



Staging of Gastric Cancer

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Disclosures

- None





Disclosures



- Lead, Cancer Care Ontario/Program in Evidence-Based Care Gastric Cancer Guidelines
- Sherif and MaryLou Hanna Chair in Surgical Oncology Research



WORKUP

- H&P
- Upper GI endoscopy and biopsy^a
- Chest/abdomen/pelvic CT with oral and IV contrast
- PET-CT evaluation if no evidence of M1 disease^b and if clinically indicated
- CBC and comprehensive chemistry profile
- Endoscopic ultrasound (EUS) if no evidence of M1 disease (preferred)
- Endoscopic resection (ER) may contribute to accurate staging of early-stage cancers^c
- Nutritional assessment and counseling
- Biopsy of metastatic disease as clinically indicated
- HER2-neu testing if metastatic adenocarcinoma is documented/suspected^d
- Assess Siewert category^e
- Smoking cessation advice, counseling, and pharmacotherapy^f
- Screen for family history^g

CLINICAL STAGE^h

Tis or T1a

Locoregional (M0)

Stage IV (M1)

ADDITIONAL EVALUATION

Medically fitⁱ

Non-surgical candidate^j

Medically fit,ⁱ potentially resectable

Medically fit,ⁱ unresectable

Non-surgical candidate^j

Consider laparoscopy^k (category 2B)

Multidisciplinary review preferred^l → [\(See GAST-2\)](#)

[Palliative Management](#) (see GAST-7)

^aSee [Principles of Endoscopic Staging and Therapy \(GAST-A\)](#).

^bMay not be appropriate for T1 patients.

^cEMR may also be therapeutic for early-stage disease/lesions.

^dSee [Principles of Pathologic Review and HER2-neu Testing \(GAST-B\)](#).

^eSee [Principles of Surgery \(GAST-C\)](#).

^fSmoking cessation guidelines are available from the U.S. Public Health Service at: http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/tobacco/clinicians/update/treating_tobacco_use08.pdf.

^gSee [Principles of Genetic Risk Assessment for Gastric Cancer \(GAST-D\)](#). Also see [NCCN Guidelines for Colorectal Cancer Screening](#) and [NCCN Guidelines for Genetic/Familial High-Risk Assessment: Breast and Ovarian](#).

^hSee [Staging \(ST-1\)](#) for tumor classification.

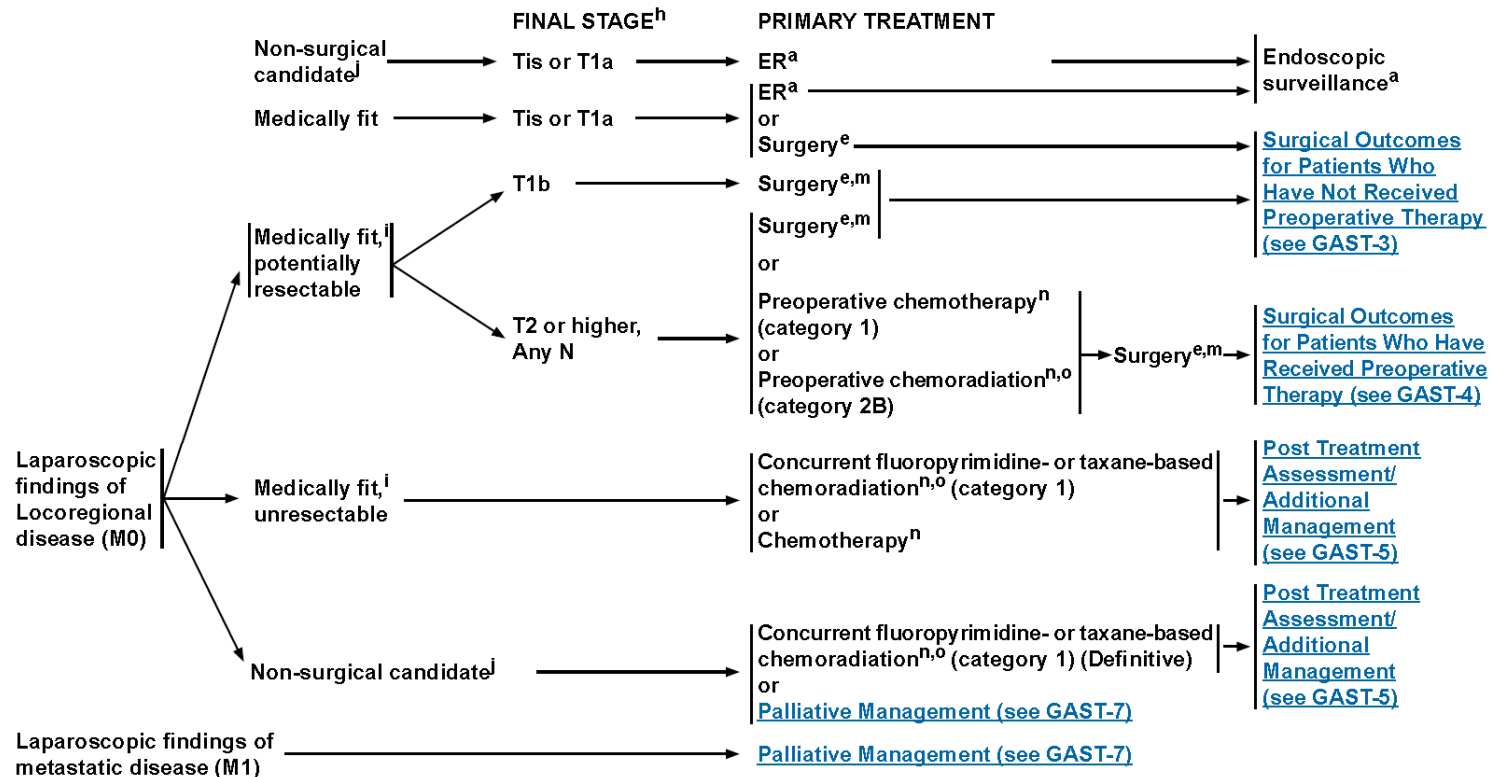
ⁱMedically able to tolerate major abdominal surgery.

^jMedically unfit patients or medically fit patients who decline surgery.

^kLaparoscopy is performed to evaluate for peritoneal spread when considering chemoradiation or surgery. Laparoscopy is not indicated if a palliative resection is planned. Laparoscopy is indicated for clinical stage T1b or higher.

^lSee [Principles of Multidisciplinary Team Approach \(GAST-E\)](#).

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any cancer patient is in a clinical trial. Participation in clinical trials is especially encouraged.



^aSee [Principles of Endoscopic Staging and Therapy \(GAST-A\)](#).

^eSee [Principles of Surgery \(GAST-C\)](#).

^hSee [Staging \(ST-1\)](#) for tumor classification.

ⁱMedically able to tolerate major abdominal surgery.

^lMedically unfit patients or medically fit patients who decline surgery.

^mSurgery as primary therapy is appropriate for ≥T1b cancer or actively bleeding cancer, or when postoperative therapy is preferred.

ⁿSee [Principles of Systemic Therapy \(GAST-F\)](#).

^oSee [Principles of Radiation Therapy \(GAST-G\)](#).

Note: All recommendations are category 2A unless otherwise indicated.
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All patients should be staged prior to treatment



All patients should be staged prior to treatment

- Why?

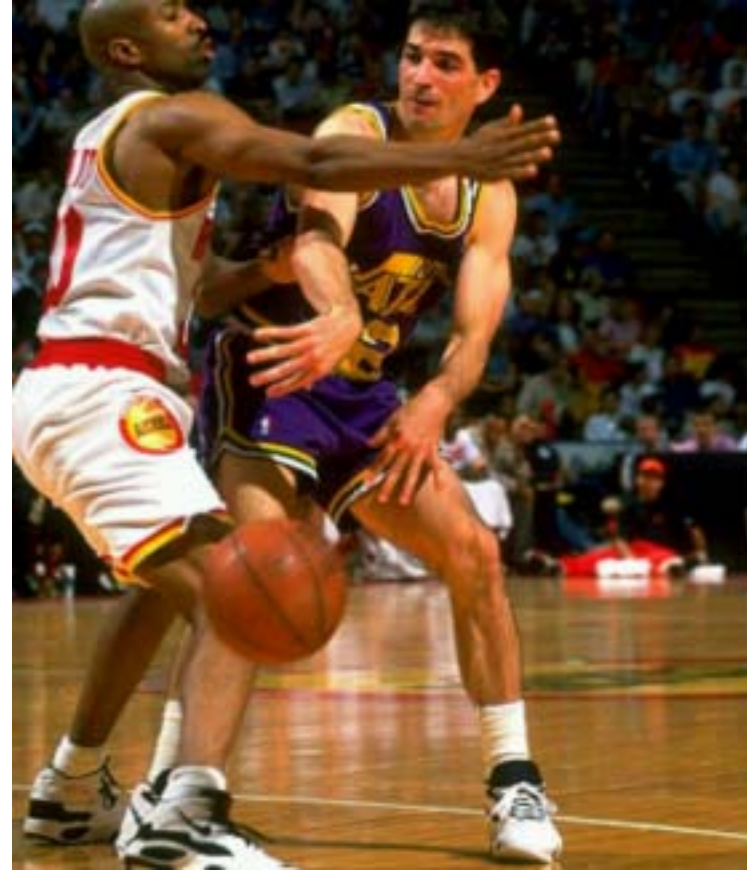


All patients should be staged prior to treatment





All patients should be staged prior to treatment





All patients should be staged prior to treatment

- T1N0, <3 cm
 - Consideration of endoscopic removal
- Locally advanced
 - Consideration of downstaging
- M1 disease
 - Consideration of multimodal options



All patients should be staged prior to treatment

- CT scan Chest, Abdo, Pelvis
 - T-stage-72% accuracy
 - N-stage-66% accuracy
 - M-stage-81% accuracy
 - Review of 40 articles (3758 patients)
 - Seevaratnam et al, 2012



All patients should be staged prior to treatment

- CT scan Chest, Abdo, Pelvis
 - T-stage-72% accuracy
 - N-stage-66% accuracy
 - M-stage-81% accuracy
 - Review of 40 articles (3758 patients)
 - Seevaratnam et al, 2012
- Ontario data, 2005-08
 - 2414 patients with GC at 116 hospitals
 - NPV for local invasion 87%
 - NPV for nodes 43%
 - NPV for M1 53%
 - Kagedan et al, under review



All patients should be staged prior to treatment

- CT scan Chest, Abdo, Pelvis
 - T-stage-72% accuracy
 - N-stage-66% accuracy
 - M-stage-81% accuracy
 - Low NPV for M1 disease
- Diagnostic Laparoscopy for T3/T4, N+, Diffuse
 - Changes management up to 43% of cases
 - Leake et al,2012
- EUS, PET, MRI
 - In situations where management will change





Laparoscopic Staging

Laparoscopy Rates

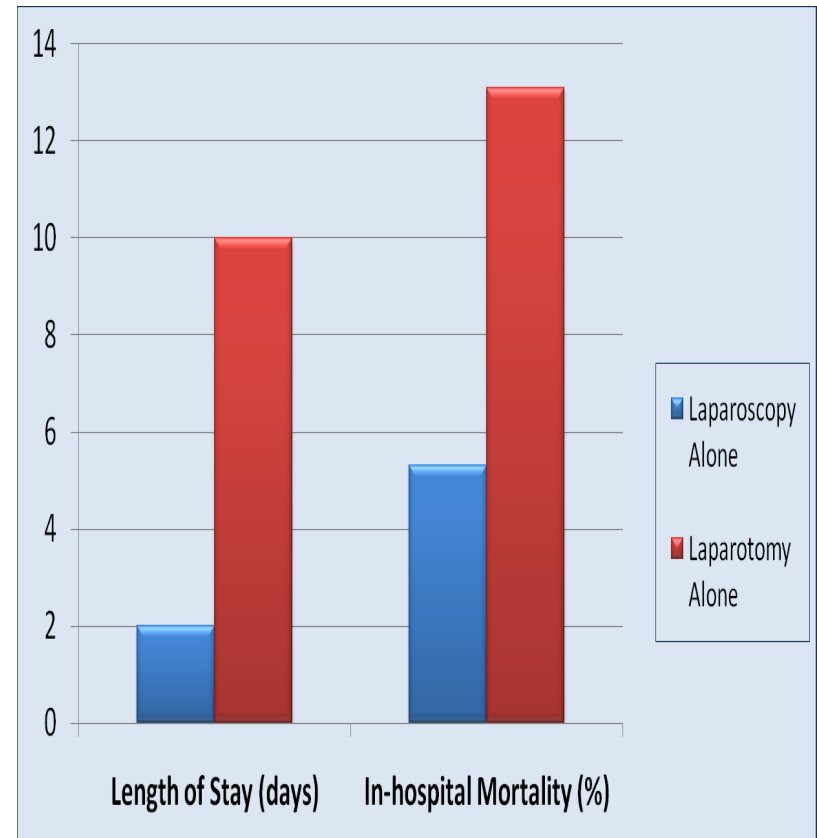
- Ontario
 - 4.6% of curative resections
 - 52.3% (205 of 392) of the non-therapeutic OR group
 - » Coburn, JSO, 2010
- US
 - 8% of curative resections
 - 19% of the non-therapeutic OR group
 - » Karanicolas, JACS, 2011



Laparoscopic Staging

Laparoscopy Rates

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Questions?

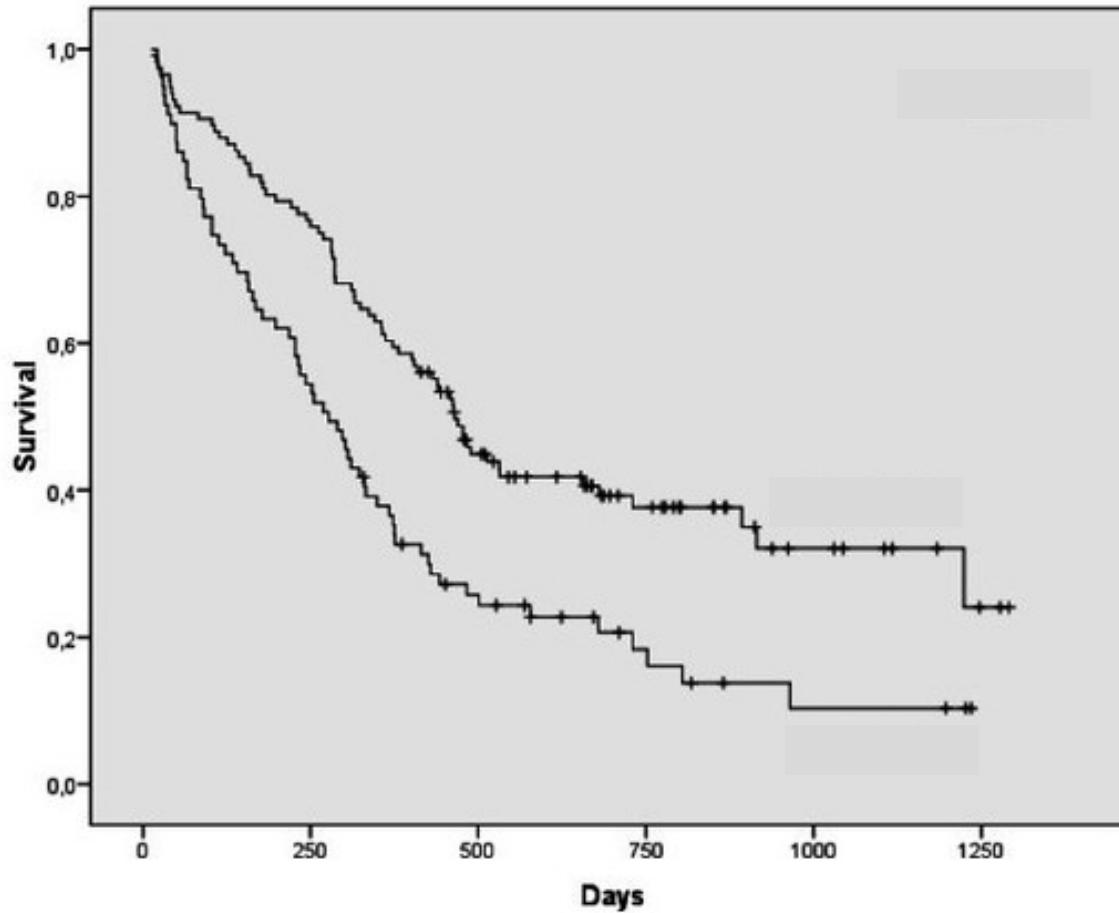


The Best Chance for Cure

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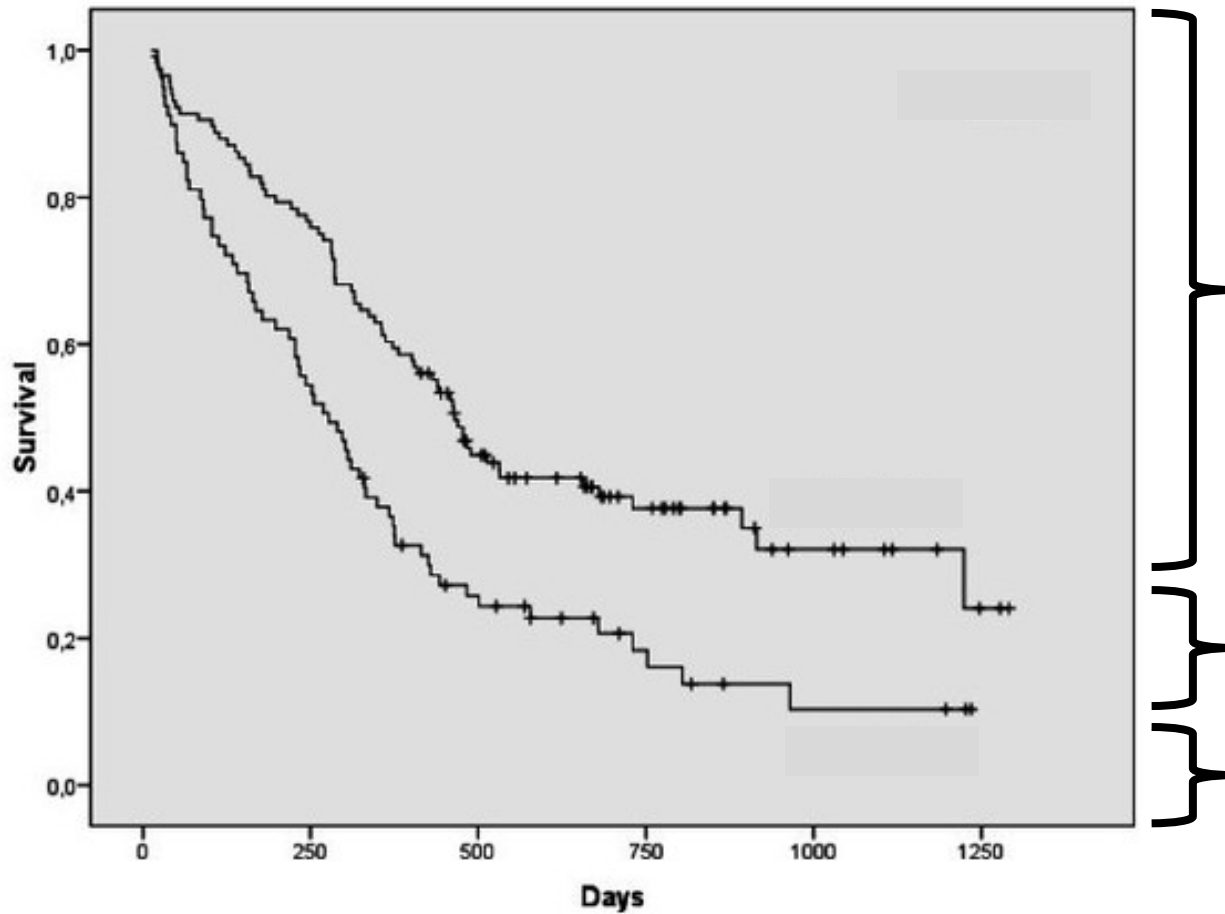


Survival and Quality of Life





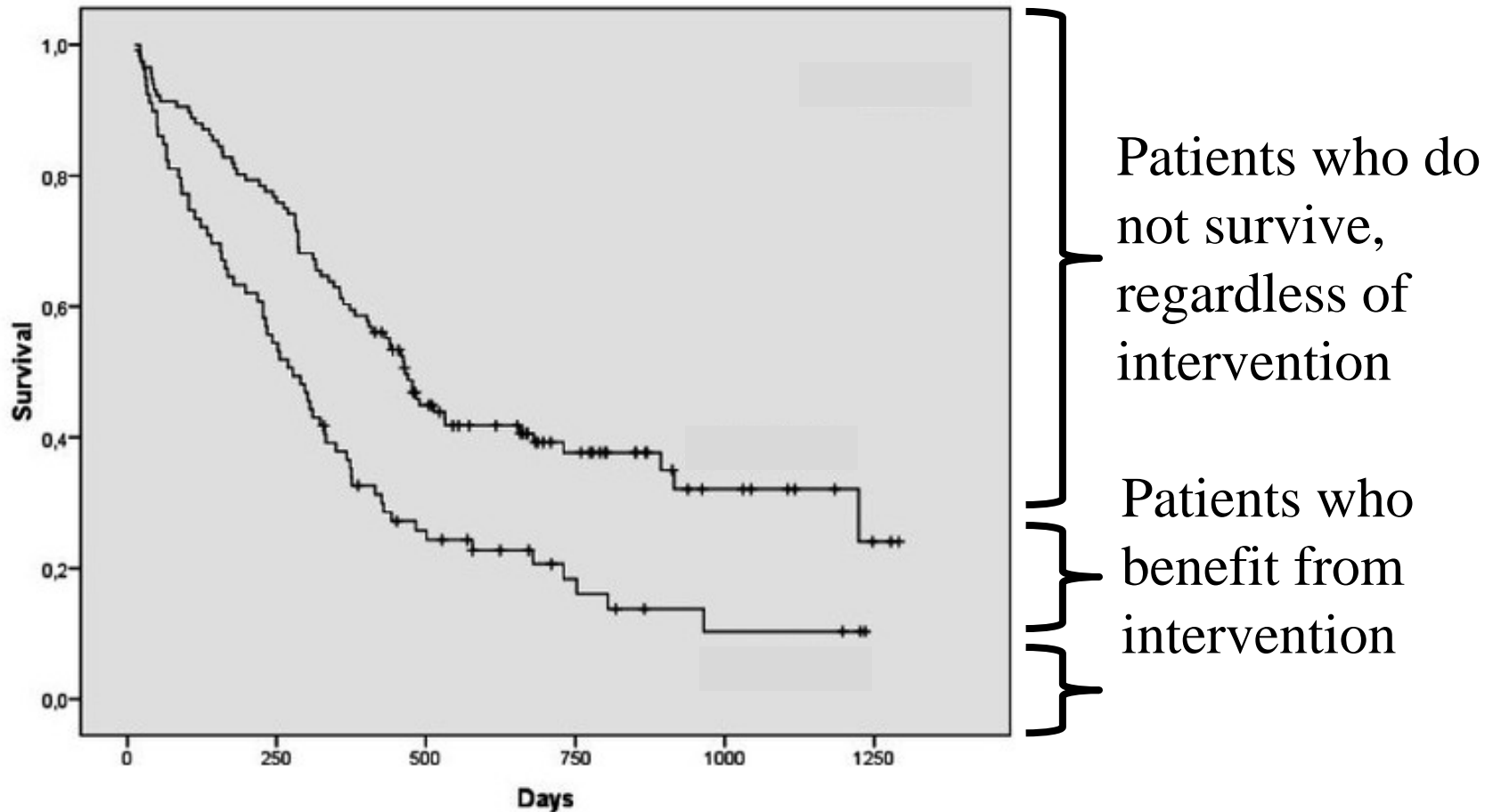
Survival and Quality of Life



Patients who
benefit from
intervention

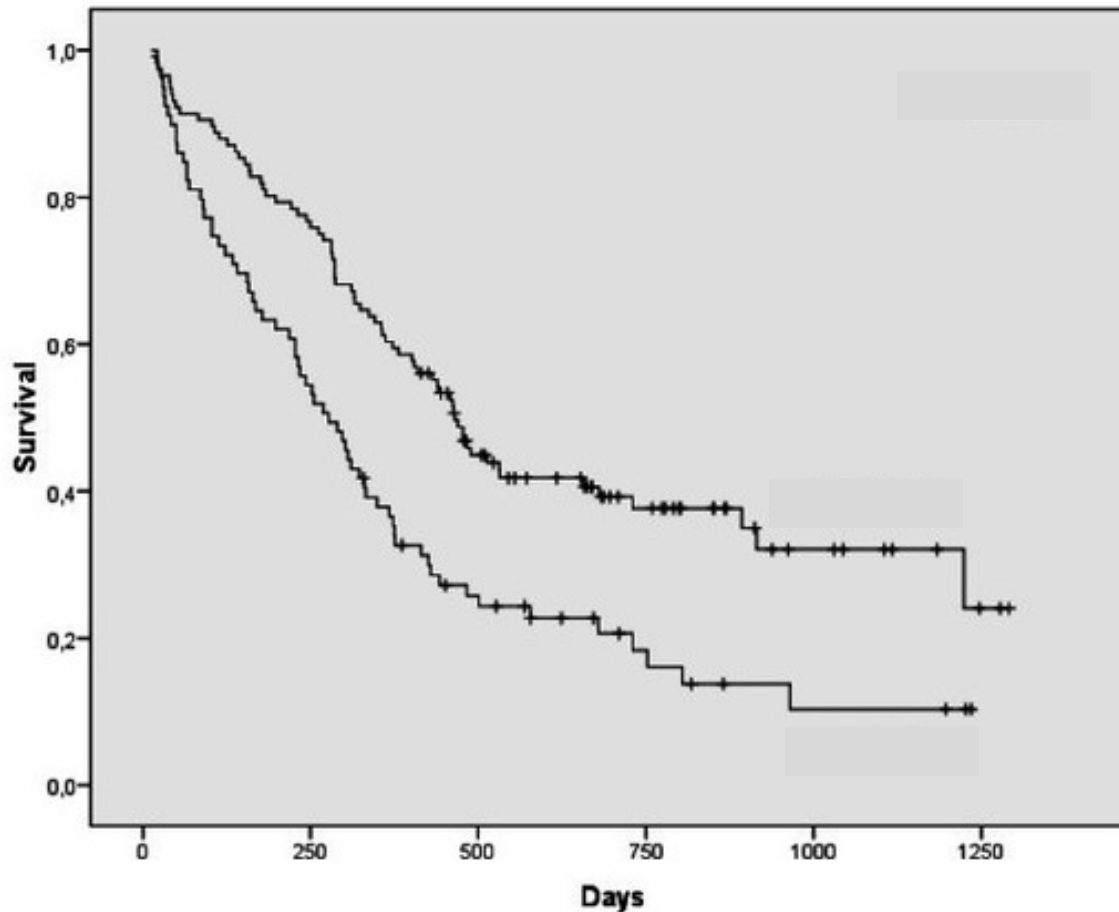


Survival and Quality of Life





Survival and Quality of Life



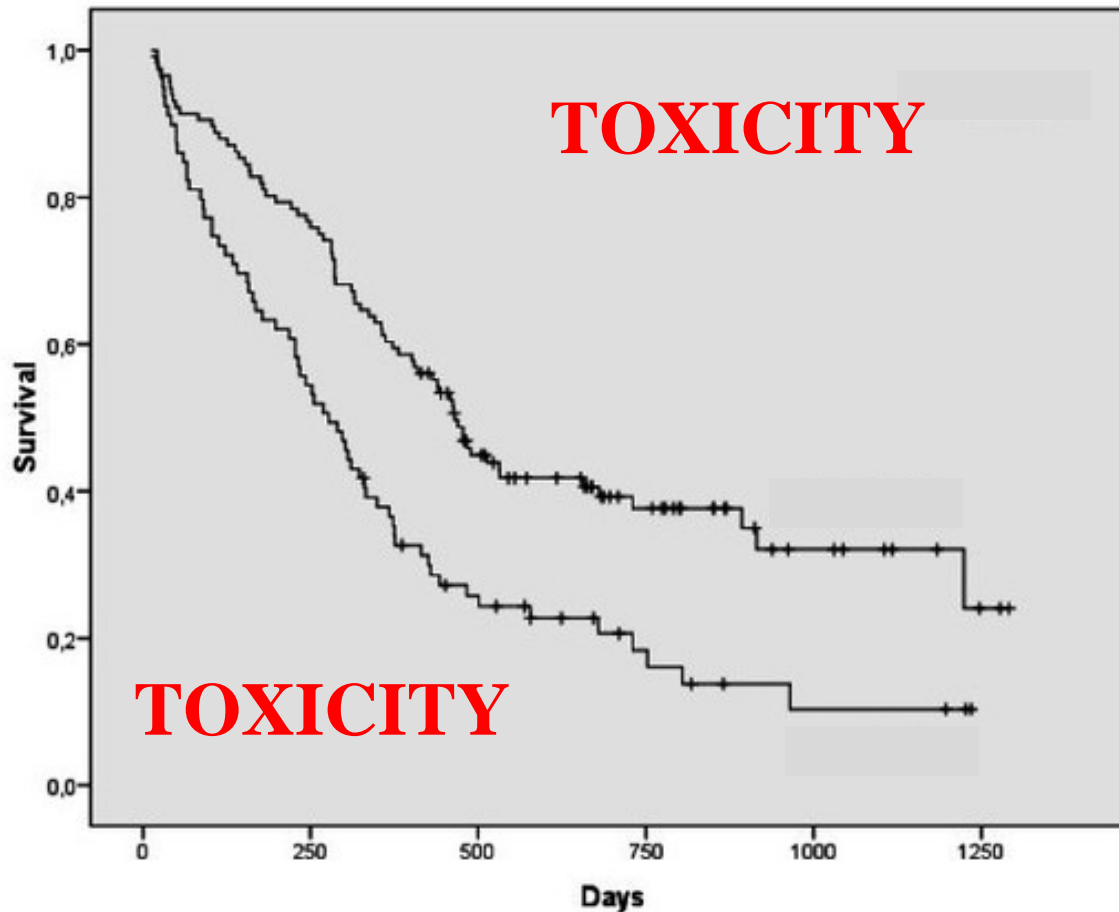
Patients who do not survive, regardless of intervention

Patients who benefit from intervention

Patients who would have survived anyhow



Survival and Quality of Life



Patients who do not survive, regardless of intervention

Patients who benefit from intervention

Patients who would have survived anyhow



All gastric cancer patients should be discussed at an MCC

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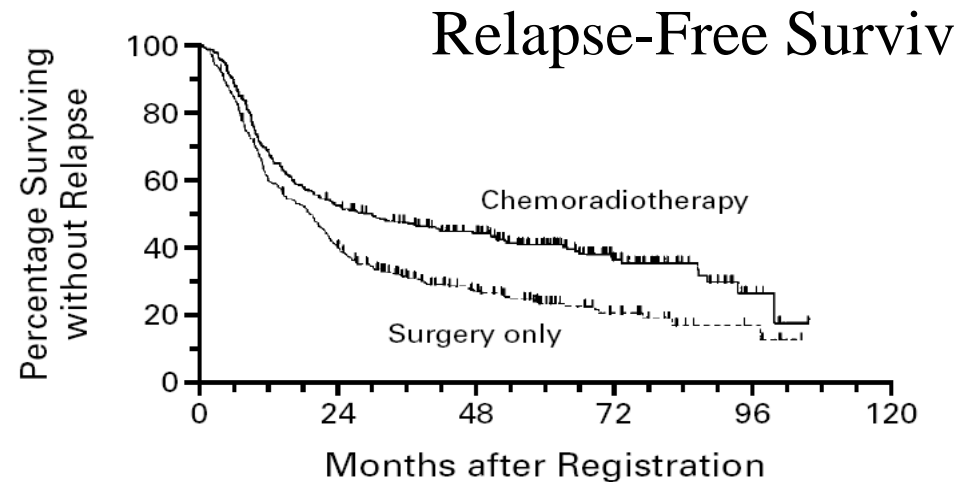
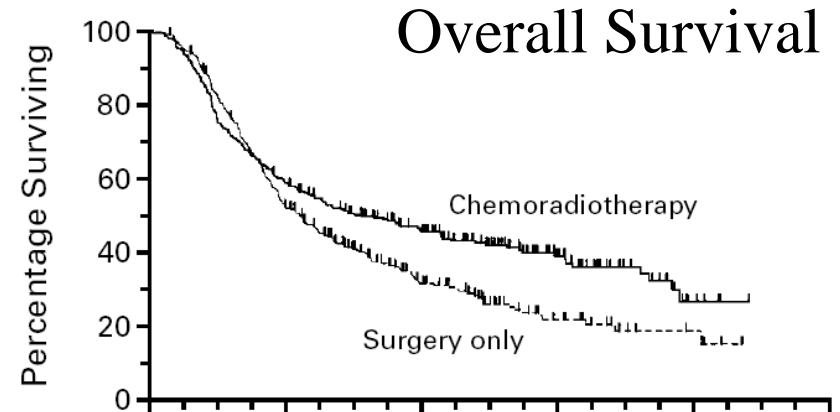




MAGIC vs MacDonald?

Adjuvant Chemo-radiation (MacDonald/0116 Protocol)

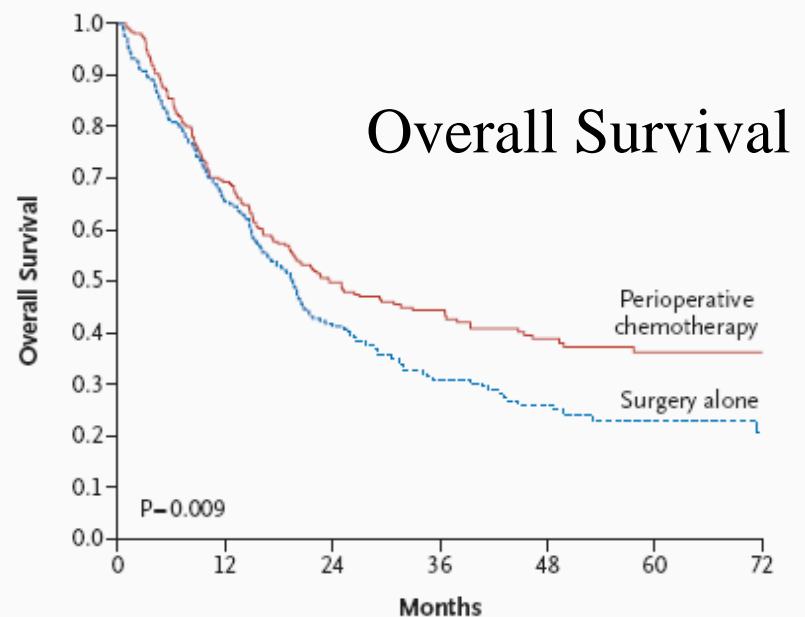
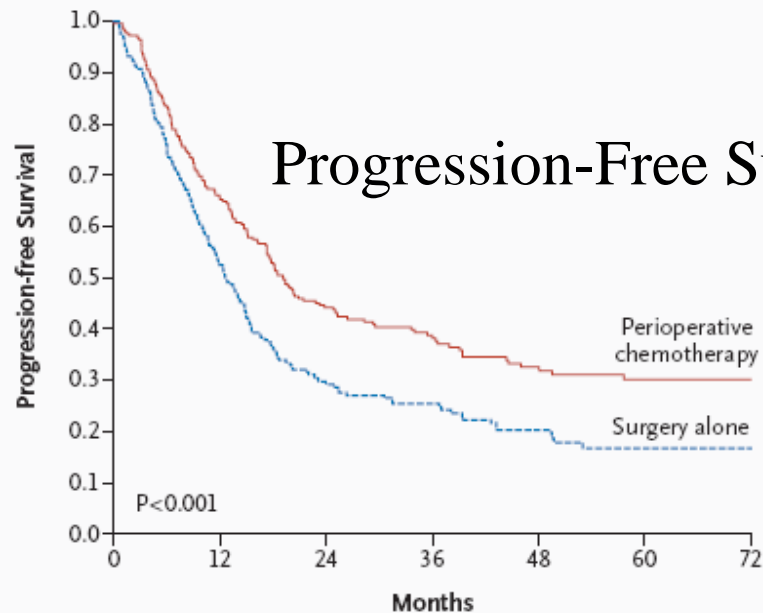
- Surgery alone vs. Surgery then 5FU + 45Gy
 - “Curative” surgery
 - Very selective trial enrollment
 - 32% needed change in XRT plan
 - 30% couldn't complete Rx
 - 1% mortality in C-XRT arm
 - D2 LN dissection was specified in protocol
 - 10% D2
 - 36% D1
 - 54% D0



Neoadjuvant Chemotherapy (MAGIC Protocol)

Surgery Alone (n=250) vs. ECF/Surgery/ECF (n=253)

- Only 41.6% completed all 6 cycles of chemo
- Only 50% had post-op chemo
- Despite lack of completion of therapy- OS and DFS benefits

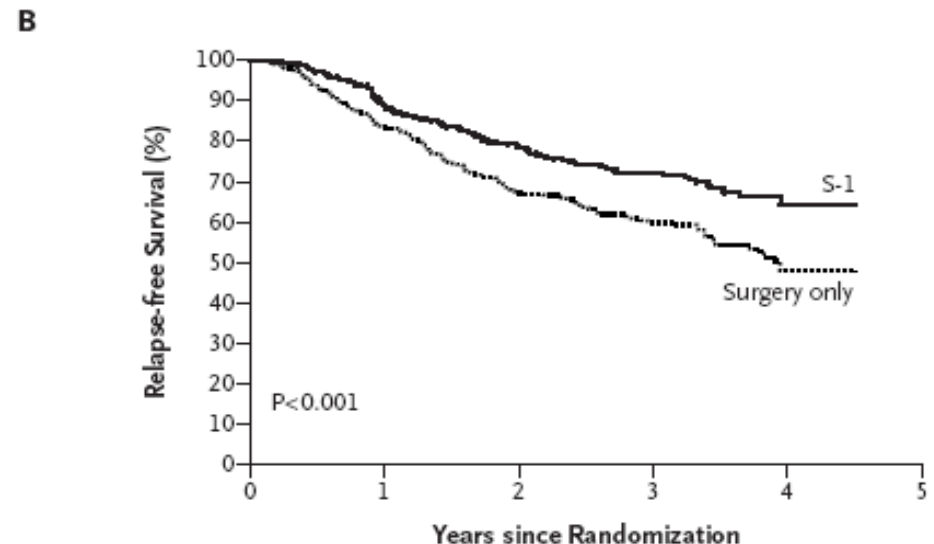
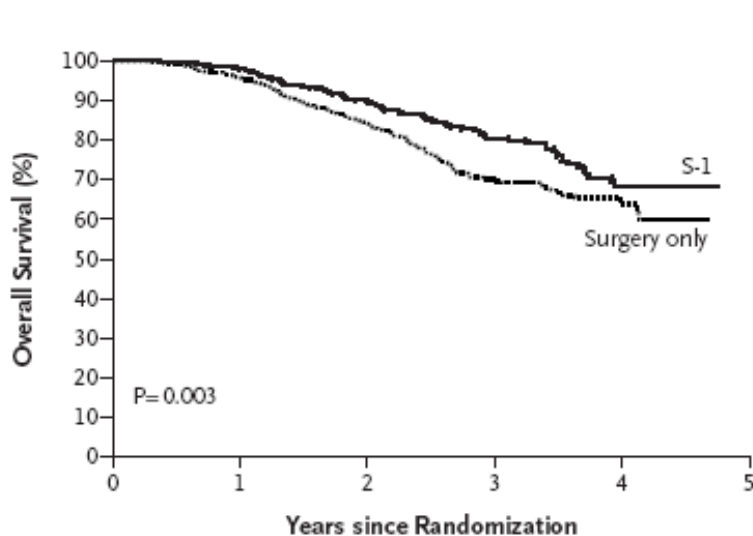




Adjuvant Chemotherapy (Japanese Protocol)

Surgery Alone vs. Surgery + chemotherapy

- 5-FU analog
- May have different responsiveness in Asian populations



Sakuramoto, NEJM, 2007

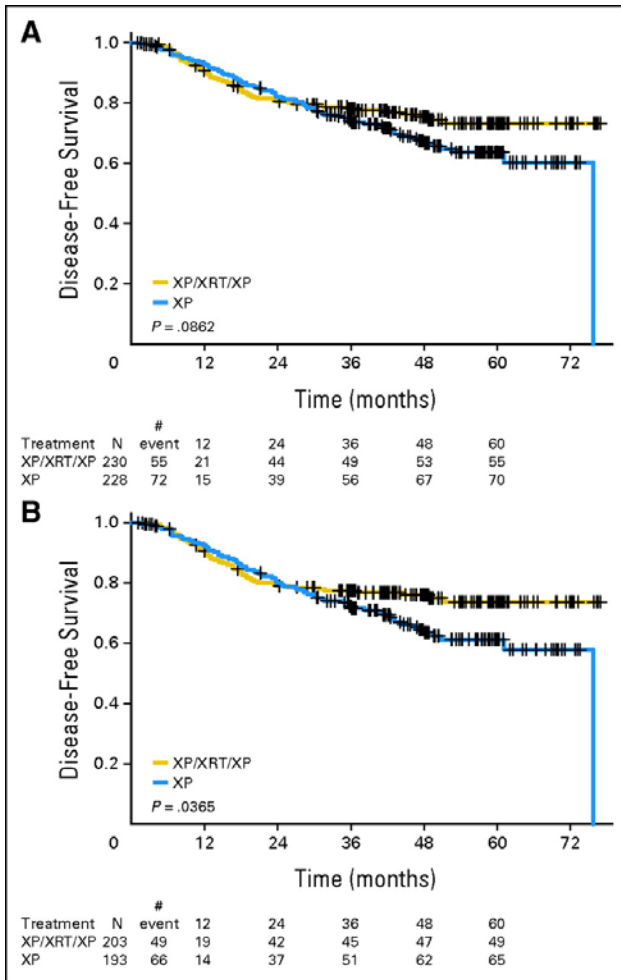


ARTIST trial-JCO 2012

- XP vs XP and Rads following D2 gastrectomy
 - 458 patients
 - Excluded Stage Ia and Ib (T2aN0), positive margins, M1 on final path, D1 dissection
 - 75% completed XP
 - 82% completed XP/XRT/XP
- “Negative Trial”



ARTIST trial—Was it “Negative”?

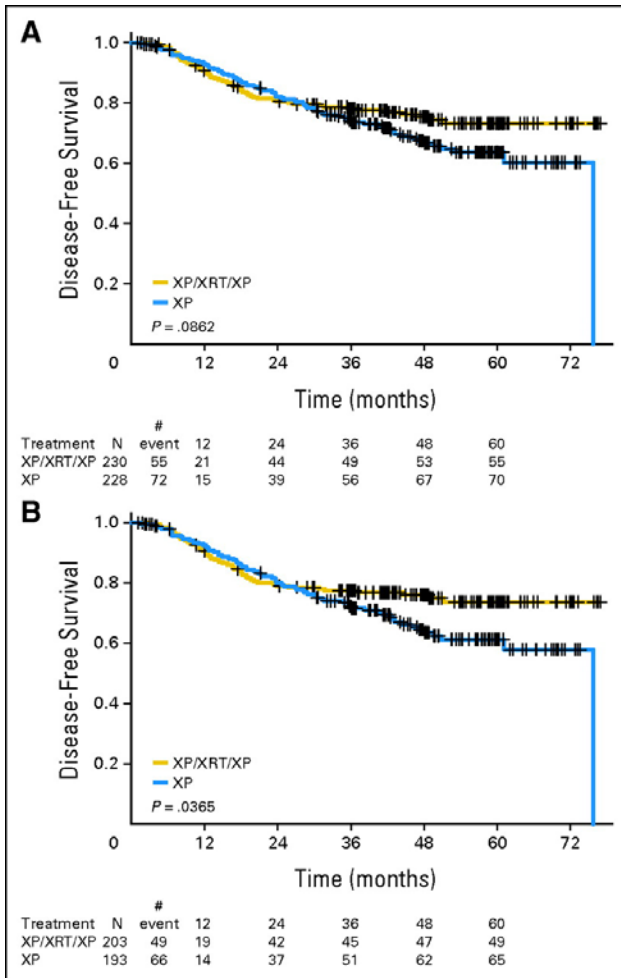




ARTIST trial—Was it “Negative”?

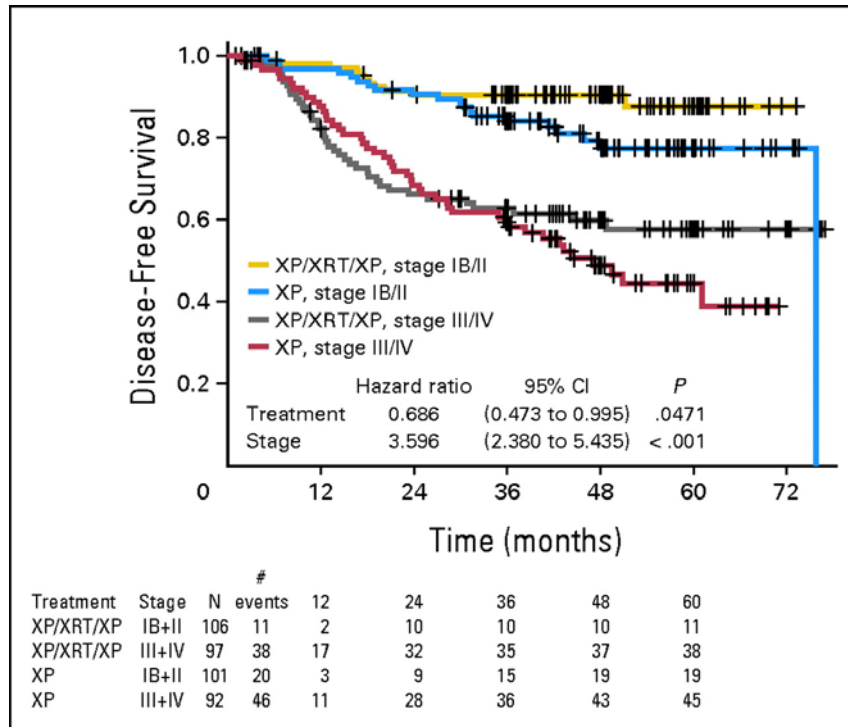
Power Calculations

- 448 patients
- 80% power to detect HR 1.450 with 2 sided alpha=0.05
- Final analysis scheduled at 227 events, but performed at 127 events
 - Fewer deaths than expected due to accrual of more patients with stage 1b/2 than expected





ARTIST trial “Negative”?



- 60% of patients were Stage 1b and 2
- Estimated 8 years of follow-up before planned analysis could occur
- ARTIST-2 trial
 - Node positive patients

So, which is the better treatment?

MacDonald

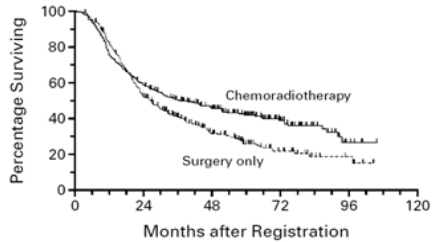
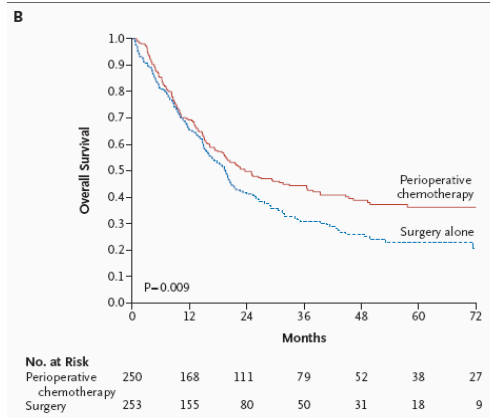
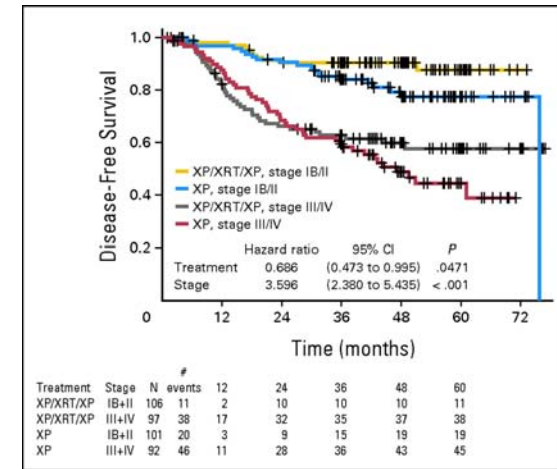


Figure 1. Overall Survival among All Eligible Patients, According to Treatment-Group Assignment. The median duration of survival was 27 months in the surgery-only group and 36 months in the chemoradiotherapy group. The difference in overall survival was significant ($P=0.005$ by a two-sided log-rank test). A total of 169 of the 281 patients in the chemoradiotherapy group and 197 of the 275 patients in the surgery-only group died during the follow-up period.

MAGIC



ARTIST



Evidence-Based Series #2-14 Version 3.2011

Neoadjuvant or Adjuvant Therapy for Resectable Gastric Cancer

G. Knight, C.C. Earle, R. Cosby, N. Coburn, Y. Youssef, K. Spithoff, R. Malthaner, R.K.S. Wong, and the Gastrointestinal Cancer Disease Site Group

A Quality Initiative of the Program in Evidence-Based Care (PEBC), Cancer Care Ontario (CCO)

Report Date: April 5, 2011

2011 Guidelines-CCO/PEBC considers them equivalent

Underscores the importance of discussing each case at a multidisciplinary tumor board



D1 vs D2?

To be, or not to be, that is the question:
Whether 'tis Nobler in the mind to suffer
The Slings and Arrows of outrageous
Fortune,
Or to take Arms against a Sea of troubles,
And by opposing end them...

William Shakespeare

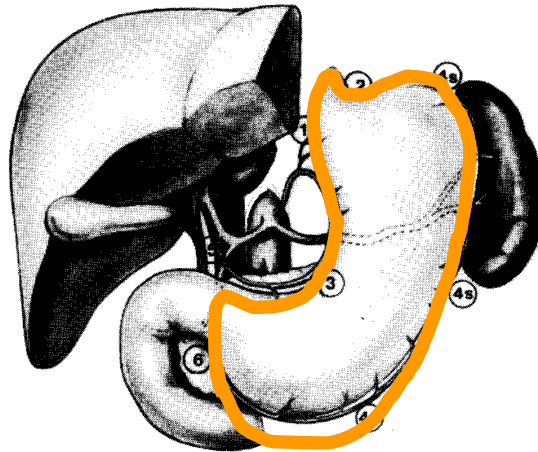


D2 LND for curative intent resection
D1 for palliative, T1, or comorbidities

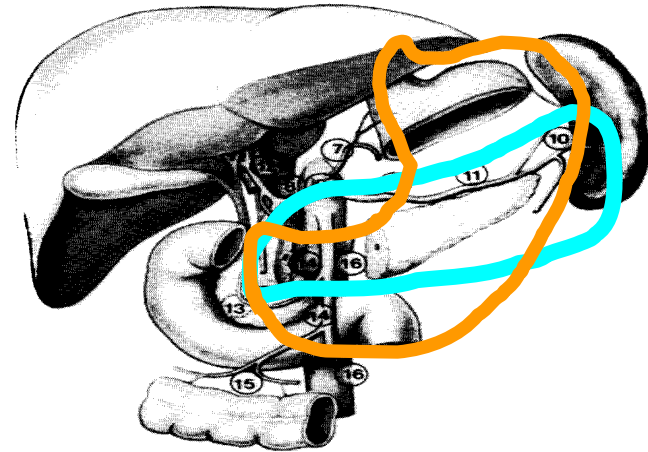


Extent of LN dissection

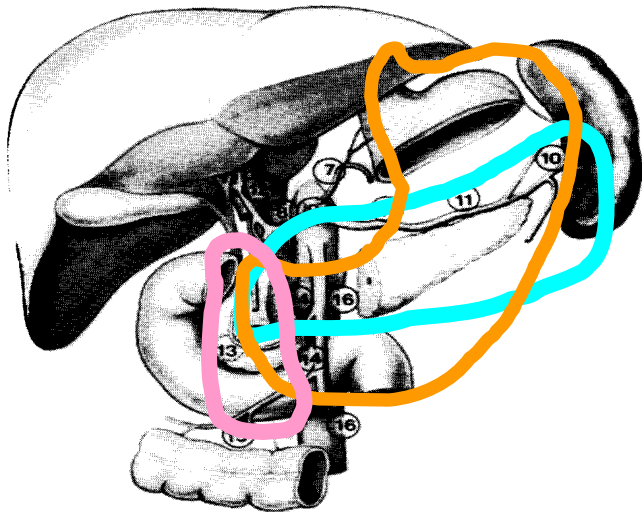
D1 Resection



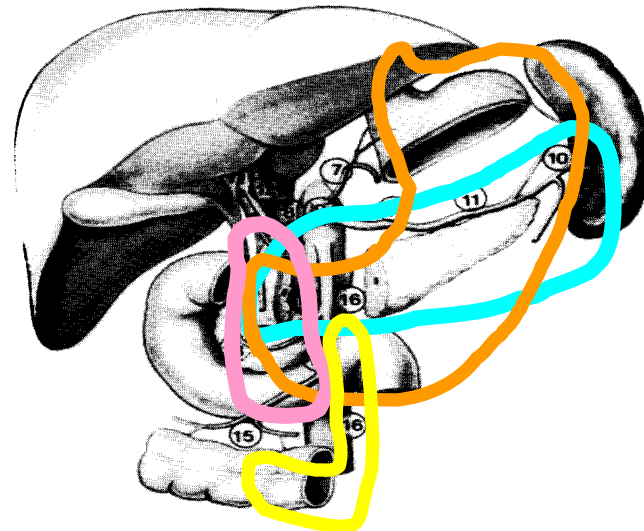
D2 Resection



D3 Resection

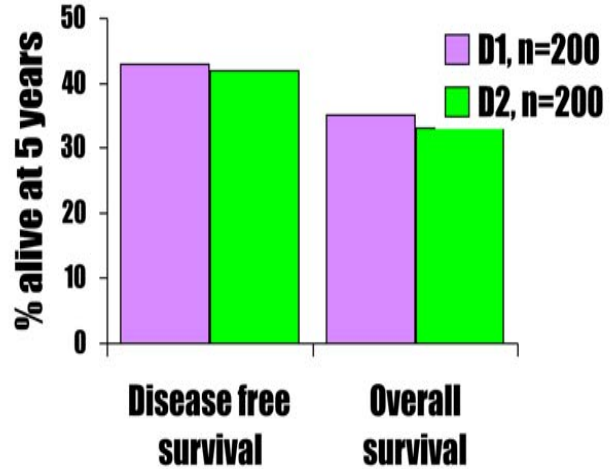
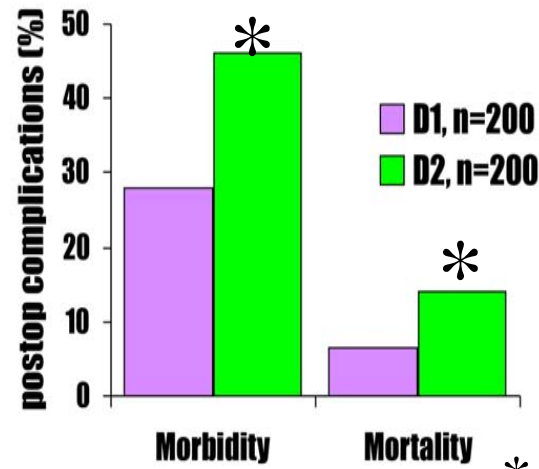


D4 Resection



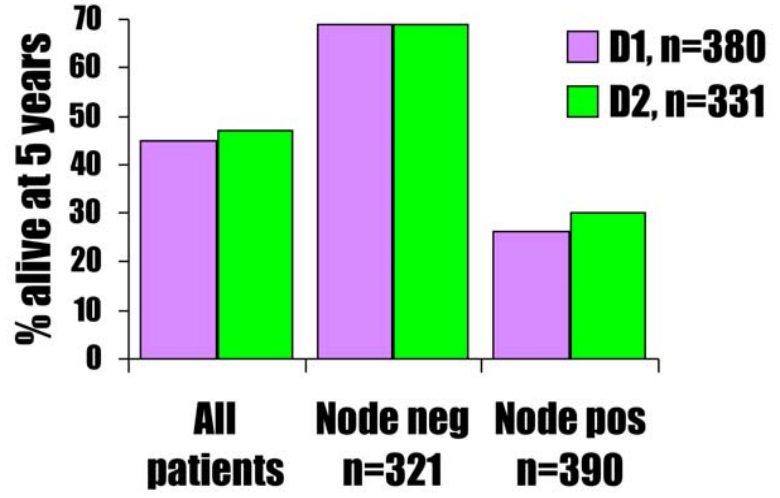
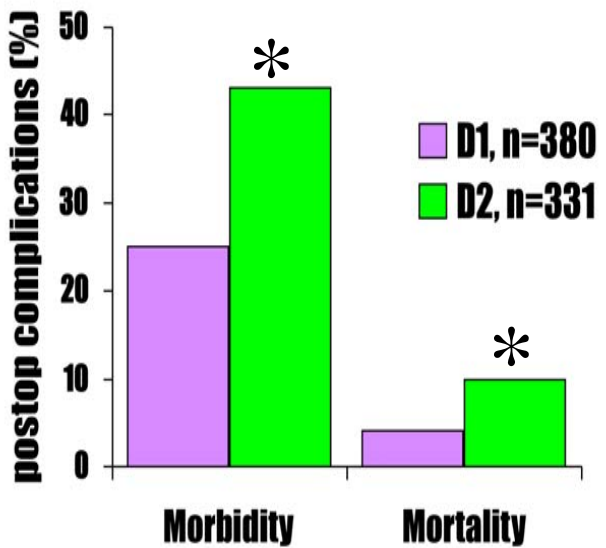


MRC RCT: D1 vs D2 Dissection Lancet 1996



* $p < 0.04$

Dutch RCT: D1 vs D2 Dissection NEJM 1999





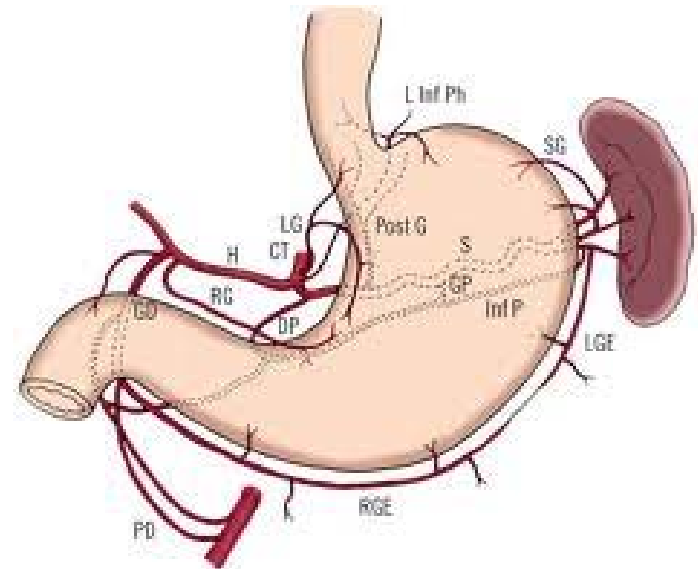
1990's D1 vs D2 trials

- Old-school resection
 - Protocol included a distal panc and splenectomy
 - Most of the complications/deaths came from the distal panc/splenectomy
- Low surgeon volumes of resection in both



1990's D1 vs D2 trials

- Old-school resection
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Morbidity and Mortality for D1 and D2 LN dissection, Deguili et al, BJS 2010

- Italian Gastric Study Group
 - 1994, phase II trial to establish safety of D2 dissection, with pancreas-preservation
 - 20.9% morbidity; 3.1% mortality
- Starting June 1998, 267 patients randomized intraoperatively
 - Spleen only removed if tumour was in the left part of the upper stomach
 - Pancreas only removed if direct invasion suspected
 - No adjuvant or neo-adjuvant therapy



Italian Phase III Trial-D1 vs D2

- 20% of registered patients refused trial due to perception that D2 was associated with better survival
- Several surgeons participating in the Phase II trial would not join the RCT (10 of the original 18 surgeons participated)



Morbidity and Mortality for D1 and D2 LN dissection, Degiuli et al, BJS 2010

Table 3 Short-term outcome

	D1 gastrectomy	D2 gastrectomy	<i>P</i> ‡	Total	<i>P</i> §
Non-surgical complications	10 of 133 (7.5)	16 of 134 (11.9)	0.223	26 of 267 (9.7)	
Surgical complications	9 of 133 (6.8)	10 of 134 (7.5)	0.825	19 of 267 (7.1)	
Total morbidity	16* of 133 (12.0)	24† of 133 (17.9)	0.178	40 of 267 (15.0)	
Total gastrectomy	6 of 35 (17)	6 of 31 (19)	0.186	12 of 66 (18)	0.401
Distal gastrectomy	10 of 98 (10)	18 of 103 (17.5)	0.137	28 of 201 (13.9)	
N0	8 of 63 (13)	12 of 57 (21)	0.220	20 of 120 (16.7)	0.563
N+	8 of 68 (12)	12 of 74 (16)	0.446	20 of 142 (14.1)	
< 70 years	10 of 88 (11)	15 of 99 (15)	0.447	25 of 187 (13.4)	0.259
≥ 70 years	6 of 45 (13)	9 of 35 (26)	0.159	15 of 80 (19)	
In-hospital mortality	4 of 133 (3.0)	3 of 134 (2.2)	0.722¶	7 of 267 (2.6)	
Total gastrectomy	3 of 35 (9)	2 of 31 (6)	1.000¶	5 of 66 (8)	0.011¶
Distal gastrectomy	1 of 98 (1)	1 of 103 (1.0)	1.000¶	2 of 201 (1.0)	
N0	1 of 63 (2)	1 of 57 (2)	1.000¶	2 of 120 (1.7)	0.459¶
N+	3 of 68 (4)	2 of 74 (3)	0.670¶	5 of 142 (3.5)	
< 70 years	2 of 88 (2)	2 of 99 (2)	1.000¶	4 of 187 (2.1)	0.431¶
≥ 70 years	2 of 45(4)	1 of 35 (3)	1.000¶	3 of 80 (4)	

Values in parentheses are percentages. *Three and †two patients had both surgical and non-surgical complications. ‡D1 *versus* D2 (χ^2 test except where indicated); §*versus* other variable in total group (χ^2 test except where indicated); ¶Fisher's exact test.



Degiuli et al, BJS, 2014

- 267 patients randomized intra-operatively
- Overall survival
 - 66.5 % vs 64.2% (p=0.70)



Degiuli et al, BJS, 2014

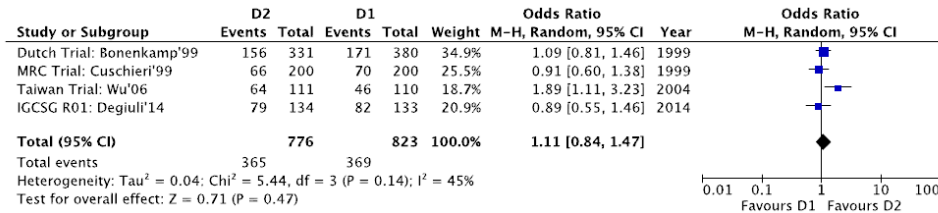
- 267 patients randomized intra-operatively
- Overall survival
 - 66.5 % vs 64.2% (p=0.70)
- Is this a 'negative' trial, or simply underpowered?
- Or, have we asked the wrong question?



Degiuli et al, BJS, 2014

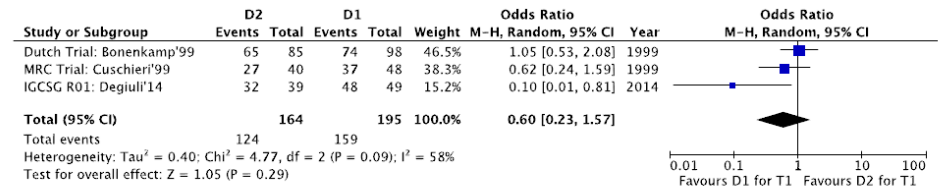
- 267 patients randomized intra-operatively
- Overall survival
 - 66.5 % vs 64.2% (p=0.70)
- Disease-specific survivals
 - T1 cancers
 - 98.0% vs 82.9% (p=0.01)
 - T2+ cancers
 - 38.4% vs 59.5% (p=0.055)

Meta-analysis of D1 vs D2 by stage, El-Sedfy et al, ASO 2014



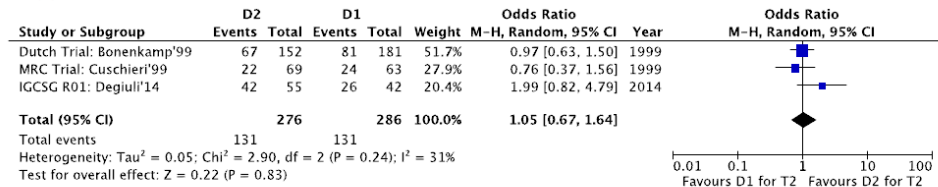
All

(a)



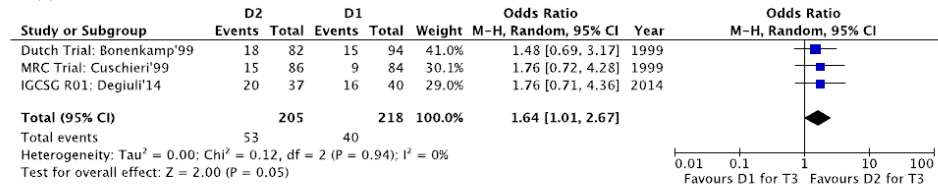
T1

(b)



T2

(c)

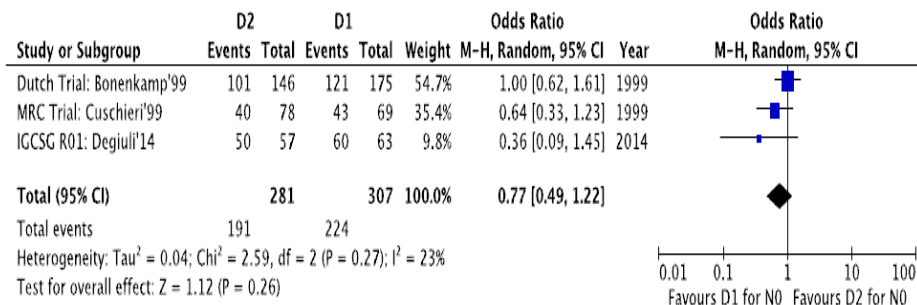


T3

(d)

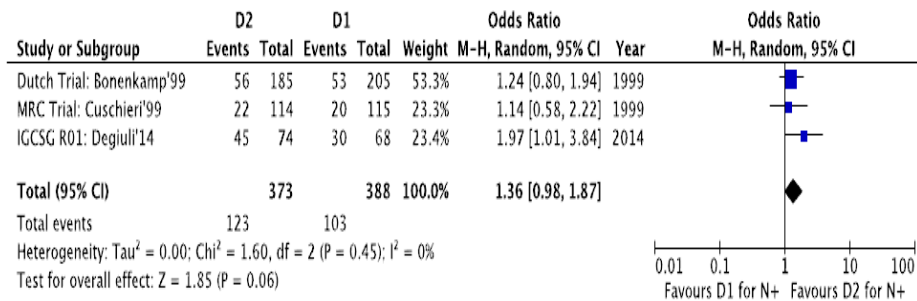
D1 D2

Meta-analysis of D1 vs D2 by stage, El-Sedfy et al, ASO 2014



Node negative

(a)



Node positive

(b)

D1 D2



TME?



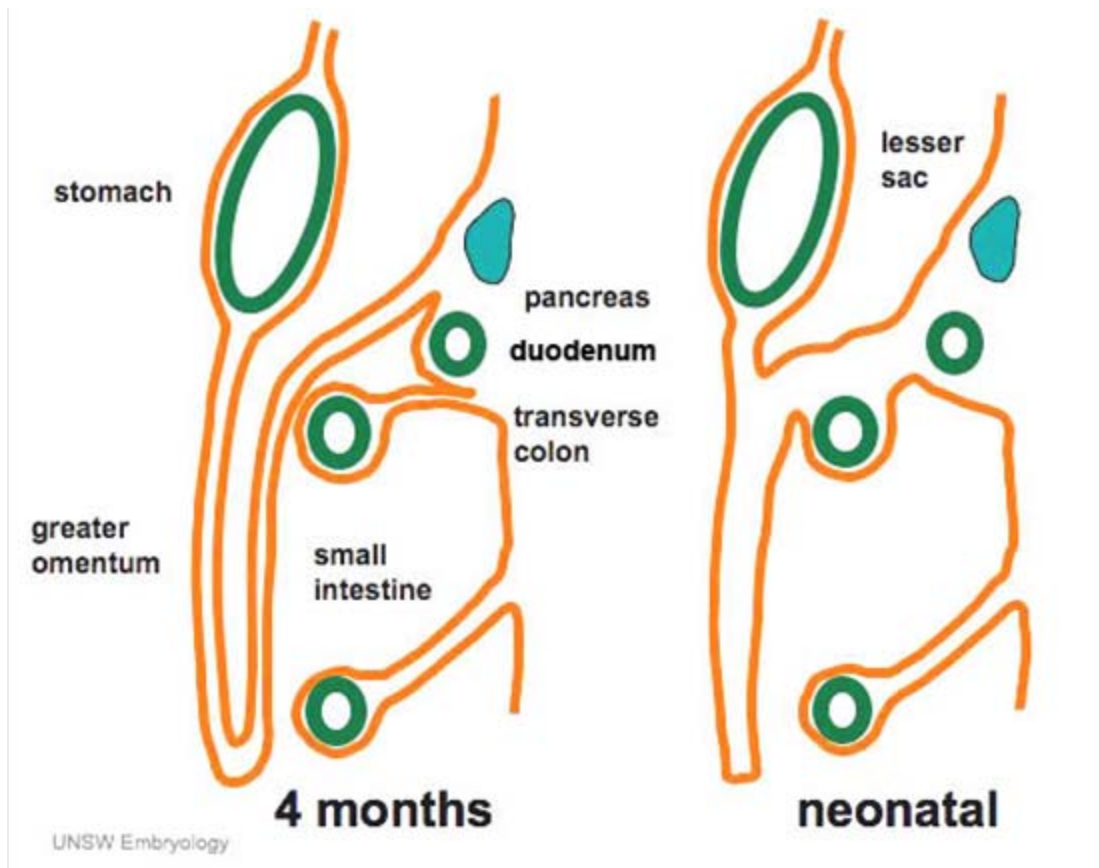
TME?

Total Mesogastric Excision



TME?

Total Mesogastric Excision



D2 LND for curative intent resection D1 for palliative, T1, or comorbidities

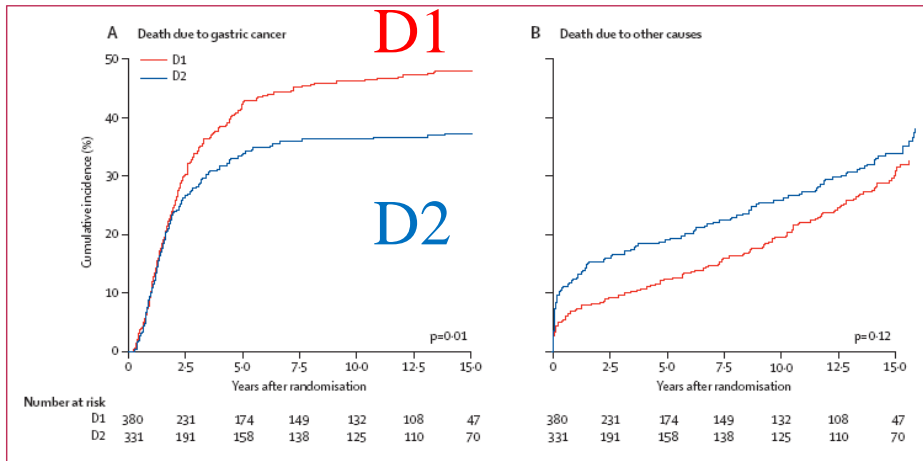


Figure 4: Cumulative risk of death due to gastric cancer and due to other causes in patients treated with curative intent (n=711). D1=standardised limited lymphadenectomy. D2=standardised extended lymphadenectomy.

Deaths due to Gastric Cancer, 15-yr Survival of Dutch Trial, Songun, Lancet Oncology 2010

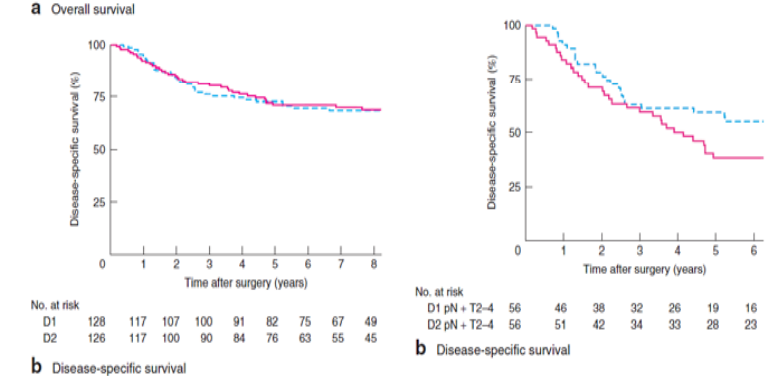
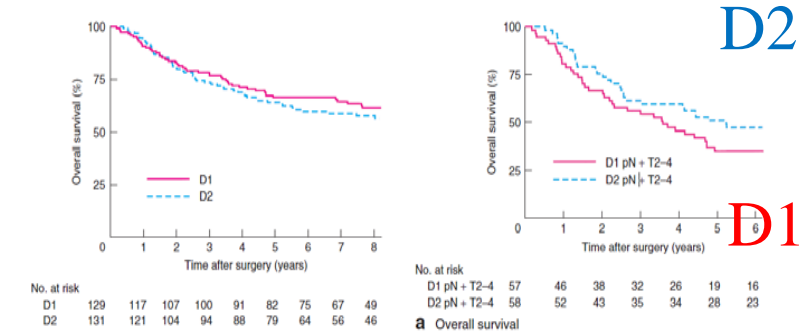


Fig. 2 Kaplan-Meier curves of a overall and b disease-specific survival for patients treated by D1 or D2 gastrectomy with curative intent. a Hazard ratio (HR) 1.19, 95 per cent confidence interval 0.82 to 1.73 ($P=0.358$, log rank test). b HR 1.02, 0.66 to 1.59 ($P=0.916$, log rank test)

Fig. 3 Kaplan-Meier curves of a overall and b disease-specific survival for patients with pathological tumour (pT) 2-4 status and positive pathological lymph node status (pN+) treated by D1 or D2 gastrectomy. a Hazard ratio (HR) 0.74, 95 per cent confidence interval 0.47 to 1.17 ($P=0.193$, log rank test). b HR 0.63, 0.36 to 1.06 ($P=0.078$, log rank test)

All Stages

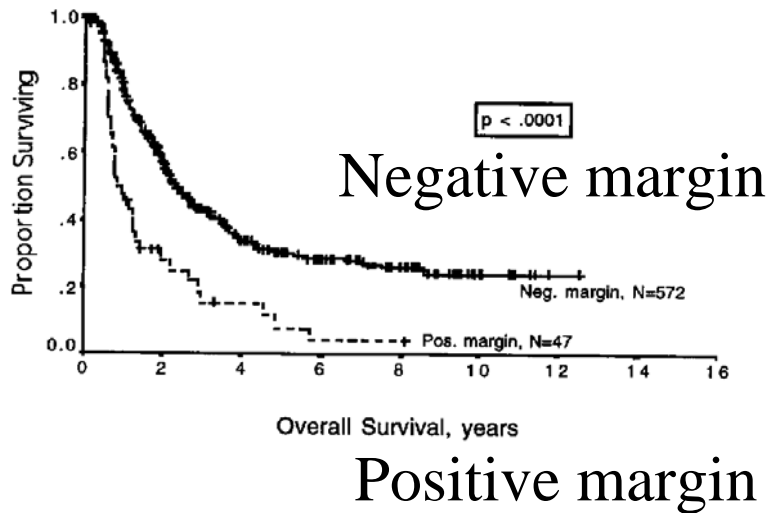
T2-4, N+ only

Italian RCT, Degiuli, BJS 2014



Surgery should aim at
achieving an R0 margin

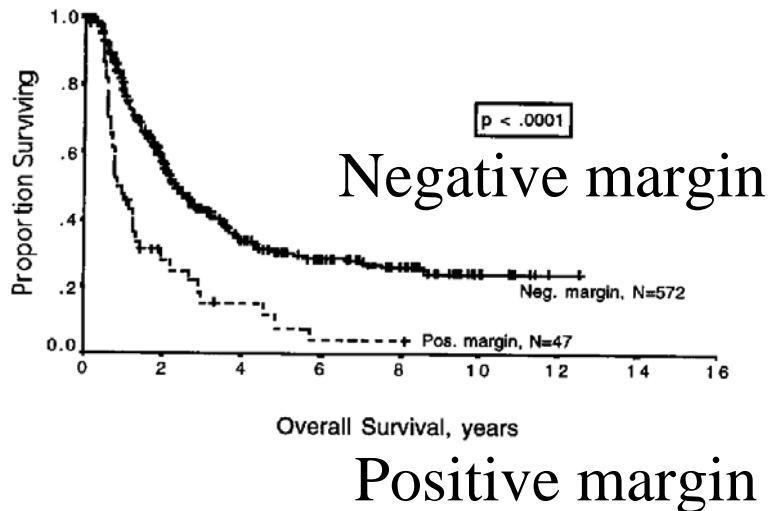
Surgery should aim at achieving an R0 margin





Surgery should aim at achieving an R0 margin

- 2005-08 Ontario
 - 2414 GC cases
 - 1476 operations
 - 904 resections
 - 691 'curative' resections
 - 610 full path data
 - 171 positive margins (28%)
 - Unpublished





Surgery should aim at achieving an R0 margin

- Caveat

Biology is King, Patient selection is Queen


- Extended resections are unlikely to benefit patients with >5 LN positive



Laparoscopic Gastrectomy

- Meta-analysis of 6 RCT
- 629 patients with EGC
 - Patients with **ADVANCED CA** were **EXCLUDED** from these trials
- Less post-operative early morbidity
 - RR=0.61, p=0.01
- Longer OR time
 - +86 minutes
- Less blood loss
 - 108 cc
- Decreased LN harvest
 - 4.88 LN
- Earlier Oral intake
 - 0.48 day
- Shorter hospital stay
 - 2.03 days
- Similar mortality (p=0.32)
 - Chen, SLEPT 2009





Another look at the Laparoscopic RCT's...

- Oncologic outcomes have not been determined

Author	N=	Stage	Cancer Location	Number of Institutions	Surgeon volume	Survival Measured?
Kitano	14/14	EGC	Distal	1	NR	No
Hayashi	14/14	EGC	Distal	1	NR	No
Lee	24/23	EGC	Distal	1	NR	No
Kim, YW	82/82	EGC	Distal	1	NR	No
Kim, HH	179/163	EGC	Distal	10	NR	No
Huscher	30/29	EGC/AGC	Distal	1	NR	Yes
Lee	24/23	EGC	Distal	1	NR	No



KLASS Trials

- KLASS-1 (Ann Surg 2015)
 - 1416 patients with STAGE I GC
 - Randomized Lap vs Open
 - Fewer complications 13% vs 20% open
 - Mostly related to decrease in wound complications
 - Similar leak and operative mortality
 - 0.6% vs 0.3% (open)



KLASS Trials

- KLASS-2
 - Randomized non-inferiority trial
 - cT2-cT4a
 - NO evidence of LN metastasis
 - Subtotal gastrectomy
 - Enrolment-1050 patients



KLASS Trials

- KLASS-3
 - T1N0, T1N1, T2N0
 - Upper lesions/Total gastrectomy
 - Phase II
 - 164 patients enrolled Oct 2012-14



Future ways to improve survival?

Future ways to improve survival?

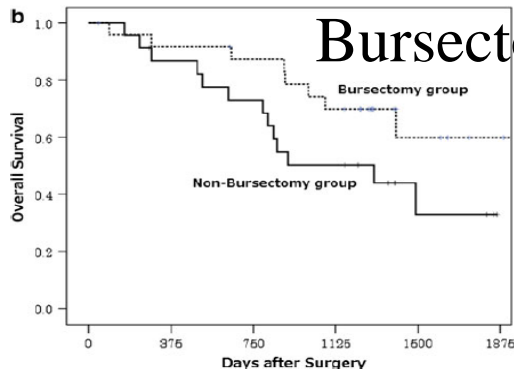
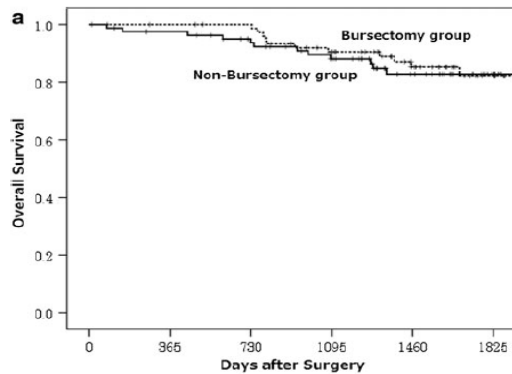


Fig. 4 Overall survival in patients with serosa-negative tumors (a) and those with serosa-positive tumors (b) by treatment group

- Bursectomy of Lesser Sac
 - Underpowered; Trial closed prematurely due to introduction of S-1 adj chemo

JCOG 1001

- T3/T4 cancers
- 1000 patients
- June 2010-2014



JCOG 0110

Adenoca. in upper 1/3 stomach
T2/T3/T4, N0/N1/N2, Not greater curvature,
Curative op, Lavage cytology (-)

Intra-op. Randomization

Group A (Splenectomy)

Total gastrectomy, D2

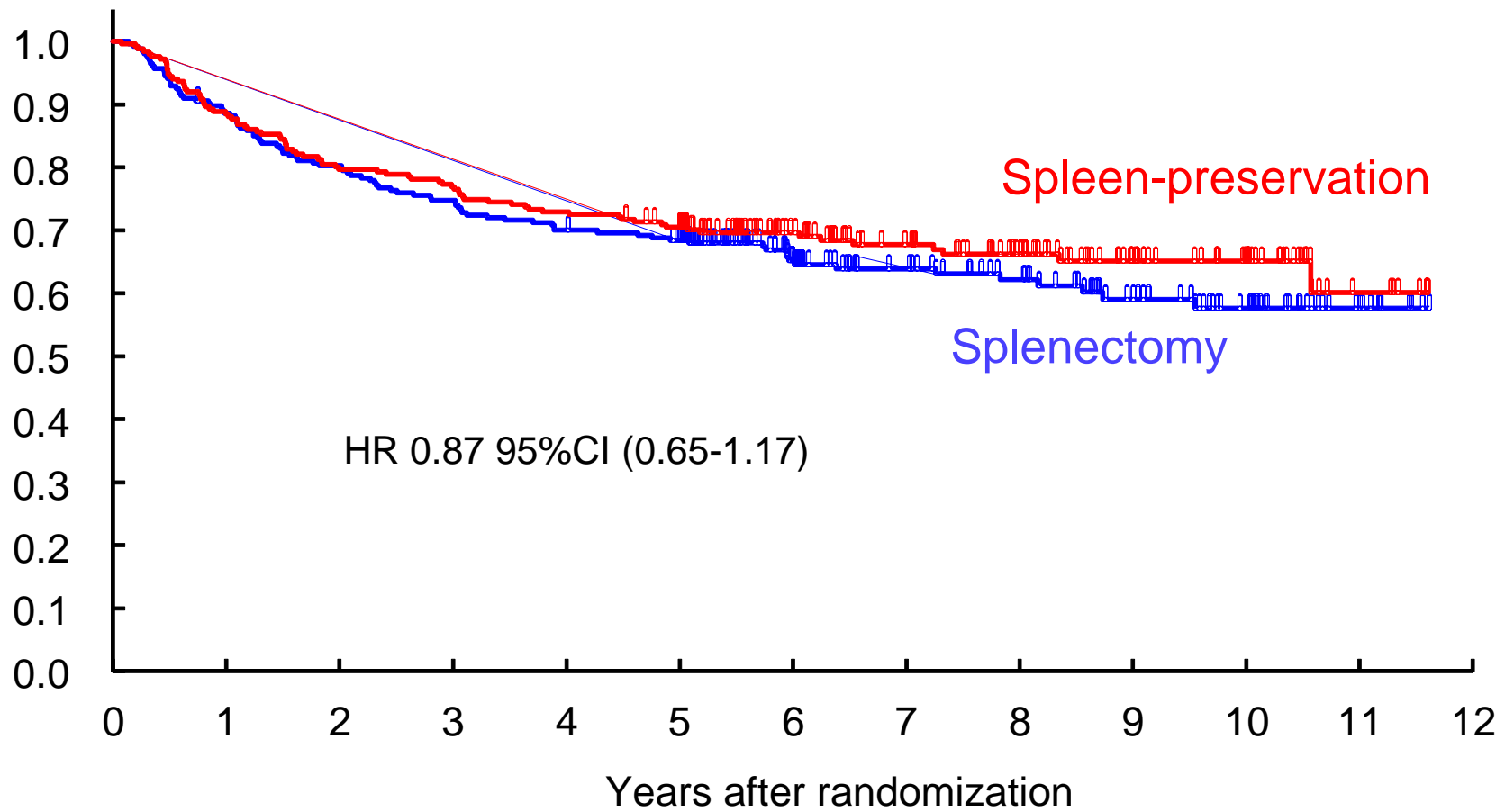
Group B (Spleen preserved)

Total gastrectomy, D2

Observation
(Adjuvant with S-1 for pStage II/III)



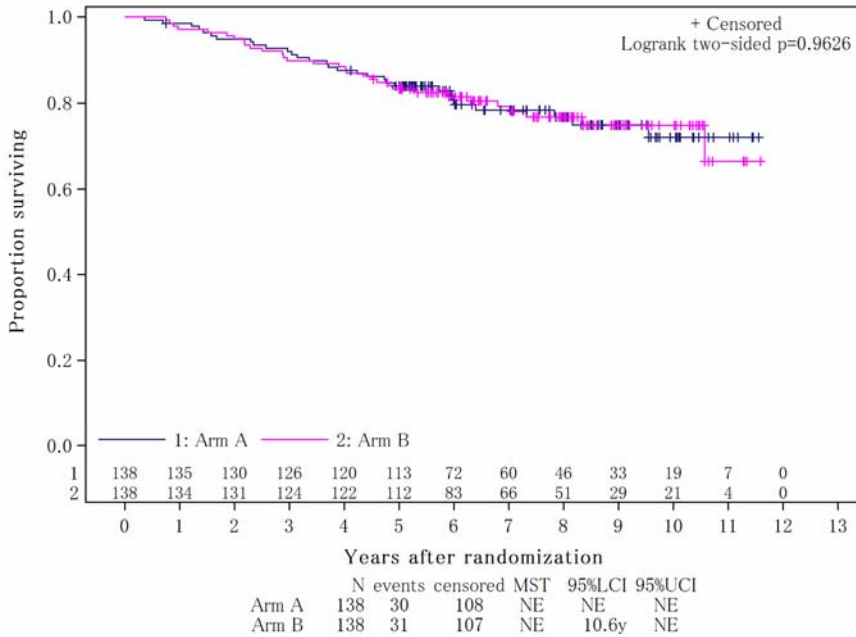
Relapse-free Survival: All 505 cases



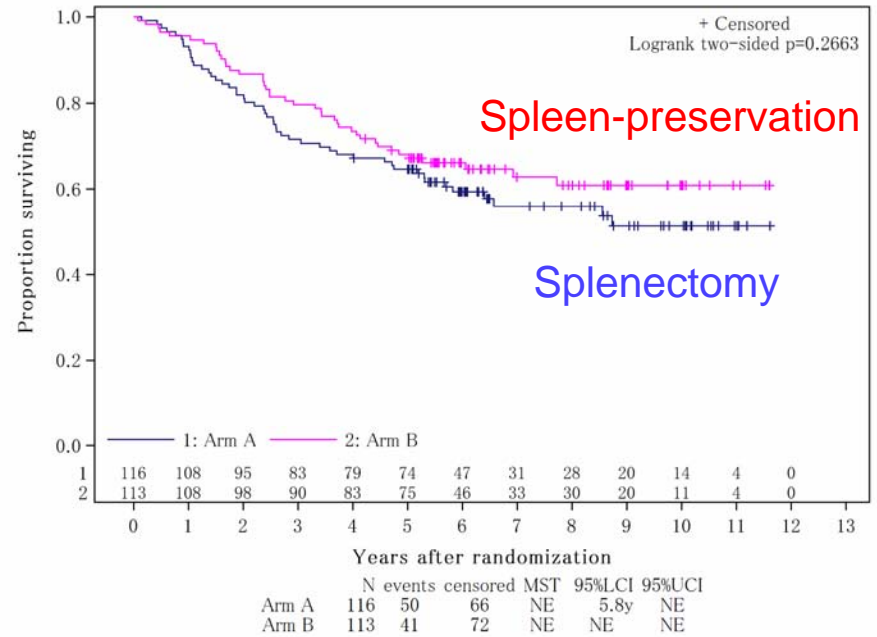


Overall Survival Surgical T

T2 (MP/SS)
(N=276)



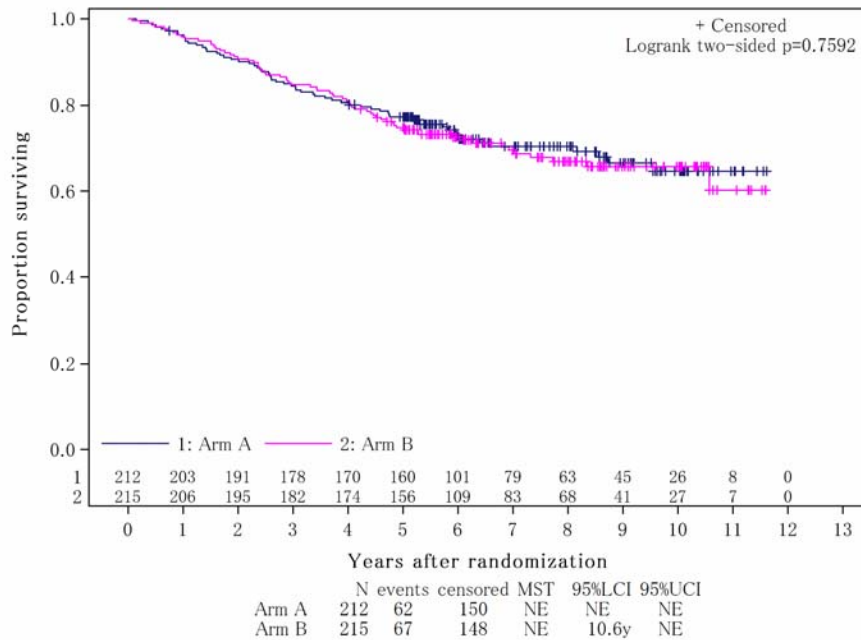
T3-4 (SE/SI)
(N=229)



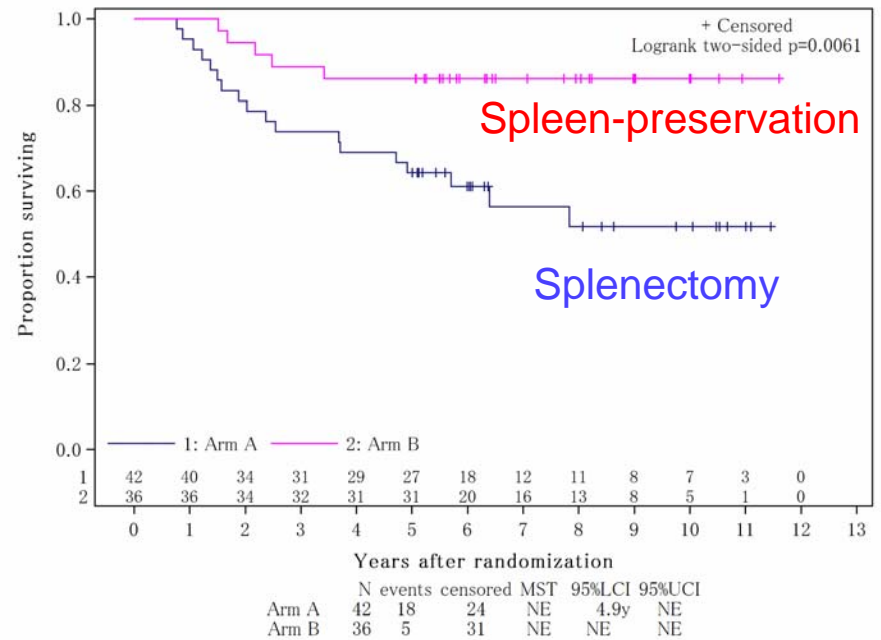
Overall Survival

Primary tumor location

“U” (N=427)



“M” or “L” (N=78)

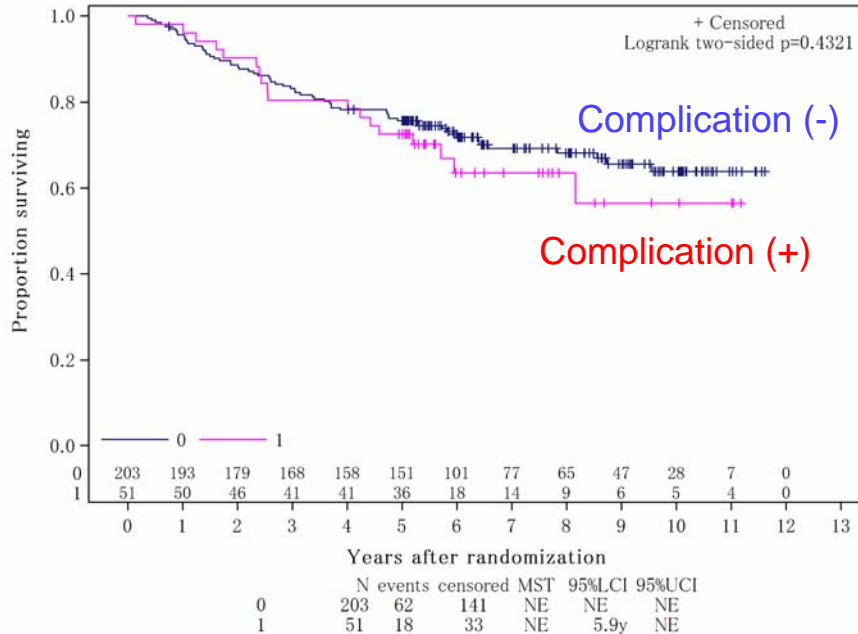




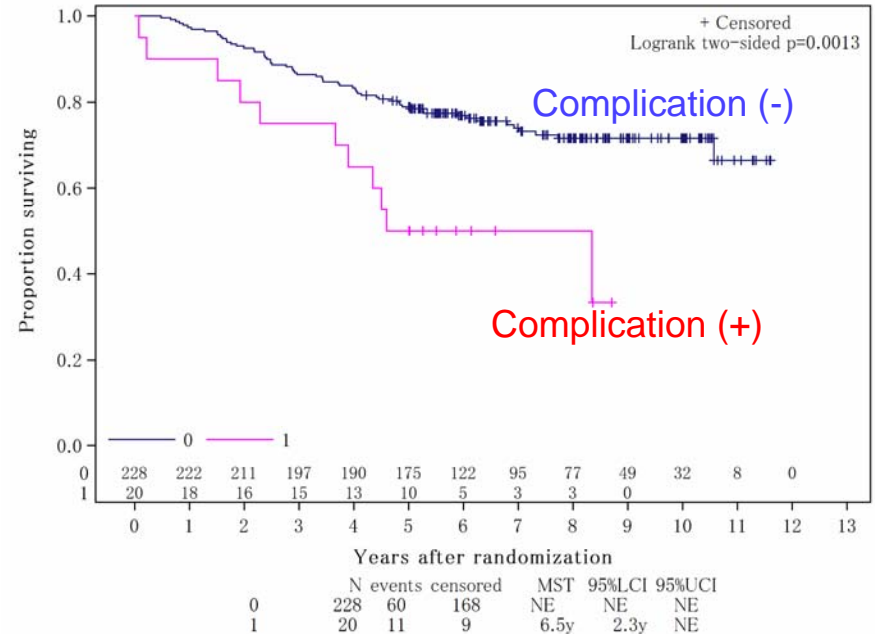
Overall Survival: Post-op Complications

Infectious complications (N=71)

Splenectomy
(N=254)



Spleen-preservation
(N=248)





Recommendations

- All patients should be presented at MCC
- CT Chest, Abdo, Pelvis for staging
- Laparoscopy for more advanced cancers
- D2 LND for $>T1N0$, curative intent
 - D1 for EGCT1, co-morbidity, palliation
- Negative margins
 - Extended resections useful only if <5 LN
- Don't perform splenectomy unless direct invasion



Questions?



Management of Stage IV Disease

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Hepato-biliary and Surgical Oncology
Sherif and MaryLou Hanna Chair in
Surgical Oncology Research
Associate Professor-
University of Toronto



In M1 cases, non-surgical management is preferred for patients without symptoms





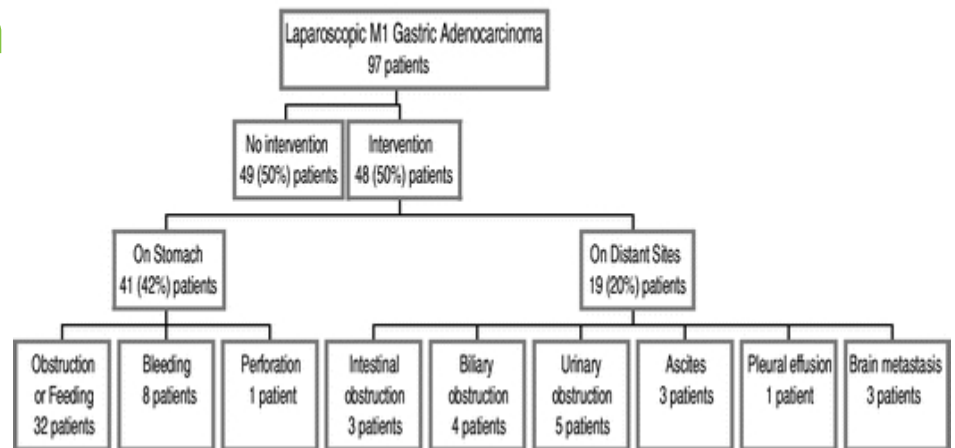
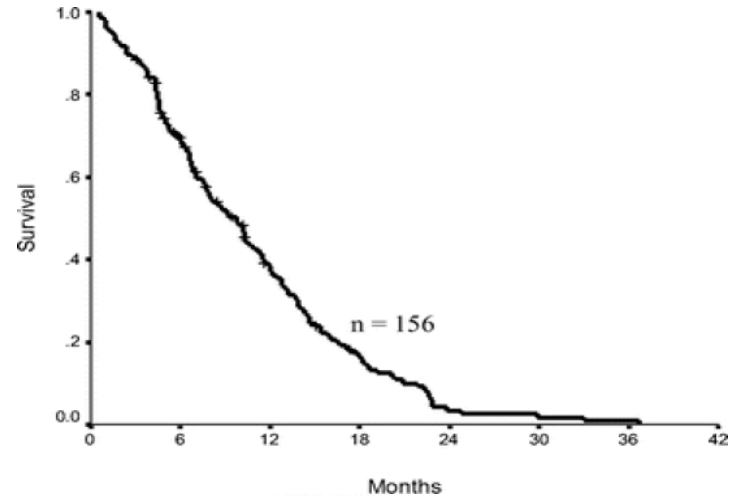
In M1 cases, non-surgical management is preferred for patients without symptoms

- Systematic Review
- 1939 abstracts
- 59 articles studying outcomes in Stage IV patients
- Only 3 were prospective
- Highly variable definitions
 - “Unresectable” “advanced” “incurable” “palliative”
- Up to 45% morbidity and 21% mortality
- Large patient selection bias



In M1 cases, non-surgical management is preferred for patients without symptoms

- MSKCC experience
 - 1993-2002
 - 165 patients M1 + at DL
 - 97 followed at MSKCC
 - Median interval from DL to procedure: 4 m (range 1-35 m)
 - Median survival from first intervention to death: 3 m (range 1-28m)





In M1 cases, non-surgical management is preferred for patients without symptoms

TABLE 1. Procedures on the GEJ or Stomach for Relief of Obstruction or Feeding

Click on image to enlarge

TABLE 1. Procedures on the GEJ or Stomach for Relief of Obstruction or Feeding

	Primary Tumor Location					
	Total	GEJ	Proximal	Body	Antrum	Whole
No. of patients	97	28	16	17	18	18
No. (%) of patients who had intervention	32 (32)	9 (32)	5 (31)	3 (18)	7 (39)	8 (44)
No. of procedures	53	17	7	6	12	11
Type of procedure						
Self-expanding stent	6	6	—	—	—	—
Endoscopic dilatation/laser	11	5	2	1	—	3
External beam radiation	1	1	—	—	—	—
PEG	21	4	3	3	6	5
PEJ	7	1	1	—	3	2
Laparotomy-gastrojejunostomy	3	—	—	1	2	—
Laparotomy-gastric/jejunal tube	4	—	1	1	1	1

GEJ indicates gastroesophageal junction; PEG, percutaneous endoscopic gastrostomy; PEJ, percutaneous endoscopic jejunostomy.

• Conclusion

- “non-curative resection is unlikely to alter disease progression, and pre-emptive surgical palliation is unnecessary”



PEBC/CCO: In M1 cases, non-surgical management is preferred for patients without symptoms

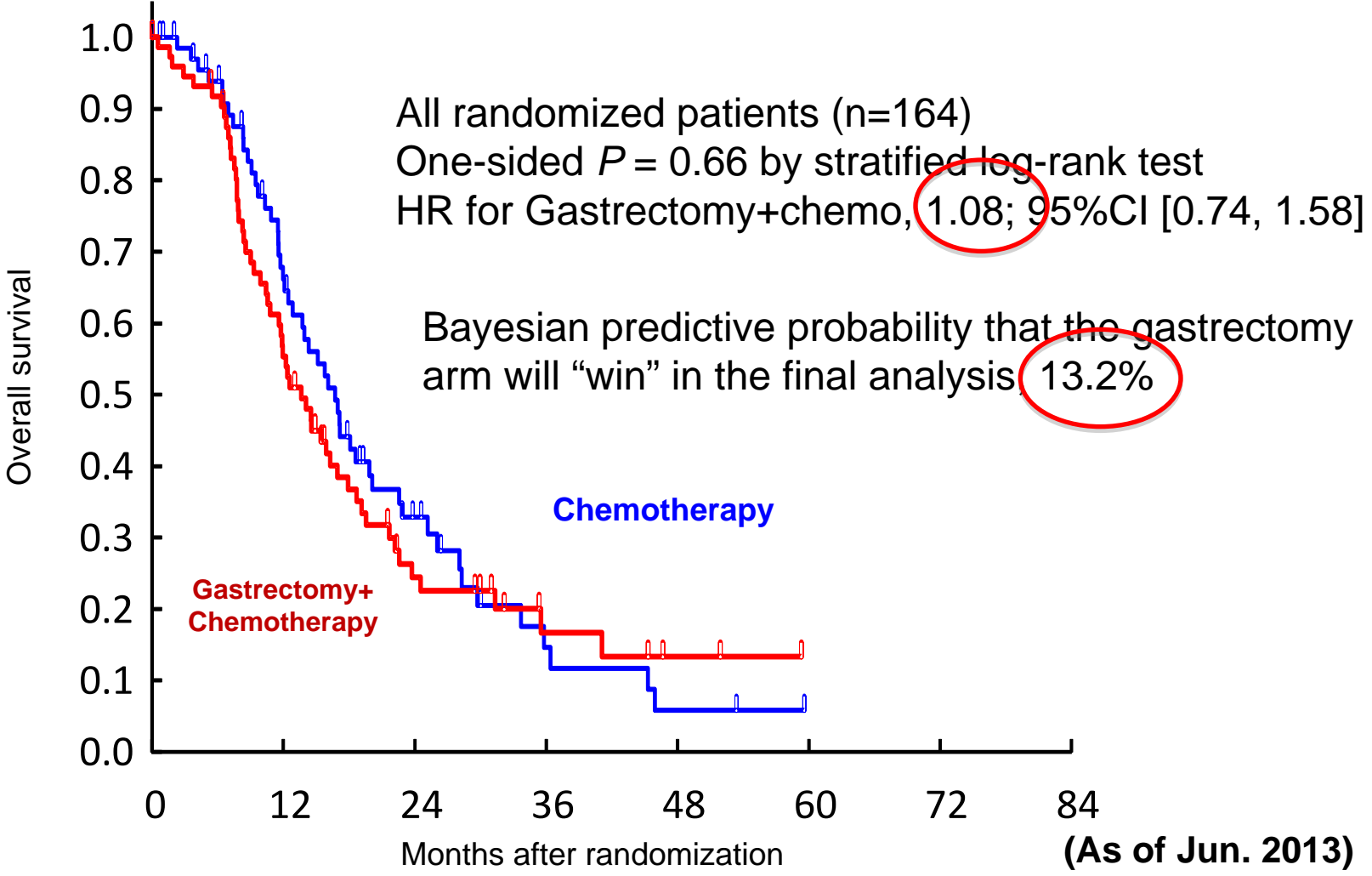
- REGATTA TRIAL-ASCO 2015
 - RCT
 - 330 patients with ‘limited’ metastatic disease
 - Chemo vs Surgery->chemo
 - S-1+Cisplatin



In M1 cases, non-surgical management is preferred for patients without major symptoms

- REGATTA TRIAL-ASCO 2015
 - RCT
 - 330 patients with ‘limited’ metastatic disease
 - Chemo vs Surgery->chemo
 - S-1+Cisplatin
 - Trial stopped by DSMB at first interim analysis

Overall Survival (interim analysis)



Early postoperative complications

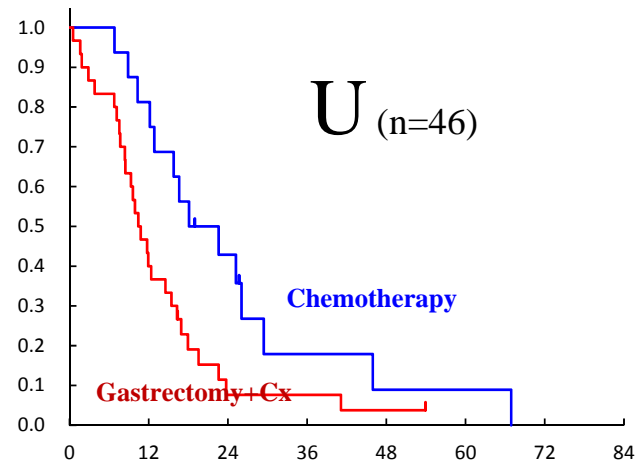
%Grade 2-4	Gastrectomy arm (n=87)*
Infection with normal ANC: wound	5.7%
Obstruction: GI-small bowel	2.3%
Pleural effusion	1.1%
Ileus	1.1%
Fever	3.4%
OVERALL	16.1% <small>*All operated pts</small>

Late adverse reactions/morbidities

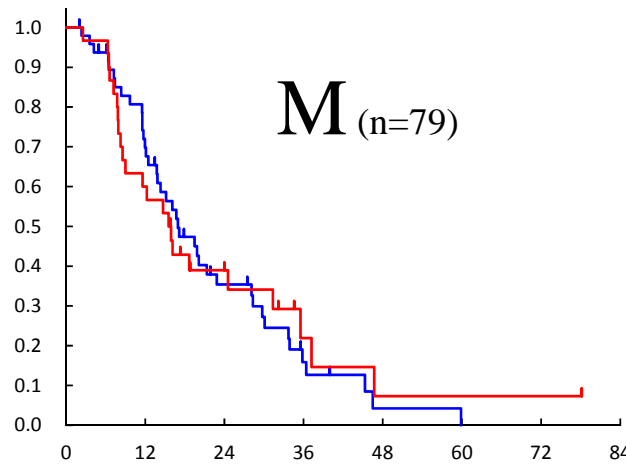
	Chemo (n=73)	Gastrectomy (n=87)*
Grade 2/3/4	6.8%	16.1%
Grade 3/4	0%	9.2%
Grade 4	0%	0%

* All operated pts

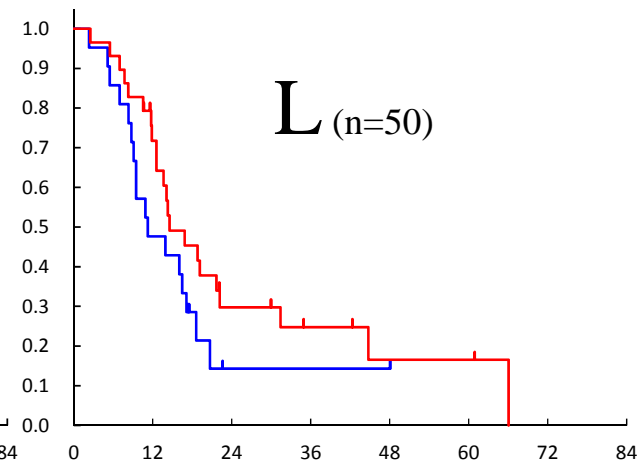
Subgroup analyses by location of primary tumor



HR for Gastrectomy arm*,
2.23, 95%CI (1.14-4.37)



HR for Gastrectomy arm*,
0.95, (0.57-1.59)



HR for Gastrectomy arm*,
0.63 (0.33-1.21)

* unstratified Cox proportional hazard model

Number of Implemented Cycles of Chemotherapy

Tumor Location	Median cycles [IQR] Chemotherapy	Median cycles [IQR] Gastrectomy+Cx
U	6 [4-8] (n=16)	3 [2-5] (n=30)
M	6 [4.5-8] (n=49)	5 [3.5-8] (n=30)
L	4 [2-6] (n=21)	6 [3-8] (n=29)
Total	6 [3-8] (n=74)	5 [3-7] (n=76)

Summary

1. Gastrectomy failed to improve overall survival in AGC with single incurable factor
2. Gastrectomy was safely performed with no mortality but associated with an increase of late AEs and morbidities.
3. Gastrectomy was associated with more frequent and severe chemotherapy related AEs, especially for U lesion or total gastrectomy.
4. In the subgroup analysis, patients with distal gastric cancer had an OS benefit. A second study only in patients with distal gastric cancer may be considered



Questions?