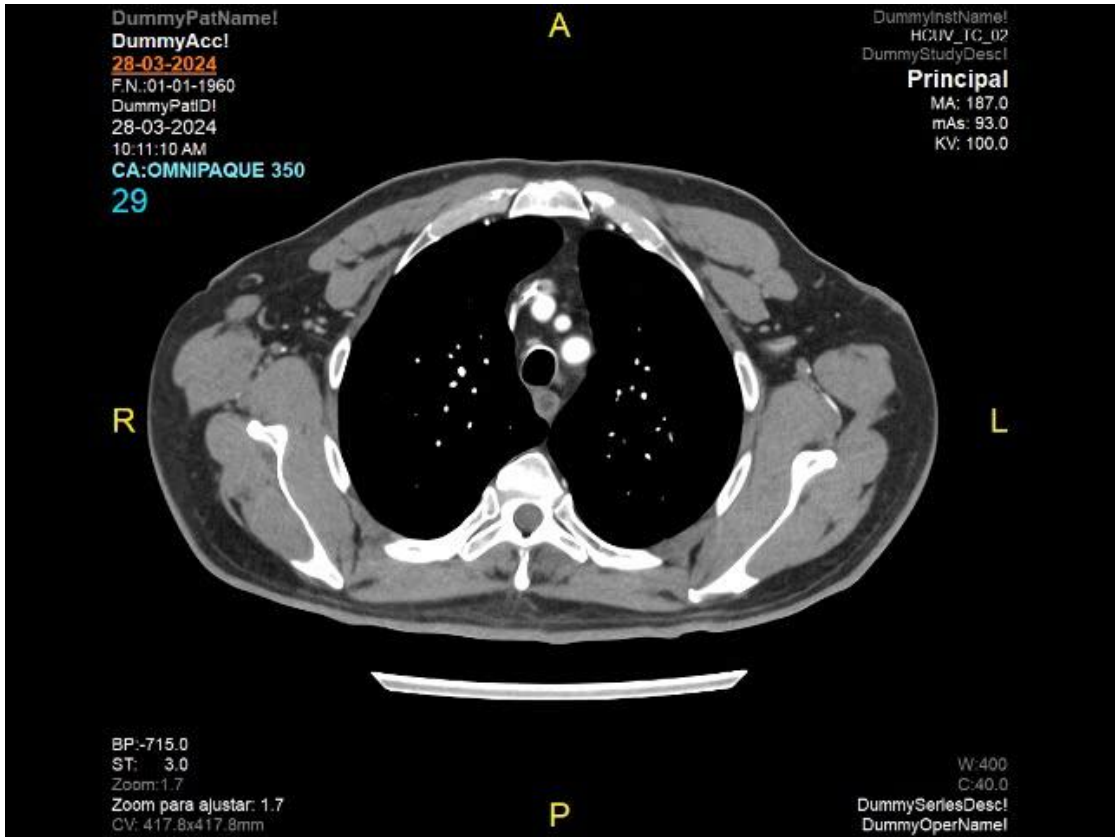
The Lancet, 393(10184), Al-Batran SE, *et al*. Perioperative chemotherapy with fluorouracil plus leucovorin, oxaliplatin, and docetaxel versus fluorouracil or capecitabine plus cisplatin and epirubicin for locally advanced, resectable gastric or gastro-oesophageal junction adenocarcinoma (FLOT4): a randomised, phase 2/3 trial, 1948–57..

CLINICAL CASE

MULTIDISCIPLINARY TEAM APPROACH

- Clinical evaluation after 4 cycles:

Clinical good response
No dysphagia after 1st cycle
Weight maintained
Discrete response in imaging
(CT and PET scan)



- Decision: Surgery

PREHABILITATION PROGRAM

1. Nutritional assessment

- MUST screening
- FRAIL scale
- SARC-F test

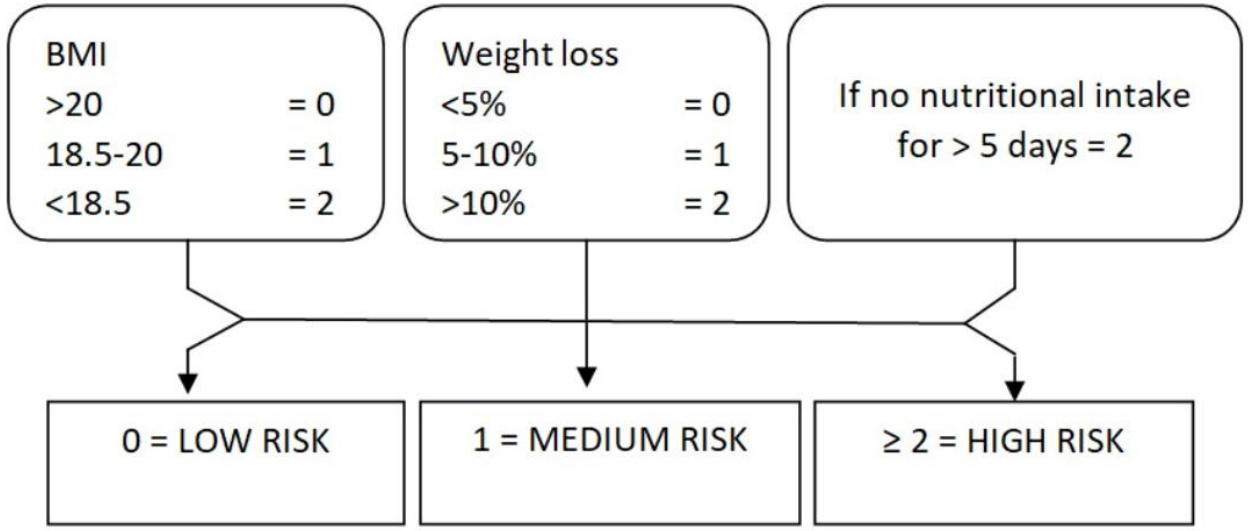
2. Exercise

- Respiratory rehabilitation with incentive spirometer
- Recommendations for aerobic and resistance training

3. Information and Psychology evaluation

PREHABILITATION PROGRAM

1. Nutritional assessment



Fatigue

Resistance (ability to climb one flight of stairs)

Ambulation (ability to walk one block)

Illnesses (greater than 5)

Loss of weight (>5%)

Strength (difficulty lifting and carrying 4.5 kg (10 lbs))

Assistance (needing assistance to walk across a room)

Rise (difficulty in rising from a chair)

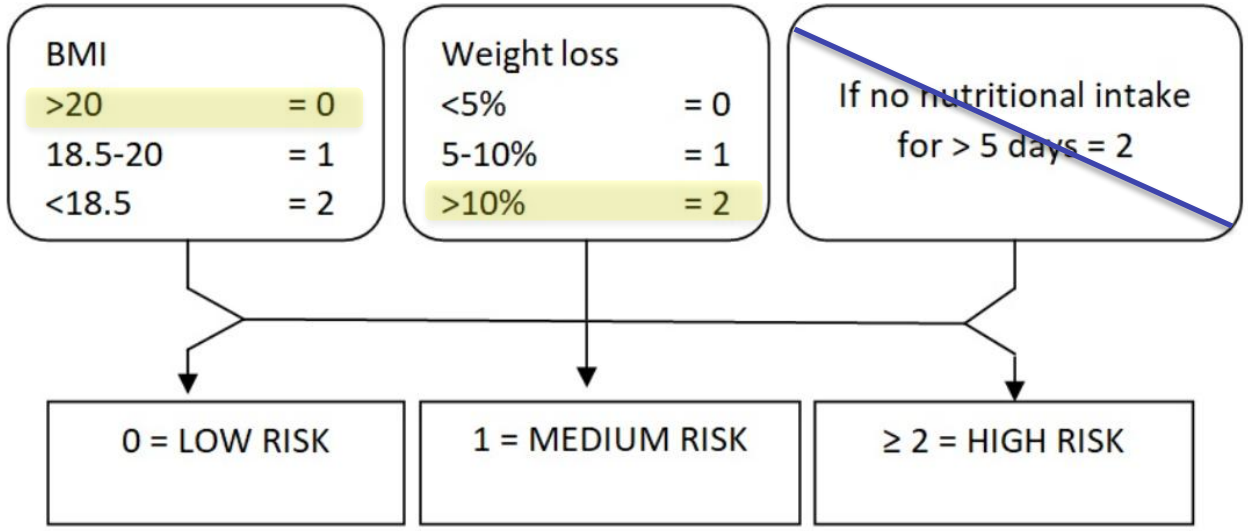
Climb (difficulty climbing a flight of 10 steps without resting)

Falls (number of falls in the past year)

CLINICAL CASE

1. Nutritional assessment

71kg 165cm



~~F__atigue~~

~~R__esistance (ability to climb one flight of stairs)~~

~~A__mbulation (ability to walk one block)~~

~~I__llnesses (greater than 5)~~

L__oss of weight (>5%)

~~S__trength (difficulty lifting and carrying 4.5 kg (10 lbs))~~

~~A__ssistance (needing assistance to walk across a room)~~

~~R__ise (difficulty in rising from a chair)~~

~~C__limb (difficulty climbing a flight of 10 steps without resting)~~

~~F__alls (number of falls in the past year)~~

CLINICAL CASE

ESPEN practical guideline: Clinical Nutrition in cancer

25) In upper GI cancer patients undergoing surgical resection in the context of traditional perioperative care, we recommend oral/enteral immunonutrition (arginine, n-3 fatty acids, nucleotides). (Recommendation C1-4; strength of recommendation strong – Level of evidence high – strong consensus)

GASTRIC CONDITIONING

Intrathoracic vs Cervical Anastomosis After Totally or Hybrid Minimally Invasive Esophagectomy for Esophageal Cancer

A Randomized Clinical Trial

Overall anastomotic leak rate was 12.3% in the intrathoracic anastomosis group and 34.1% in the cervical anastomosis group (risk difference, −21.9% [95% CI, −32.1% to −11.6%]). Intensive care unit length of stay, mortality rates, and overall

2021 Jul; 156(7): 601–610.

End-to-End Versus End-to-Side Esophagogastrostomy After Esophageal Cancer Resection

A Prospective Randomized Study

18%, $P < 0.01$) after 1 year of follow-up. The overall (clinical and radiological) anastomotic leak rate was lower in the ETE group (22% vs. ETS 41%, $P = 0.04$). Patients with an ETE anastomosis suffered less often from pneu-

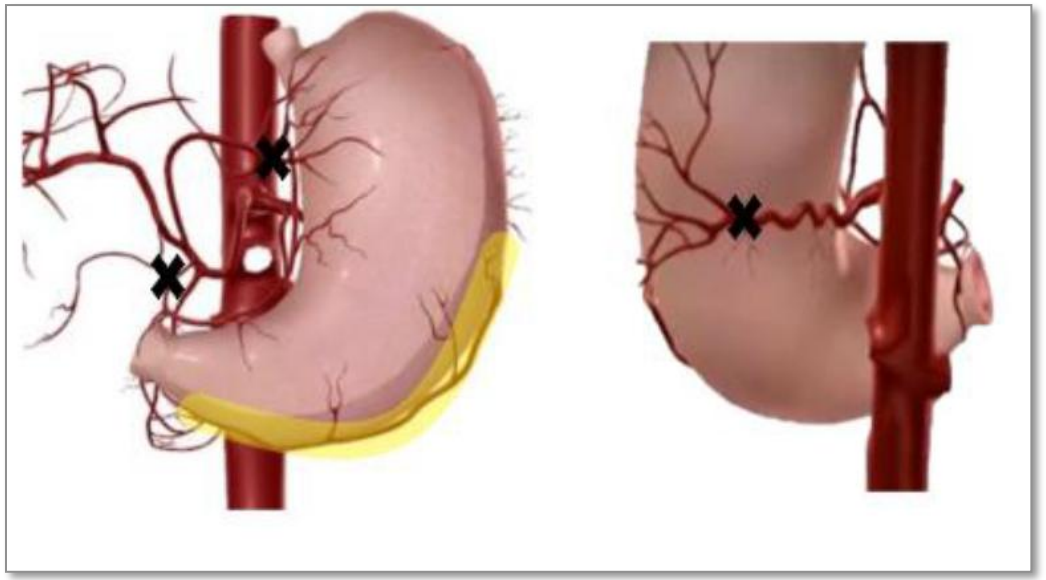
2011 Aug;254(2):226-33.

GASTRIC CONDITIONING

Strategy to enhance gastric perfusion

Types:

LAPAROSCOPIC



EMBOLIZATION

GASTRIC CONDITIONING

Ann Surg Open. 2024 Feb 5;5(1):e379. doi: 10.1097/AS9.0000000000000379. eCollection 2024 Mar.

Pilot Trial on Ischemic Conditioning of the Gastric Conduit in Esophageal Cancer: Feasibility and Impact on Anastomotic Leakage (TIGOAL-I)

María-Carmen Fernández-Moreno [1], María Eugenia Barrios Carvajal [1], Fernando López Mozos [1], Roberto Martí Obiol [1], Jorge Guijarro Rozalén [2], Elisabetta Casula [2], Joaquín Ortega [1]

GASTRIC CONDITIONING

Ann Surg Open. 2024 Feb 5;5(1):e379. doi: 10.1097/AS9.0000000000000379. eCollection 2024 Mar.

Pilot Trial on Ischemic Conditioning of the Gastric Conduit in Esophageal Cancer: Feasibility and Impact on Anastomotic Leakage (TIGOAL-I)

María-Carmen Fernández-Moreno [1], María Eugenia Barrios Carvajal [1], Fernando López Mozos [1], Roberto Martí Obiol [1], Jorge Guijarro Rozalén [2], Elisabetta Casula [2], Joaquín Ortega [1]

Detailed Outcomes of Patients with Anastomotic Leakage

	PAE (n = 20)	No-PAE (n = 20)	*P*
AL; ECCG definition	7 (35%)	5 (25%)	0.49
I	4 (30%)	2 (10%)	0.45
II	2 (0%)	3 (15%)	
III	1 (5%)	0 (0%)	
AL size (mm)	4.7	11	0.04
Time to AL diagnosis (days), mean (SD)	8.1 (2.5)	8.2 (2.3)	0.96
Conduit necrosis type III	0 (0%)	2 (15%)	0.48
AL and CN severity			
Clavien <IIIb	6 (30%)	1 (5%)	0.02
Clavien ≥IIIb	1 (5%)	6 (30%)	
CCI, median (IQR)	20.9 (20.9–29.6)	33.7 (33.5–71.3)	0.01
Days in ICU, median (IQR)	2 (1–5)	7 (3–8)	0.03

AL indicates anastomosis leakage; CCI, comprehensive complication index; CN, Conduit Necrosis; ECCG, esophagectomy complications consensus group; ICU, intensive care unit; PAE, preoperative arterial embolization.

CLINICAL CASE

Surgery

- Surgery: Esophagectomy Mckeown was performed on May 4th, 2024.
- Pathology report: INFILTRATING ADENOCARCINOMA residual post-neoadjuvant CT was reported ypT3N2 (5/38) M0.
- Postoperative management: Methylene blue test on postoperative days 3 to 5.
- Uncomplicated postoperative course. Discharged on day 11 post-surgery.

Surveillance

- Post-operative FLOT was completed in August 2024.
- Currently under follow-up. Disease-free for 12 months since diagnosis (9 post-surgery).

DISCUSSION

- Patient preparation and support are essential as part of the multidisciplinary treatment strategy.

- Close follow-up to recognize post-operatory complications is critical to put measures to solve them if present.

- Perioperative FLOT + surgery is our standard of care, and complete post-operative FLOT although there´s low tumor downstaging is recommended according to the ESMO guidelines.