

Surgery for Oligo-Metastatic Gastro- Esophageal Cancer

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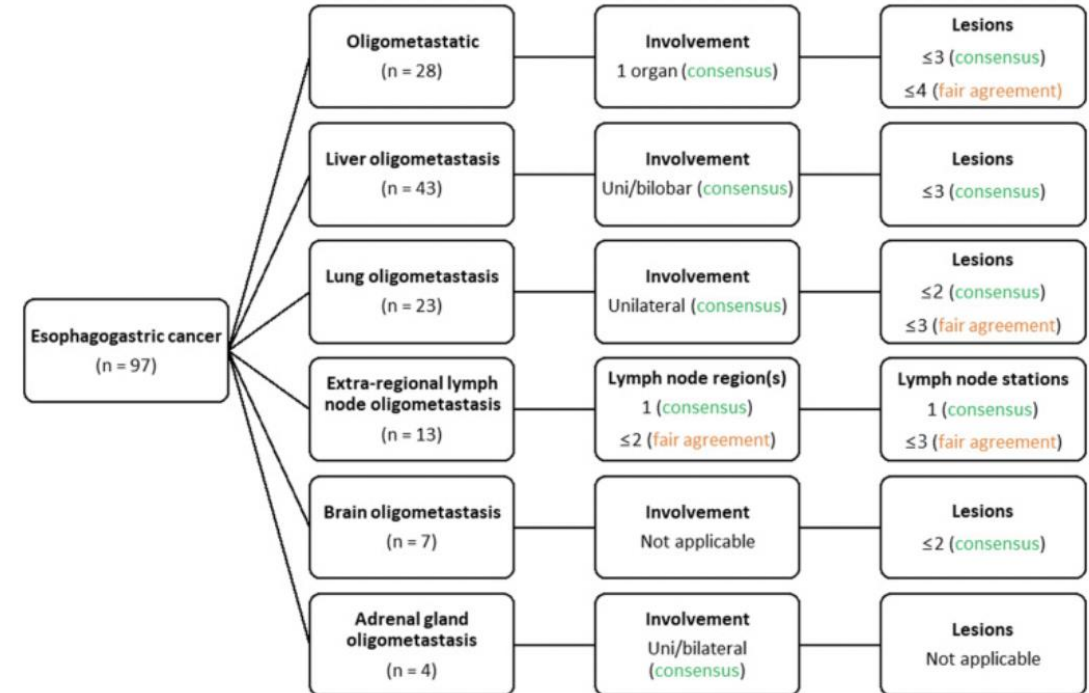
Toronto General Hospital

Disclosures

- No relevant disclosures

What is “oligo metastatic”?

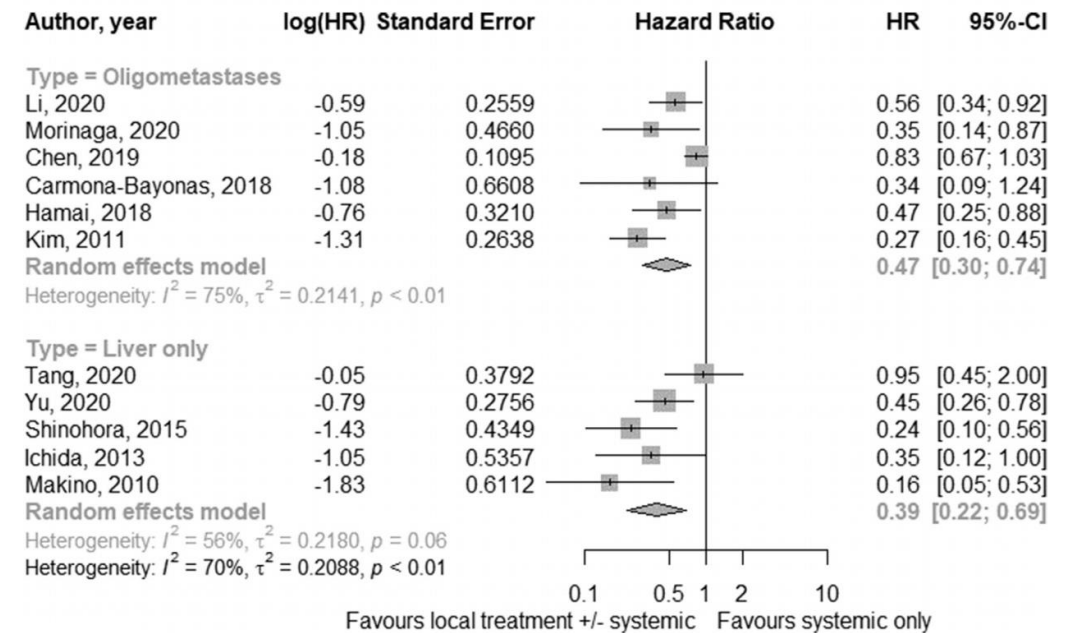
- Low burden metastatic disease
- Beyond that, it’s hard to decide...



Kroese et al 2022

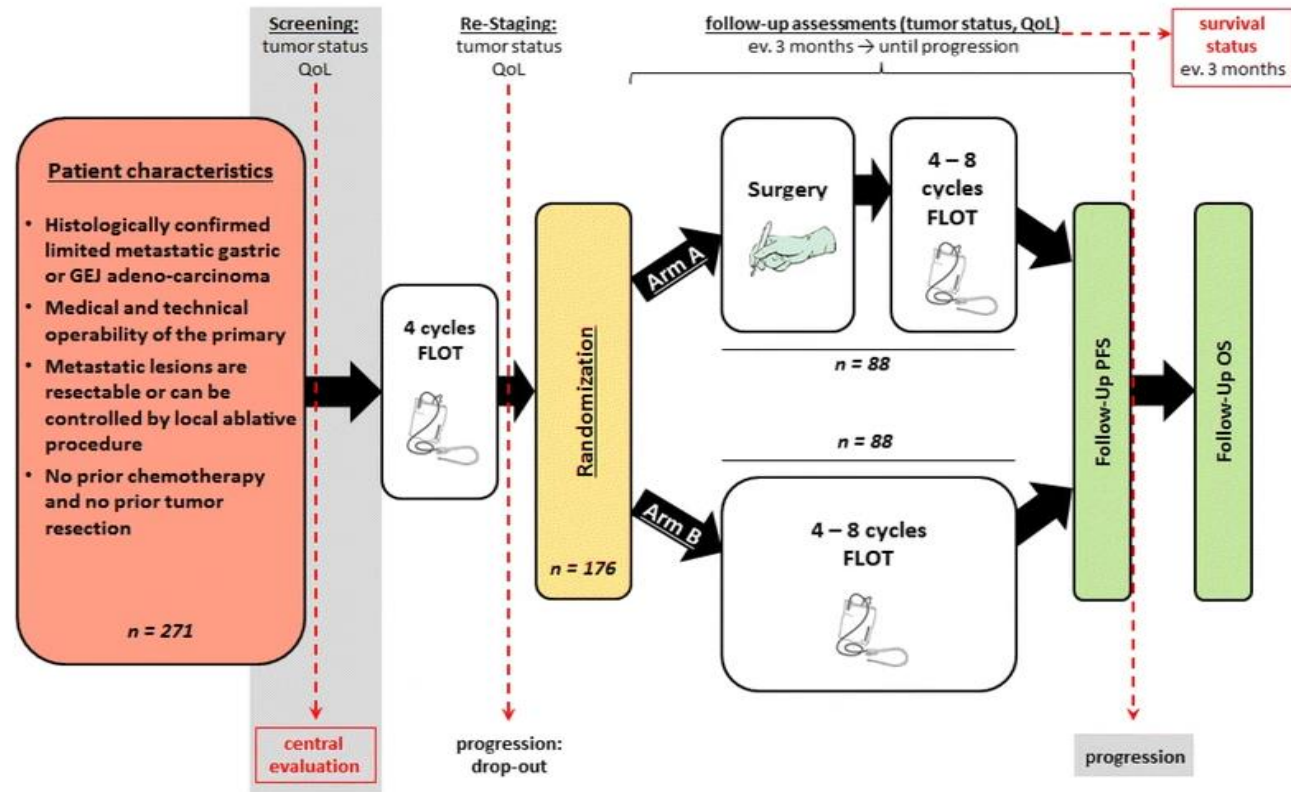
Do we operate?

- Even less consensus than on the definition



Kroese et al 2022

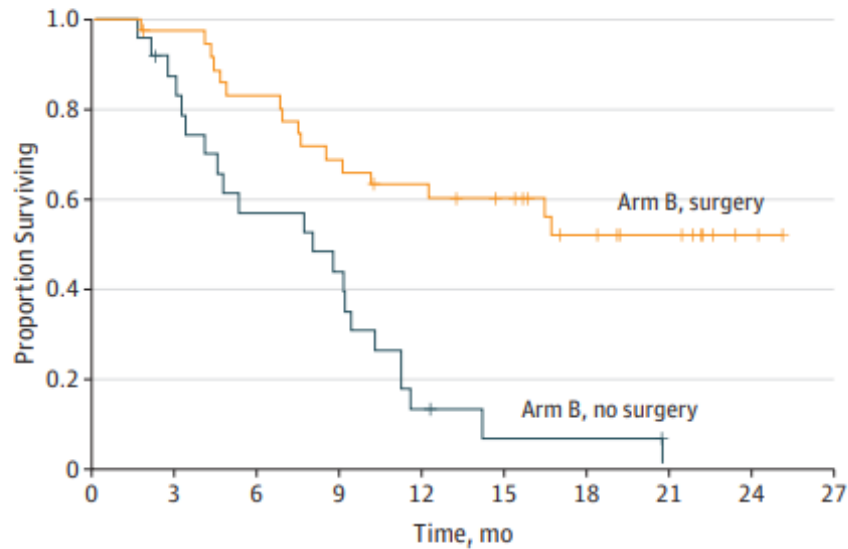
Lessons Learned in Gastric Cancer



AIO-FLOT5 "RENAISSANCE"

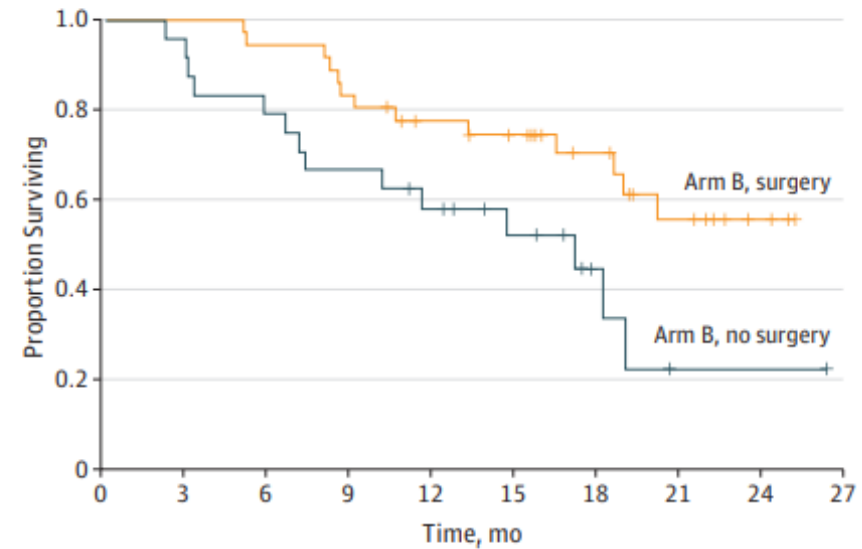
AIO-FLOT3

C Progression-free survival



No. at risk	0	3	6	9	12	15	18	21	24	27
No surgery	24	20	13	10	3	1	1	0	0	0
Surgery	36	34	29	24	21	18	12	9	3	0

D Overall survival



No. at risk	0	3	6	9	12	15	18	21	24	27
No surgery	24	22	19	16	13	9	4	1	1	0
Surgery	36	36	34	30	25	22	16	10	4	0

Median 8 cycles FLOT (1-15cycles)

- B: 60% proceeded to surgery, 60% responded (10% CR, 50% PR)

Stereotactic radiotherapy or metastasectomy for oligometastatic esophagogastric cancer: A nationwide population-based cohort study

Tiuri E. Kroese^{a,b,*}, Nikita K.N. Jorritsma^{a,b,1}, Hanneke W.M. van Laarhoven^c, Rob H.A. Verhoeven^{c,d}, Stella Mook^b, Nadia Haj Mohammad^e, Jelle P. Ruurda^a, Peter S.N. van Rossum^b, Richard van Hillegersberg^a

Table 1 (continued)

Factor	Local +/- systemic therapy (n = 105)	Systemic therapy only (n = 489)	P-value
Distant organ	83 (79 %)	298 (61 %)	
Brain	32 (30 %)	1 (0 %)	
Lung	15 (14 %)	39 (8 %)	
Bone	12 (11 %)	17 (3 %)	
Liver	10 (10 %)	182 (37 %)	
Soft tissue	8 (8 %)	4 (1 %)	
Other distant organ	6 (6 %)	55 (11 %)	
Extra-regional lymph nodes	13 (12 %)	111 (23 %)	
Peritoneum	9 (9 %)	80 (16 %)	
Confirmation of OMD			<0.001
Histology	75 (71 %)	226 (46 %)	
Repeated follow-up imaging	30 (29 %)	263 (54 %)	

* For patients with a resected primary tumor.

Table 1 Patient and tumor characteristics of included patients.

Factor	Local +/- systemic therapy (n = 105)	Systemic therapy only (n = 489)	P-value
Mean age in years (±SD)	64 (±8)	64 (±10)	0.894
Sex			0.460
Male	75 (71 %)	369 (75 %)	
Female	30 (29 %)	120 (25 %)	
WHO performance score			<0.001
0	35 (33 %)	119 (24 %)	
1	27 (29 %)	165 (34 %)	
>1	6 (5 %)	53 (11 %)	
Missing	37 (33 %)	152 (31 %)	
Location of the primary tumor			<0.001
Upper or middle third esophagus	14 (13 %)	51 (10 %)	
Lower third esophagus	60 (57 %)	187 (38 %)	
Esophagus not specified	2 (2 %)	14 (3 %)	
Gastroesophageal junction/cardia	13 (12 %)	80 (16 %)	
Stomach	16 (15 %)	157 (32 %)	
Clinical tumor stage			<0.001
cT1b or cT2	25 (24 %)	169 (35 %)	
cT3 or cT4	74 (70 %)	168 (35 %)	
Missing	5 (5 %)	102 (21 %)	
Clinical nodal stage			0.124
cN0	30 (29 %)	121 (25 %)	
cN1	48 (46 %)	165 (34 %)	
cN2 or cN3	26 (25 %)	168 (34 %)	
Missing	1 (1 %)	28 (6 %)	

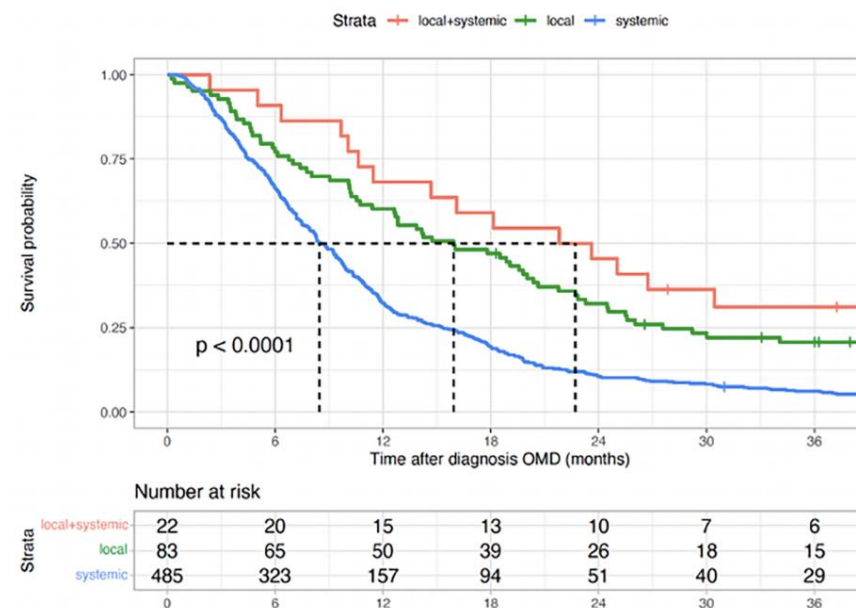



Fig. 2. Overall survival curve stratified for treatment of oligometastatic disease.

Significance of Surgery for Resectable M1 Lymph Node Metastases Without Organ Metastasis in Esophageal Carcinoma in the Era of Neoadjuvant Treatment

Shota Igaue, MD^{1,3}, Ryoko Nozaki, MD¹, Daichi Utsunomiya, MD¹, Yuto Kubo, MD¹, Kentaro Kubo, MD¹, Daisuke Kurita, MD¹, Shun Yamamoto, MD², Koshiro Ishiyama, MD, PhD¹, Junya Oguma, MD, PhD¹, Ken Kato, MD, PhD², and Hiroyuki Daiko, MD, PhD, FACS^{1,3} 

-supraclavicular, paratracheal, posterior thoracic para aortic, abdominal para aortic

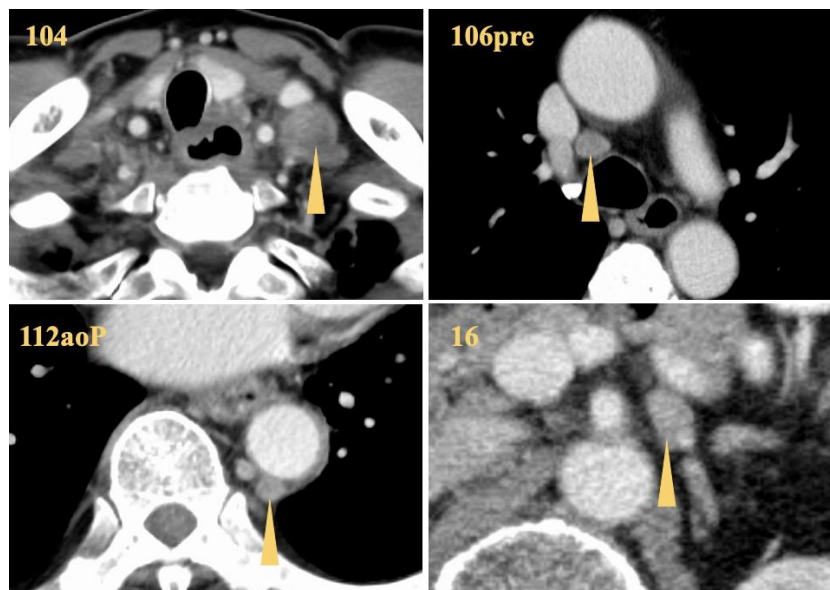

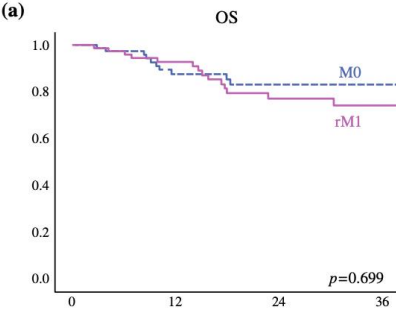


TABLE 1 Patients' characteristics before and after propensity score matching

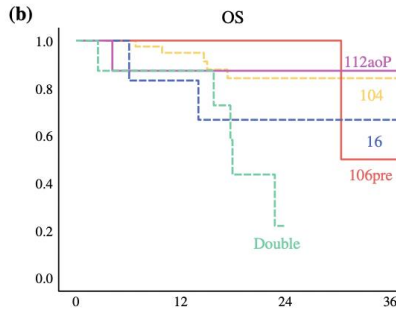
	Unmatched cohort		
	M0	rM1	p-Value
No. of patients (n, %)	602	80	
Age	67 (60-74)	67 (59-73)	0.756
Sex (%)			0.912
Male	486 (80.7)	65 (81.3)	
Female	116 (19.3)	15 (18.7)	
ASA-PS (%)			0.213
1	26 (4.3)	7 (8.8)	
2	548 (91.0)	70 (87.4)	
3	28 (4.7)	3 (3.8)	
cT (%)			< 0.001
1	226 (37.5)	12 (15.0)	
2	76 (12.6)	5 (6.3)	
3	276 (45.9)	52 (65.0)	
4	24 (4.0)	11 (14.7)	
cN (%)			< 0.001
0	220 (36.5)	4 (5)	
1	226 (37.5)	30 (37.5)	
2	131 (21.8)	29 (36.3)	
3	25 (4.2)	17 (21.3)	
cM (%)			NA
M0	602 (100)	0 (0)	
104	0 (0)	54 (67.5)	
106pre	0 (0)	4 (5)	
112aoP	0 (0)	8 (10)	
16	0 (0)	6 (7.5)	
M1 in two regions*	0 (0)	8 (10)	
Histological type (%)			0.863
SCC	538 (89.4)	72 (90)	
Adenocarcinoma	64 (10.6)	8 (10)	
Tumor location (%)			0.011
Ce/Ut	115 (19.1)	26 (32.5)	
Mt	294 (48.8)	28 (35.0)	
L/Ae	193 (32.1)	26 (32.5)	
Preoperative therapy (%)			< 0.001
None	190 (31.6)	3 (3.8)	
Chemotherapy (triplet**/doublet)	399 (66.3)	76 (96.2)	
Neoadjuvant CRT	13 (2.2)	1 (1.3)	
Surgical approach (%)			< 0.001
Thoracoscopy	510 (84.7)	59 (73.8)	
Thoracotomy	19 (3.2)	3 (3.8)	
Bilateral approach	0 (0)	8 (10.0)	
Others	73 (12.1)	10 (12.5)	
Postoperative complications*** (%)	166 (27.6)	24 (30.0)	0.649
Surgery time (min)	342 (294-394)	373 (318-457)	0.001
Blood loss (ml)	84 (48-164)	151 (66-258)	<0.001
Hospital stay (days)	14 (12-20)	15 (13-22)	0.126
In hospital death (%)	2 (0.3)	0 (0)	0.606

Significance of Surgery for Resectable M1 Lymph Node Metastases Without Organ Metastasis in Esophageal Carcinoma in the Era of Neoadjuvant Treatment

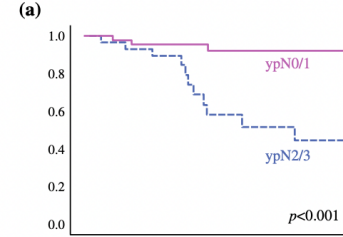
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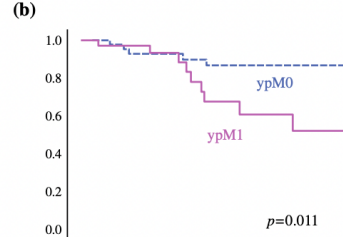
Number at risk	0	12	24	36
M0	79	48	28	20
rM1	80	58	34	23



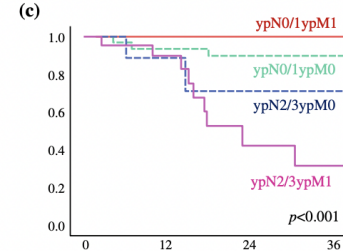
Number at risk	0	12	24	36
104	54	35	21	14
106pre	4	4	3	1
112aoP	8	7	6	5
16	6	5	4	3
Double	8	7	0	0



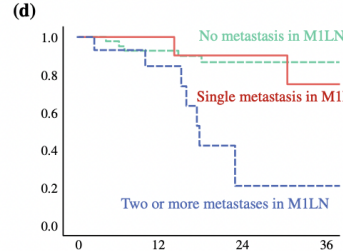
Number at risk	0	12	24	36
ypN0/1	45	33	25	17
ypN2/3	31	23	8	5



Number at risk	0	12	24	36
ypM0	44	33	24	17
ypM1	32	23	9	5



Number at risk	0	12	24	36
ypN0/1ypM0	35	26	20	14
ypN2/3ypM0	9	7	4	3
ypN0/1ypM1	10	7	5	3
ypN2/3ypM1	22	16	4	2



Number at risk	0	12	24	36
No	44	33	24	17
Single	18	13	8	4
Two or more	14	10	1	1

FIG. 4 Overall survival according to ypN status and ypM status (a, b, c). Overall survival according to the number of pathological rMILN metastases (d)

Outcomes after Surgical Treatment of Oesophagogastric Cancer with Synchronous Liver Metastases: A Multicentre Retrospective Cohort Study



Sander J. M. van Hooitegem¹, Carlo A. de Pasqual², Simone Giacopuzzi², Elke Van Daele³ , Hanne Vanommeslaeghe³, Johnny Moons⁴ , Philippe Nafteux⁴, Pieter C. van der Sluis¹, Sjoerd M. Lagarde¹ and Bas P. L. Wijnhoven^{1,*}

Table 2. Systemic and surgical treatment details.

Variables	Total n = 31
Neoadjuvant treatment	
No	5 (16)
Yes	26 (84)
Type of neoadjuvant treatment, n = 26	
Chemoradiation	2 (8)
Chemotherapy	20 (77)
Chemotherapy + targeted therapy	3 (12)
Unknown	1 (4)
Number of cycles completed	
3	6 (23)
4-6	13 (50)
>6	4 (15)
Unknown	3 (12)
Type of resection	
McKeown esophagectomy	1 (3)
Ivor-Lewis esophagectomy	17 (55)
Transhiatal esophagectomy	2 (7)
Total gastrectomy	8 (26)
Subtotal gastrectomy	3 (10)
Total minimally invasive procedure	
Extent of abdominal lymphadenectomy	
D1	2 (7)
D1+	5 (16)
D2	20 (65)
D3	4 (13)
Procedures on LM	
Wedge resection	16 (52)
Multiple wedge resections	4 (13)
Segmentectomy	4 (13)
Ablation	3 (10)
Wedge resection + ablation	4 (13)
Adjuvant treatment	
No	17 (55)
Yes	14 (45)
Type of adjuvant treatment, n = 14	
Chemoradiation	1 (7)
Chemotherapy	9 (64)
Chemotherapy + targeted therapy	4 (29)
Number of cycles completed	
3	6 (43)
4-6	5 (36)
Unknown	3 (21)

LM: Liver metastasis. Percentages may not total to 100% due to rounding.

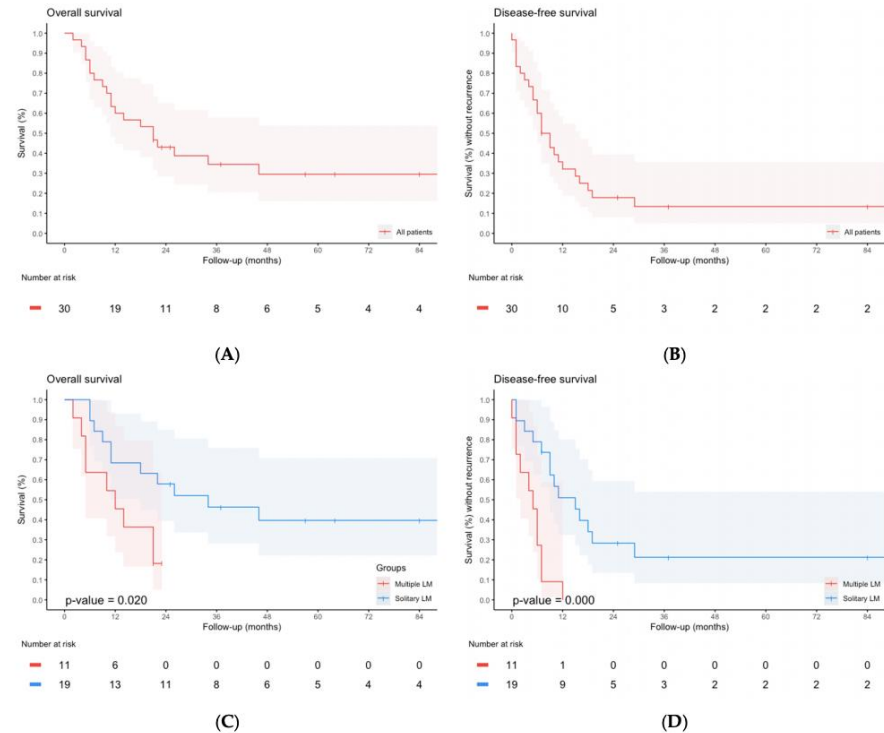
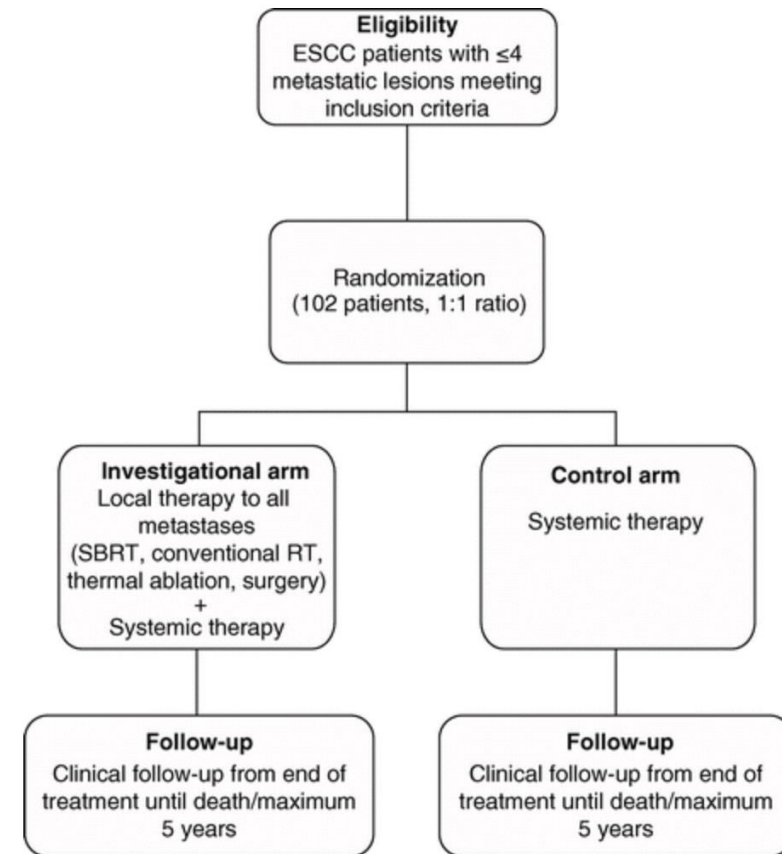


Figure 1. (A) Overall survival with 95% CI; (B) Disease-free survival with 95% CI; (C) Overall survival stratified for number of LM with 95% CI; (D) Disease-free survival stratified for number of LM with 95% CI. The *p*-values displayed were calculated with the log-rank test.

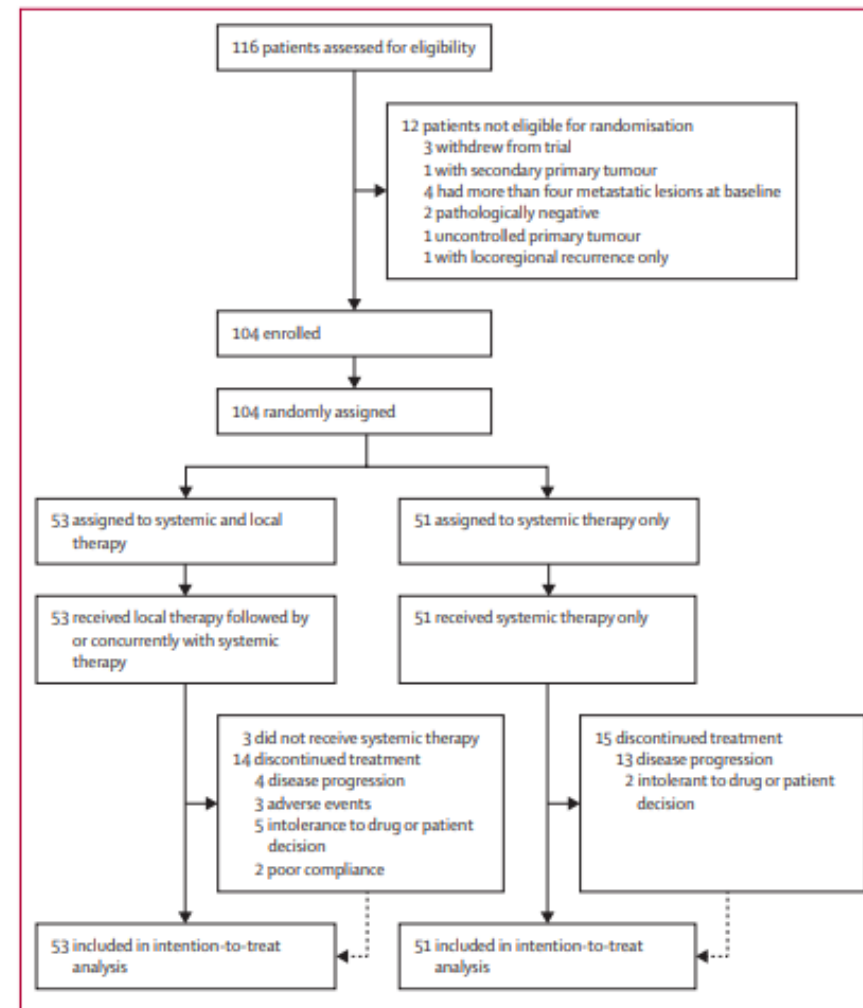
Systemic therapy with or without local intervention for oligometastatic oesophageal squamous cell carcinoma (ESO-Shanghai 13): an open-label, randomised, phase 2 trial

Qi Liu, Junqiang Chen, Yu Lin, Jinjun Ye, Wenbin Shen, Honglei Luo, Baosheng Li, Wei Huang, Shihong Wei, Jibin Song, Yaohui Wang, Huanjun Yang, Songtao Lai, Hongcheng Zhu, Dashan Ai, Yun Chen, Jiaying Deng, Shengnan Hao, Kuaile Zhao



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	Systemic and local therapy group (n=53)	Systemic therapy only group (n=51)
Median age, years (IQR)	66 (61-69)	63 (57-67)
Sex		
Male	45 (85%)	45 (88%)
Female	8 (15%)	6 (12%)
Eastern Cooperative Oncology Group performance status		
0	15 (28%)	16 (31%)
1	38 (72%)	35 (69%)
Classification of oligometastasis		
Synchronous oligometastasis	9 (17%)	9 (18%)
Metachronous oligorecurrence	38 (72%)	37 (73%)
Repeat oligorecurrence	6 (11%)	5 (10%)
Location of the metastases		
Non-regional nodes only	23 (43%)	23 (45%)
Visceral metastases	30 (57%)	28 (55%)
Number of oligometastatic lesions		
1	23 (43%)	21 (41%)
2	22 (42%)	18 (35%)
3	6 (11%)	9 (18%)
4	2 (4%)	3 (6%)
Number of involved organs		
1	42 (79%)	37 (73%)
2	11 (21%)	13 (25%)
3	0	1 (2%)
Local treatment		
None	0	51 (100%)
Radiotherapy	44 (83%)	0
Surgery	4 (8%)	0
Thermal ablation	2 (4%)	0
Radiotherapy with surgery	3 (6%)	0
Systemic therapy		
None	3 (6%)	0
Chemotherapy	30 (57%)	28 (55%)
Immunotherapy with or without chemotherapy	20 (38%)	23 (45%)
Previous therapy for primary tumour		
Oesophagectomy	19 (36%)	24 (47%)
Chemoradiotherapy	34 (64%)	27 (53%)
Lines of systemic therapy		
First line	38 (72%)	39 (76%)
Second line	15 (28%)	12 (24%)
Median months to initial treatment (IQR)*	12 (6-3-32.0)	12 (6.0-26.5)

*Time to initial treatment means the interval time from the end of radical treatment for primary tumour to the current diagnosis.

Table 1: Baseline characteristics

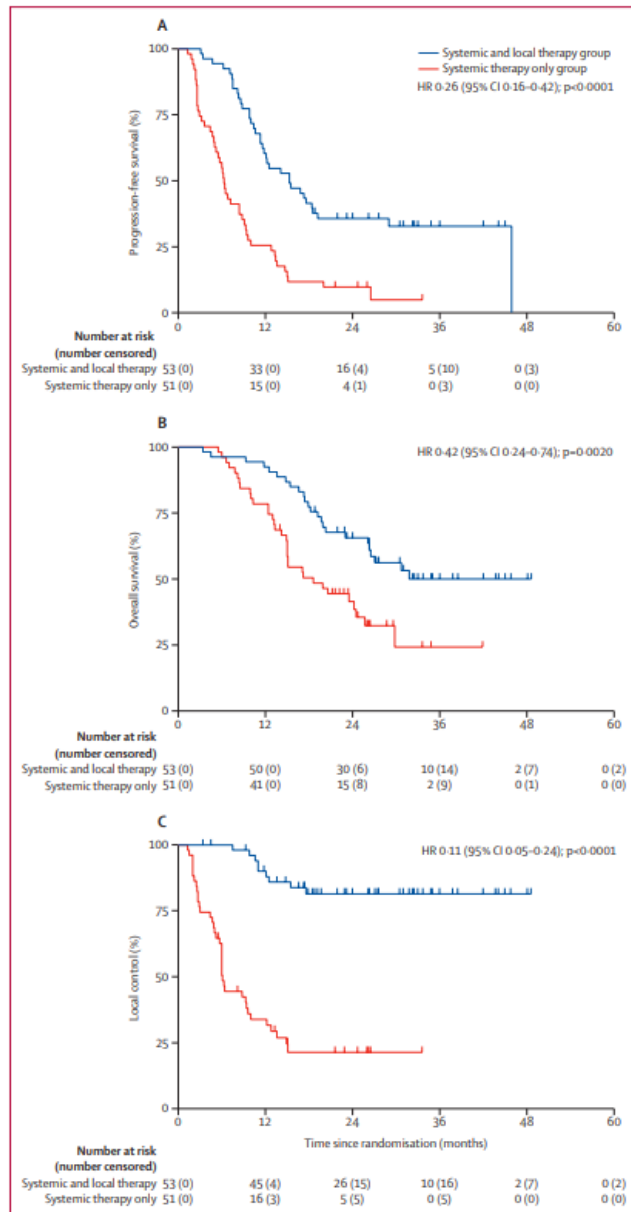


Figure 2: Kaplan-Meier plots for survival
(A) Progression-free survival. (B) Overall survival. (C) Local control.

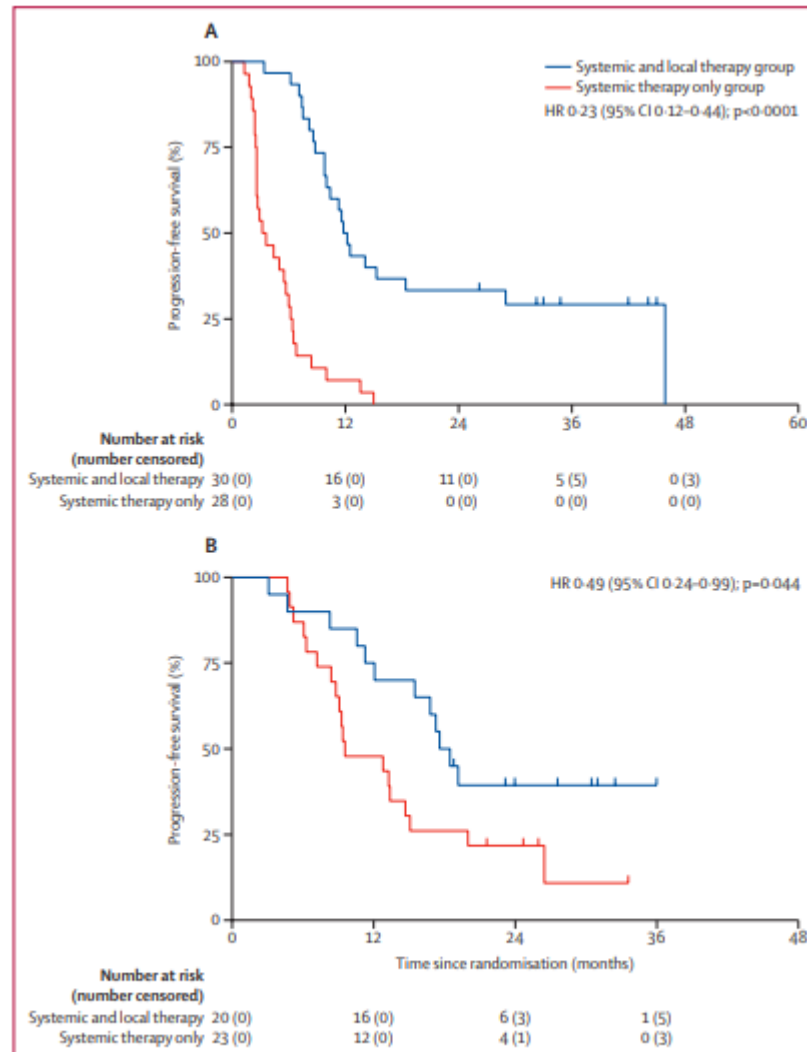


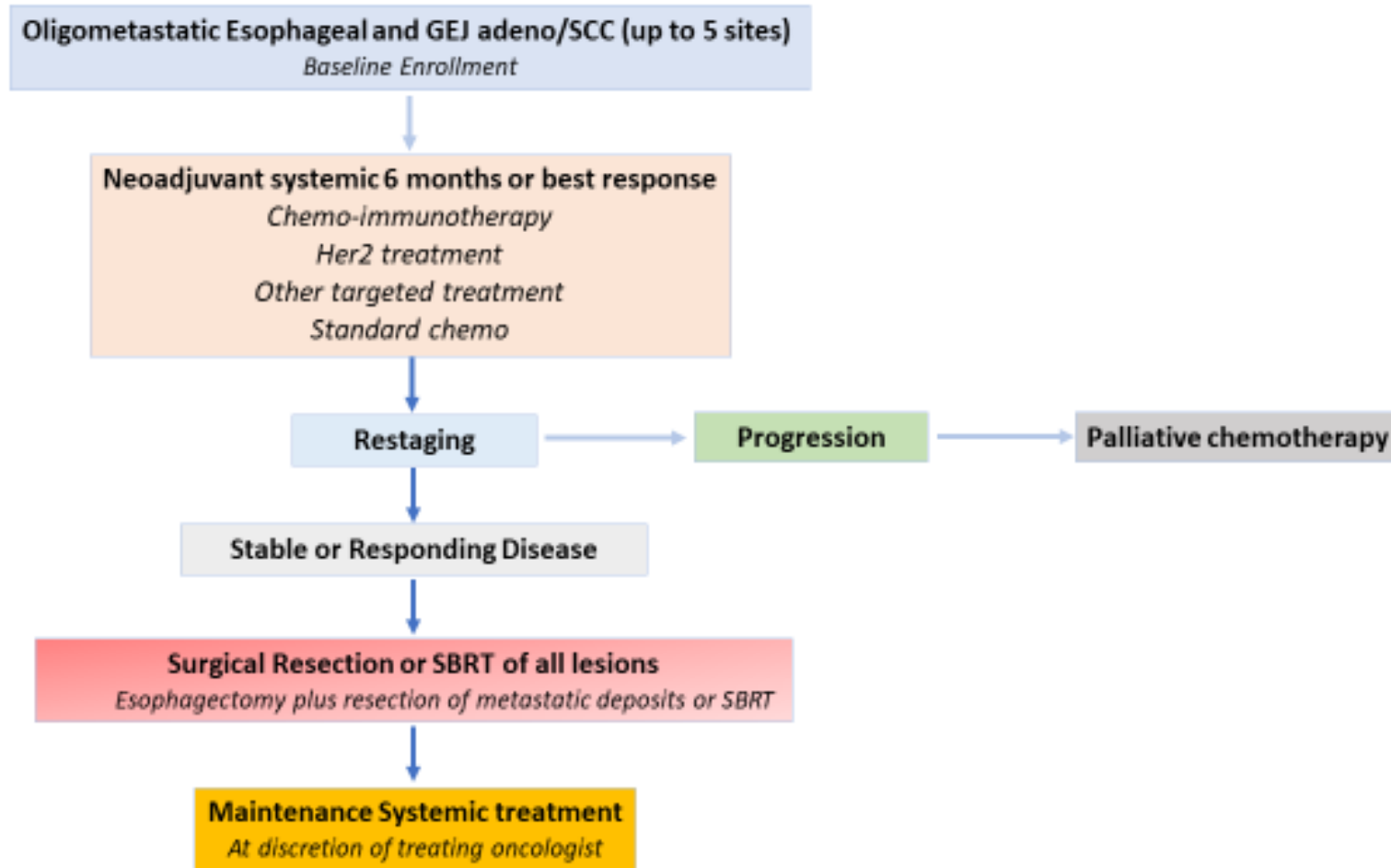
Figure 3: Progression-free survival by receipt of chemotherapy or immunotherapy
(A) Progression-free survival in the chemotherapy alone subgroup. (B) Progression-free survival in the immunotherapy subgroup.

What could we add?

- Surgical trial with surgical outcomes
- Correlative studies
- Clear(er) selection
- Non SCC population



TORonto Resection of Oligometastasis (TORO)



TORonto Resection of Oligometastasis (TORO)



- Inclusion:

- 5 sites
- 1 brain, 1 bone
- Resectable or radiatable
- Fit
- Stable or responsive disease 6 months on systemic tx

- Outcomes

- *Primary outcome: 2 year survival*
- Survival at 1, 2 and 5 years
- Recurrence
- Surgical morbidity
- QOL
- ctDNA

- Enrollment

- Need 72 patients total → 12 1st interim analysis, next 24 for 2nd, last 36 final

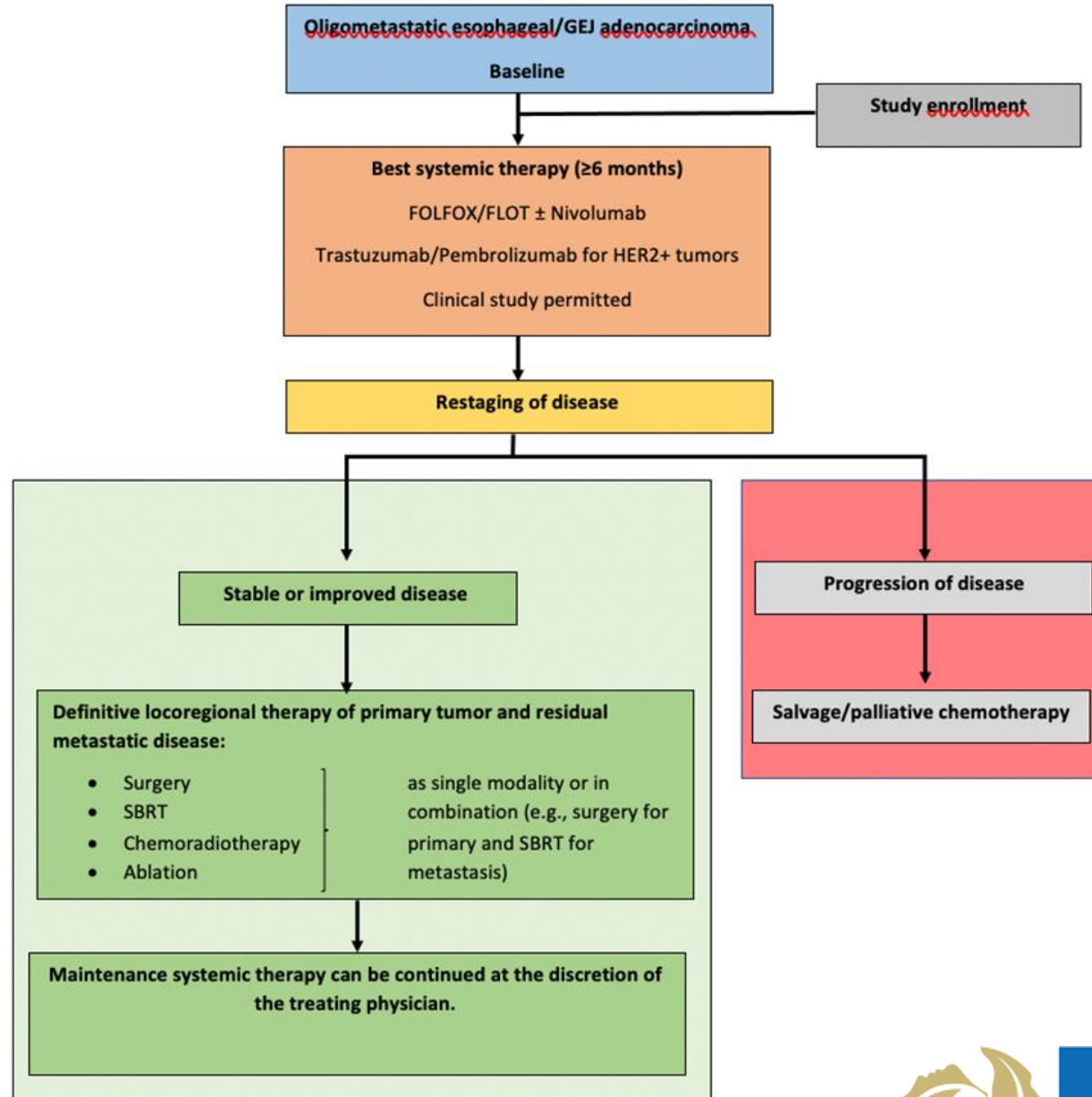
TOronto Resection of Oligometastasis (TORO)

- Presented last year at retreat ✓
- Draft Protocol ✓
- Protocol reviewed by investigators ✓
- REB Approval
- Recruitment
- Interim Analysis
- Final Analysis



Other Trials Out There?

PROMOTE trial



Thank you!

