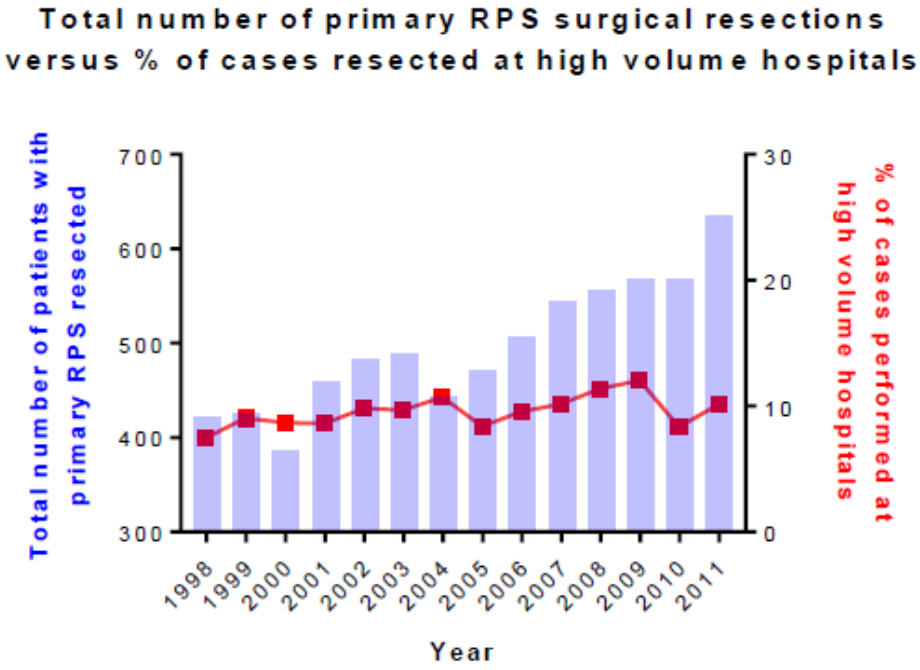
Quoi de neuf ?
Chirurgie viscérale/tissus mous

Sylvie Bonvalot

institutCurie

Cancer

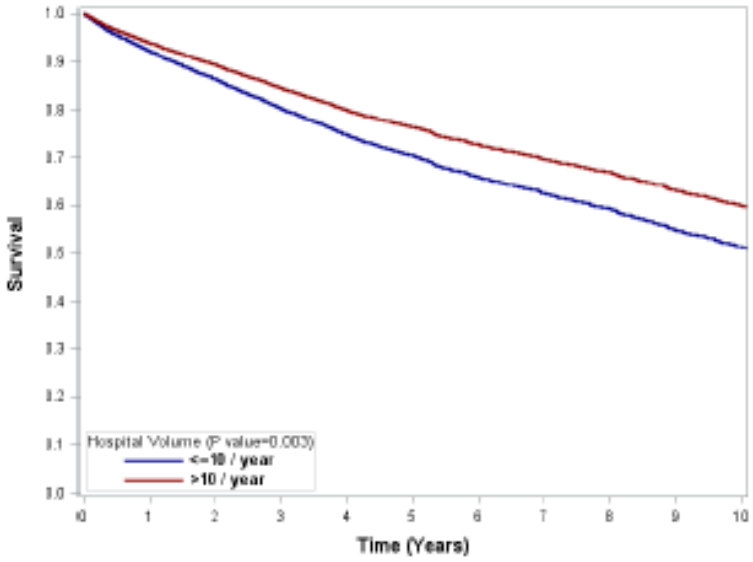
Treatment at Low Volume Hospitals is Associated with Reduced Short- and Long-Term Outcomes for Patients with Retroperitoneal Sarcoma



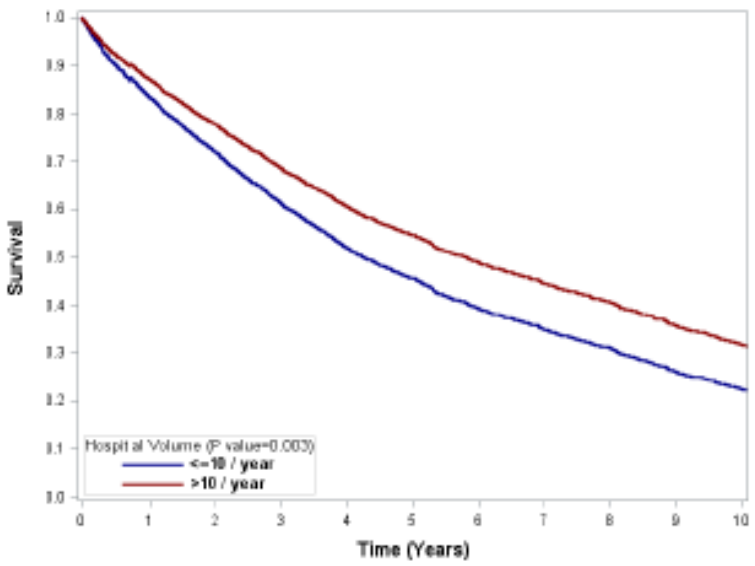
- SEER database
- 1998-2011
- 6950 pts RPS
- HVC >10 cases/year
- LVC ≤10 cases/year

LVC n = 1127 (99.6%)
Median cases/an in LVC n=1
HVC n = 4 !! (ont traité 10% des pts)

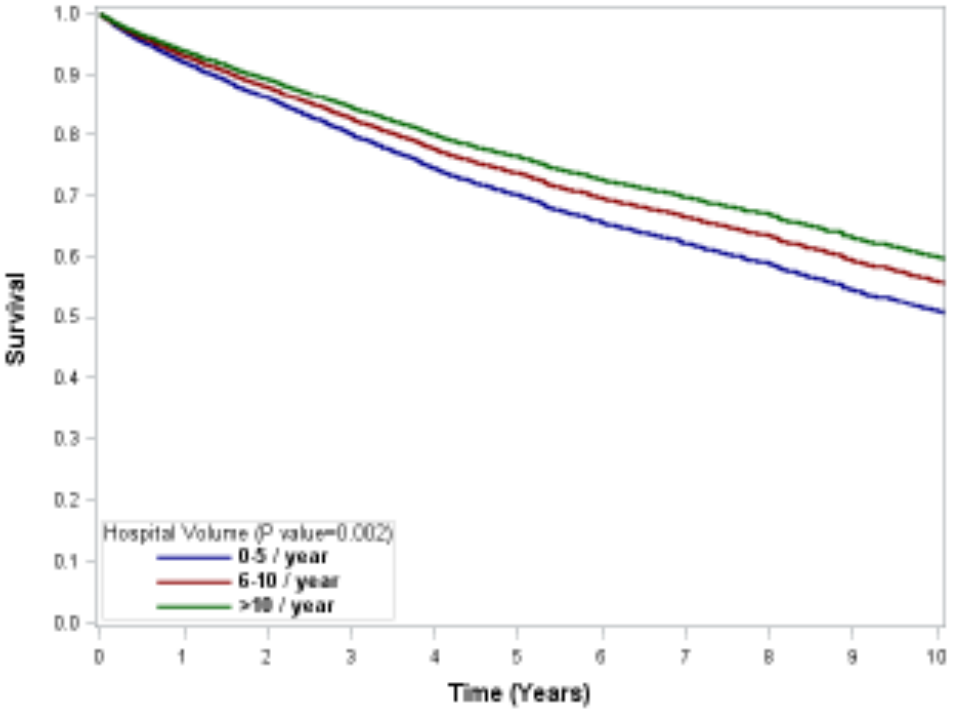
In press

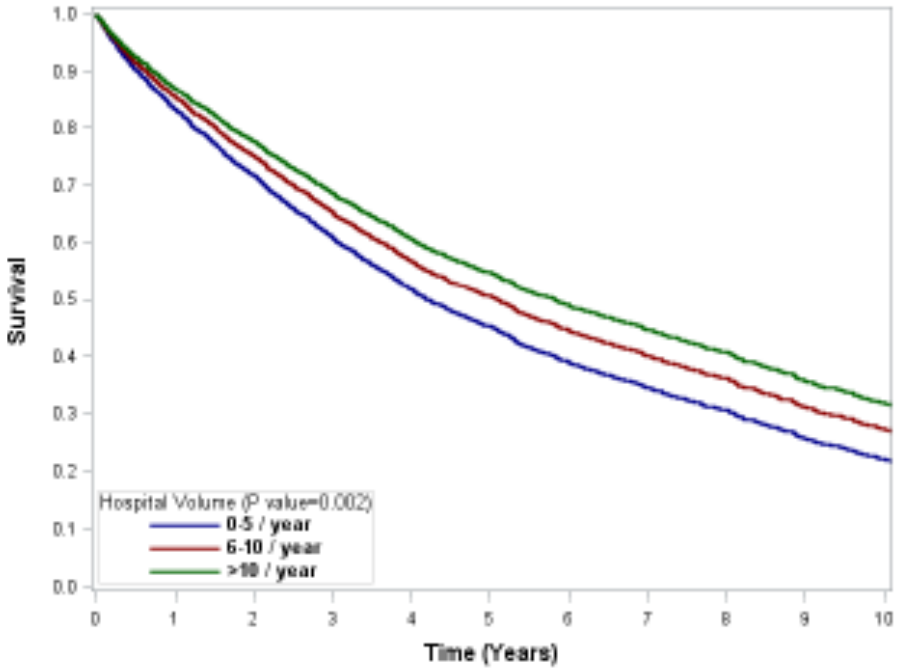


Low grade



Intermediate/highgrade


Survival
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0
1
2
3
4
5
6
7
8
9
10
Time (Years)
Hospital Volume (P value=0.002)
0-5 / year
6-10 / year
>10 / year


Survival
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0
1
2
3
4
5
6
7
8
9
10
Time (Years)
Hospital Volume (P value=0.002)
0-5 / year
6-10 / year
>10 / year

RESAR study (Primary RPS): inclusions in 2017 in US/Eu/Australia
12 Centers > 10/y

INT Milan	67	Ottawa (Can)	15
RMH London	64	LMU Munich	15
Curie Paris	39	Emory Atlanta (US)	12
Birmingham	38		
MSH Toronto (Can)	31		
Warsaw	31		
Moffit Tampa (US)	29		
BWH-DFCI Boston (US)	24		
Mac Callum Melbourne (Au)	21		

TARPSWG

Survival impact of surgical management in reference centers for retroperitoneal sarcoma (RPS): A nationwide study of French Sarcoma Group FSG- GETO and NETSARC

Sylvie Bonvalot (1), Elodie Gaignard (1), Eberhard Stoeckle (2), Charles Honoré (3), Pierre Meeus (4), Nicolas Penel (5), Gwennael Ferron (6), Nelly Firmin (7),

Florence Duffaud (8), Antonio Di Marco (9), Emmanuelle Bompas (10), Maria Rios (11), François Bertucci (12), Nicolas Isambert (13), Antoine Italiano (2),

Isabelle Laure Ray-Coquard (4), Axel Le Cesne (3), Jean Michel Coindre (2),

Francoise Ducimetiere (4), Jean-Yves Blay (4)

ASCO 2018

Results

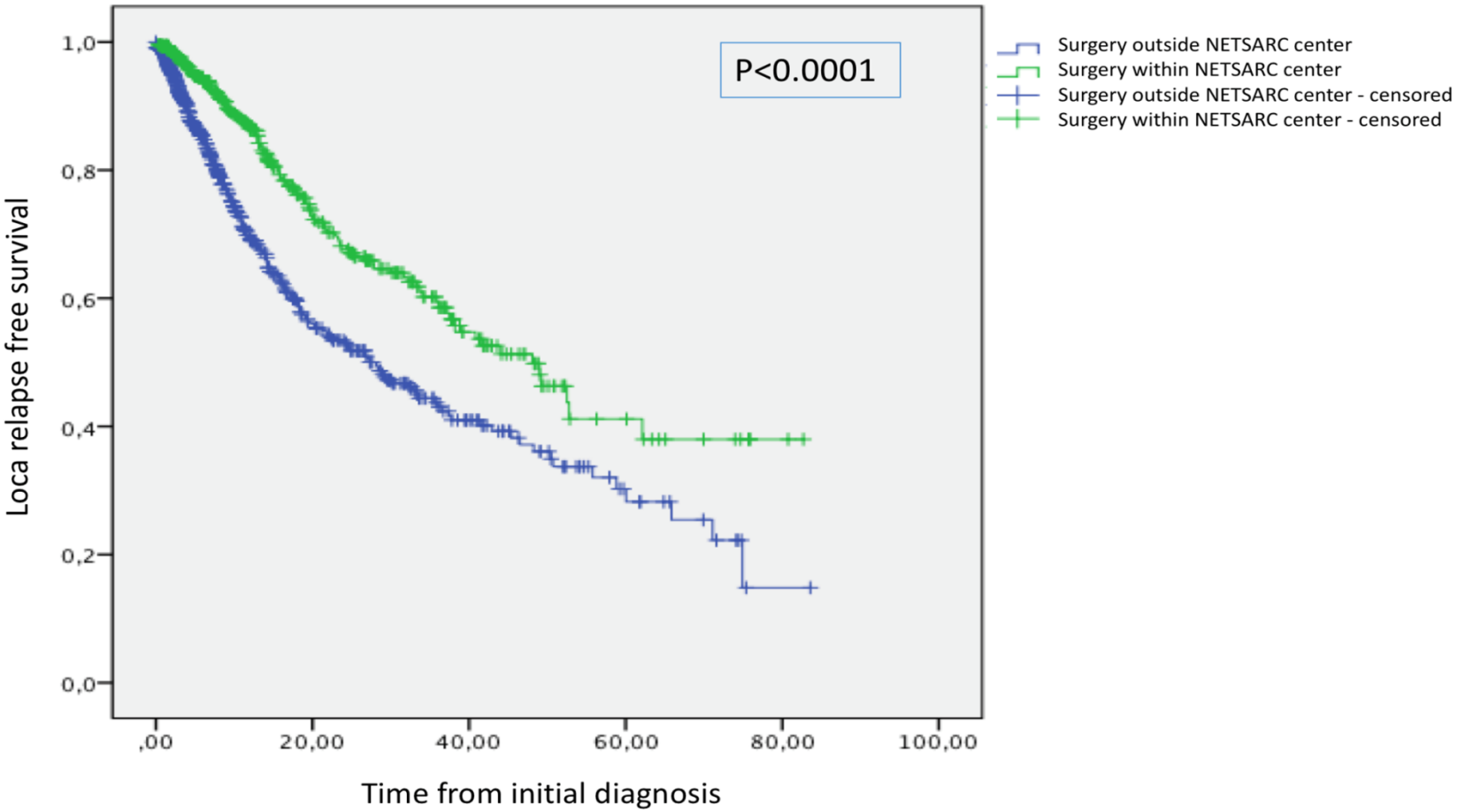
- 2010 -16: 1286 RPS, median age 63 (range 20-94)
- 477(37%) operated in a NETSARC reference center
- 809 (63%) operated outside a NETSARC reference center
- Pts treated in NETSARC centers had significantly:
- → More documented imaging (92% vs 80%)
- → More Preoperative biopsy (81% vs 63%)
- → More Pre op MDTB
- → Less tumor fragmentation
- → Final surgery was “R2 or unknown” in 24% vs 69% in non NETSARC centers

Results

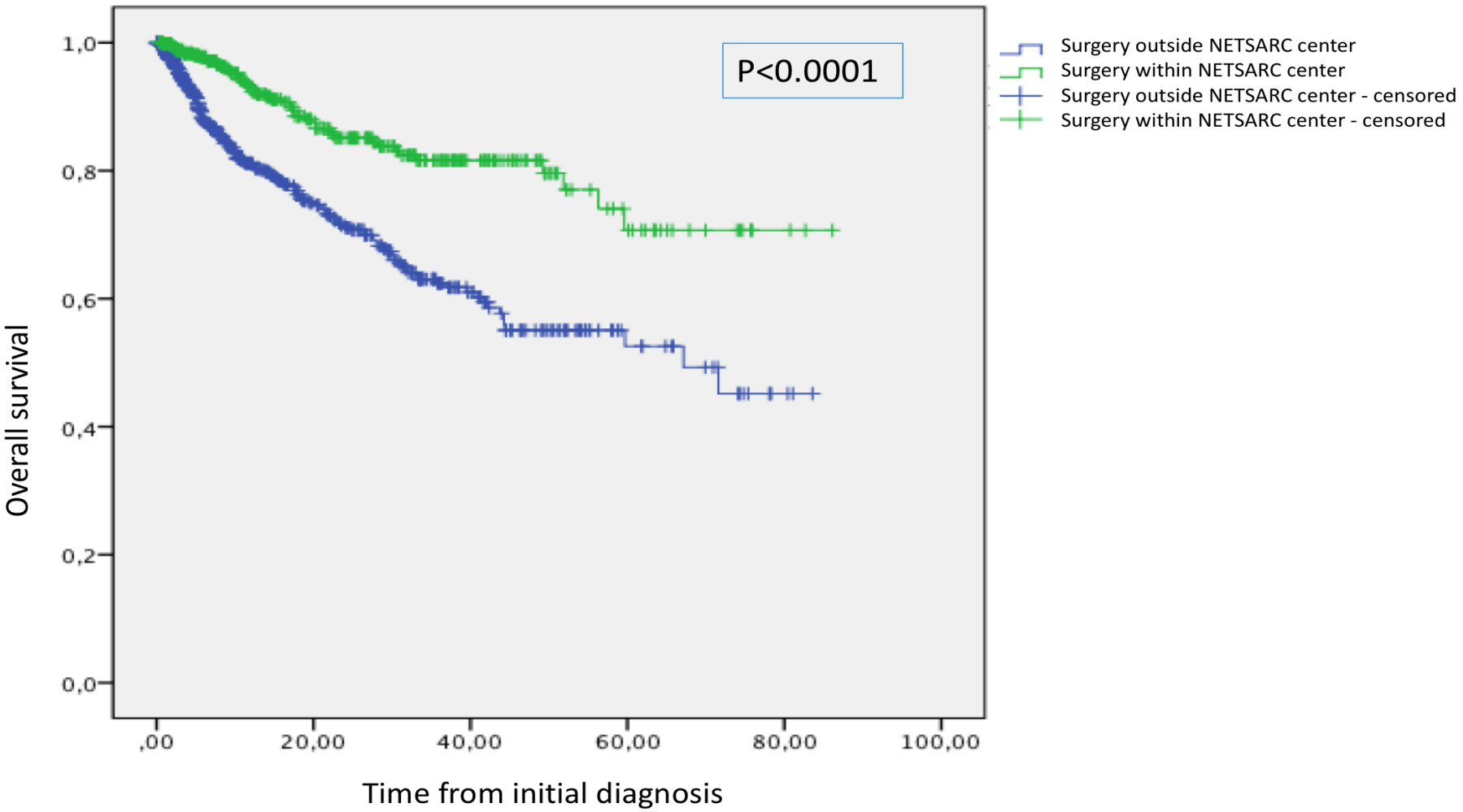
- → In univariate analysis (on non-met patients), surgery within a reference center was associated with a better OS and a 30-months OS 84% vs 63% (logrank $p < 0.001$)

- → Local RFS and RFS were significantly better for pts operated in reference centers ($p < 0.0001$)

- → Surgery in reference center was an independent good prognostic factor for OS (HR: 0.23), LRFS (HR: 0,56), RFS (HR:0,79) using Cox model ($p < 0.001$ all)


P<0.0001
Surgery outside NETSARC center
Surgery within NETSARC center
Surgery outside NETSARC center - censored
Surgery within NETSARC center - censored
Loca relapse free survival
1,0
0,8
0,6
0,4
0,2
0,0
,00
20,00
40,00
60,00
80,00
100,00
Time from initial diagnosis

LRFS


P<0.0001
Surgery outside NETSARC center
Surgery within NETSARC center
Surgery outside NETSARC center - censored
Surgery within NETSARC center - censored
Overall survival
1,0
0,8
0,6
0,4
0,2
0,0
,00
20,00
40,00
60,00
80,00
100,00
Time from initial diagnosis

OS

Ann Surg Oncol (2018) 25:98–106
https://doi.org/10.1245/s10434-017-6136-4

Annals of
SURGICAL ONCOLOGY
OFFICIAL JOURNAL OF THE SOCIETY OF SURGICAL ONCOLOGY

ORIGINAL ARTICLE – BONE AND SOFT TISSUE SARCOMAS

Surgical Management of Primary Retroperitoneal Sarcomas: Rationale for Selective Organ Resection

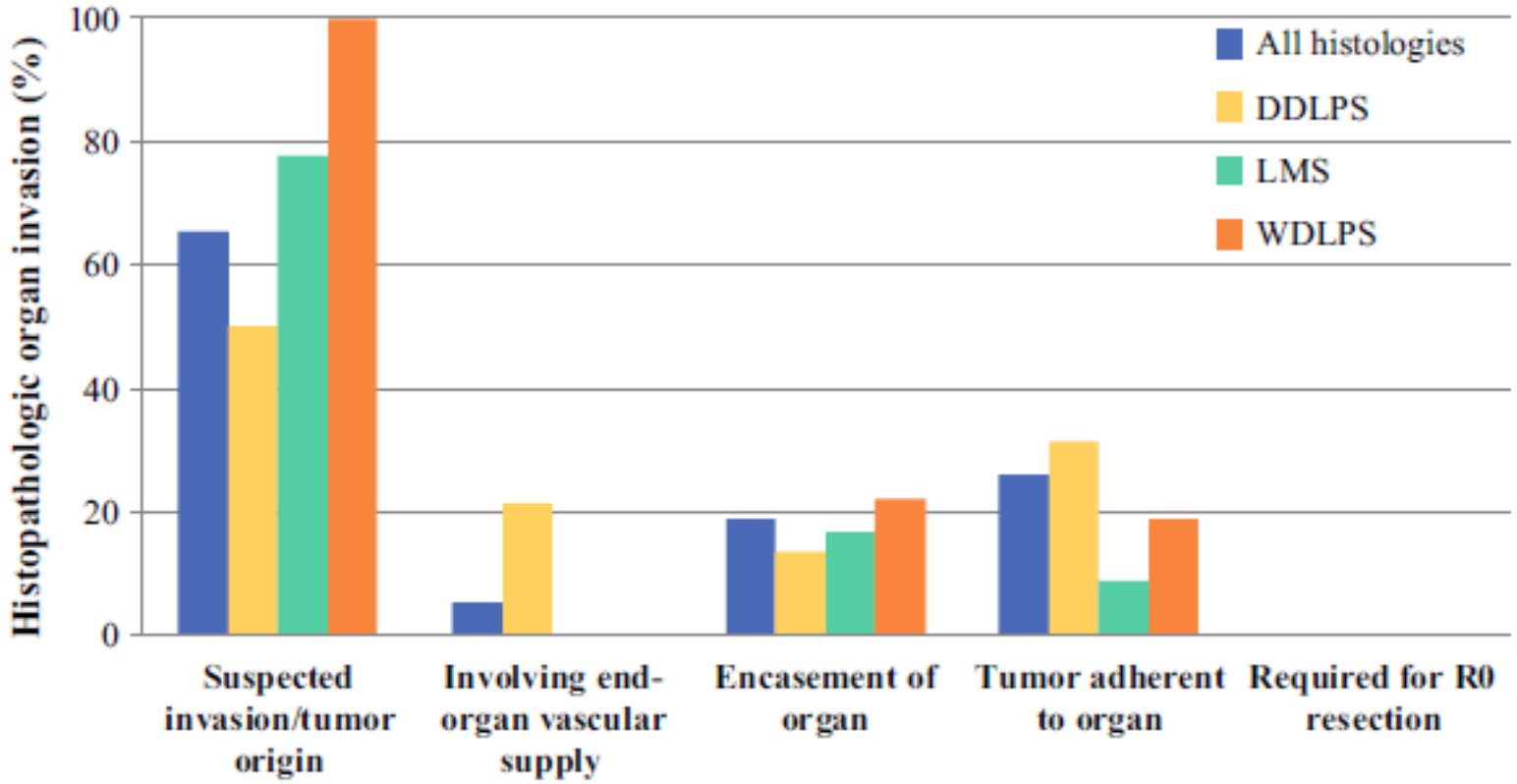
Mark Fairweather, MD[1,2], Jiping Wang, MD, PhD[1,2,3], Vickie Y. Jo, MD[2,3,4], Elizabeth H. Baldini, MD, MPH[2,3,5], Monica M. Bertagnolli, MD[1,2,3], and Chandrajit P. Raut, MD, MSc[1,2,3]

[1]Department of Surgery, Brigham and Women's Hospital, Boston, MA; [2]Harvard Medical School, Boston, MA; [3]Center for Sarcoma and Bone Oncology, Dana-Farber/Brigham and Women's Cancer Center, Boston, MA; [4]Department of Pathology, Boston, MA; [5]Department of Radiation Oncology, Brigham and Women's Hospital and Dana-Farber Cancer Institute, Boston, MA

TABLE 1 Classification system for the rationale for organ resection

Category	Criteria
1	Suspected organ invasion/tumor origin
2	Tumor involving end-organ vascular supply
3	Tumor encasement of organ
4	Tumor adherent to organ
5	Tumor adjacent to organ/required for microscopic complete resection (R0/R1 resection)
6	Other (iatrogenic injury requiring resection, incidental resection for another reason)

118 pts
2002_2011



HOI was present in 19% of the organs resected due to tumor encasement and 26% of the organs with adherent tumor, even when not suspected intraoperatively.

VOLUME 36 · NUMBER 7 · MARCH 1, 2018

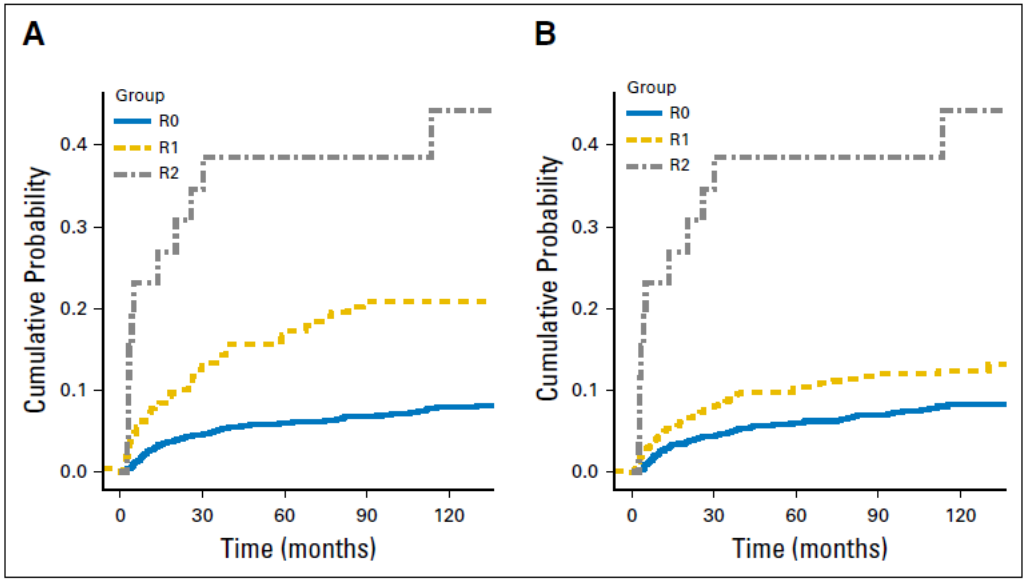
JOURNAL OF CLINICAL ONCOLOGY

ORIGINAL REPORT

2217 pts

Analysis of Margin Classification Systems for Assessing the Risk of Local Recurrence After Soft Tissue Sarcoma Resection

Kenneth R. Gundle, Lisa Kafchinski, Sanjay Gupta, Anthony M. Griffin, Brendan C. Dickson, Peter W. Chung, Charles N. Catton, Brian O'Sullivan, Jay S. Wunder, and Peter C. Ferguson



R classification
UICC

R + 1 mm classification

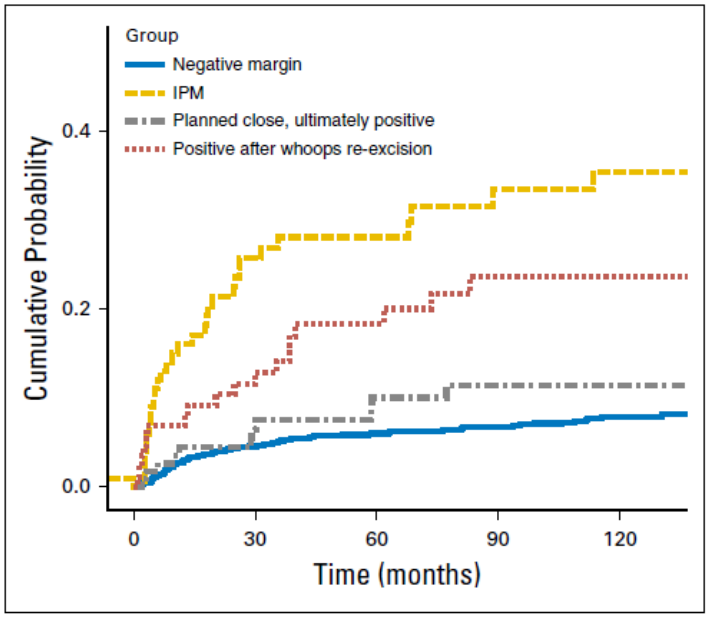


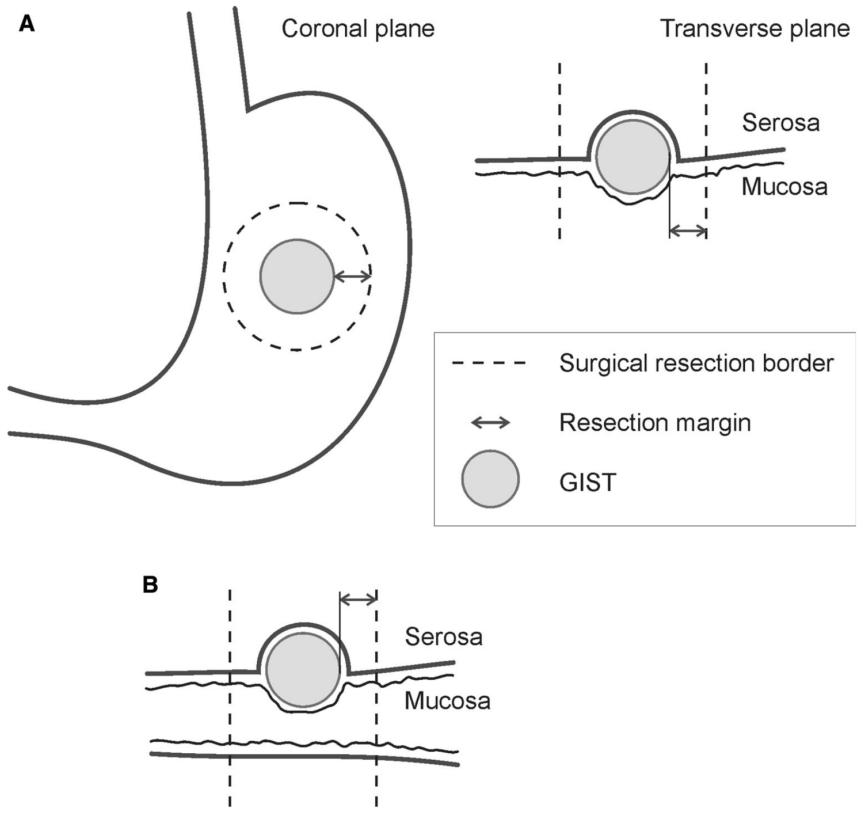
Fig 2. Cumulative probability of local recurrence by Toronto Margin Context Classification. IPM, inadvertent positive margin.

MICROSCOPIC SURGICAL MARGINS AND OUTCOME IN LOCALIZED GIST TREATED WITHIN THE EORTC STBSG, AGITG, UNICANCER, FSG, ISG AND GEIS RANDOMIZED TRIAL ON ADJUVANT IMATINIB.

Alessandro Gronchi, Sylvie Bonvalot, Andres Poveda Velasco, Dusan Kotasek, Piotr Rutkowski, Peter Hohenberger, Elena Fumagalli, Ian R. Judson, Antoine Italiano, Hans J Gelderblom, Fritz Van Coevorden, Nicolas Penel, Hans-Georg Kopp, David Goldstein, Javier Martin Broto, Eva Wardelmann, Sandrine Marréaud, John R. Zalcberg, Axel Le Cesne, Saskia Litière, Jean-Yves Blay and Paolo G Casali

SSO 2018, *in press*

Surgical margins in GIST



World J Surg. 2018 doi: 10.1007/s00268-018-4498

AIM of the study

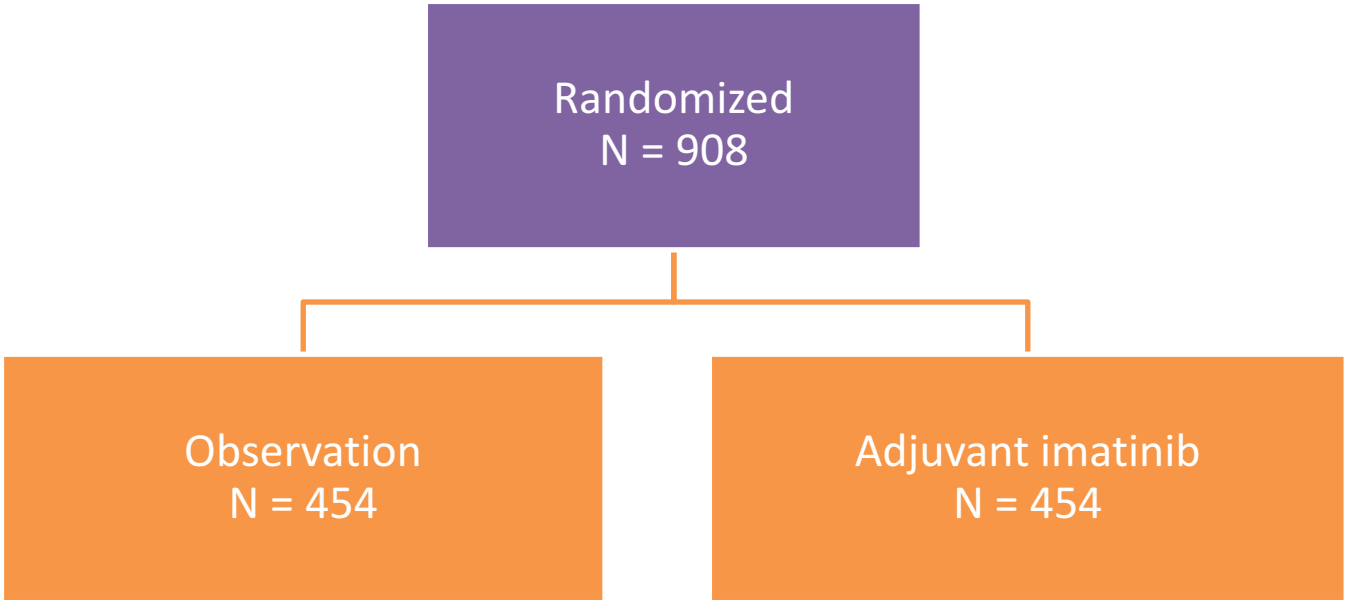
- Investigate the impact of surgical margins on OS in the EORTC-STBSG, AGITG, UNICANCER, FSG, ISG AND GEIS randomized trial on adjuvant Imatinib in localized GIST

- Explore the impact of surgical margins by site of tumor origin

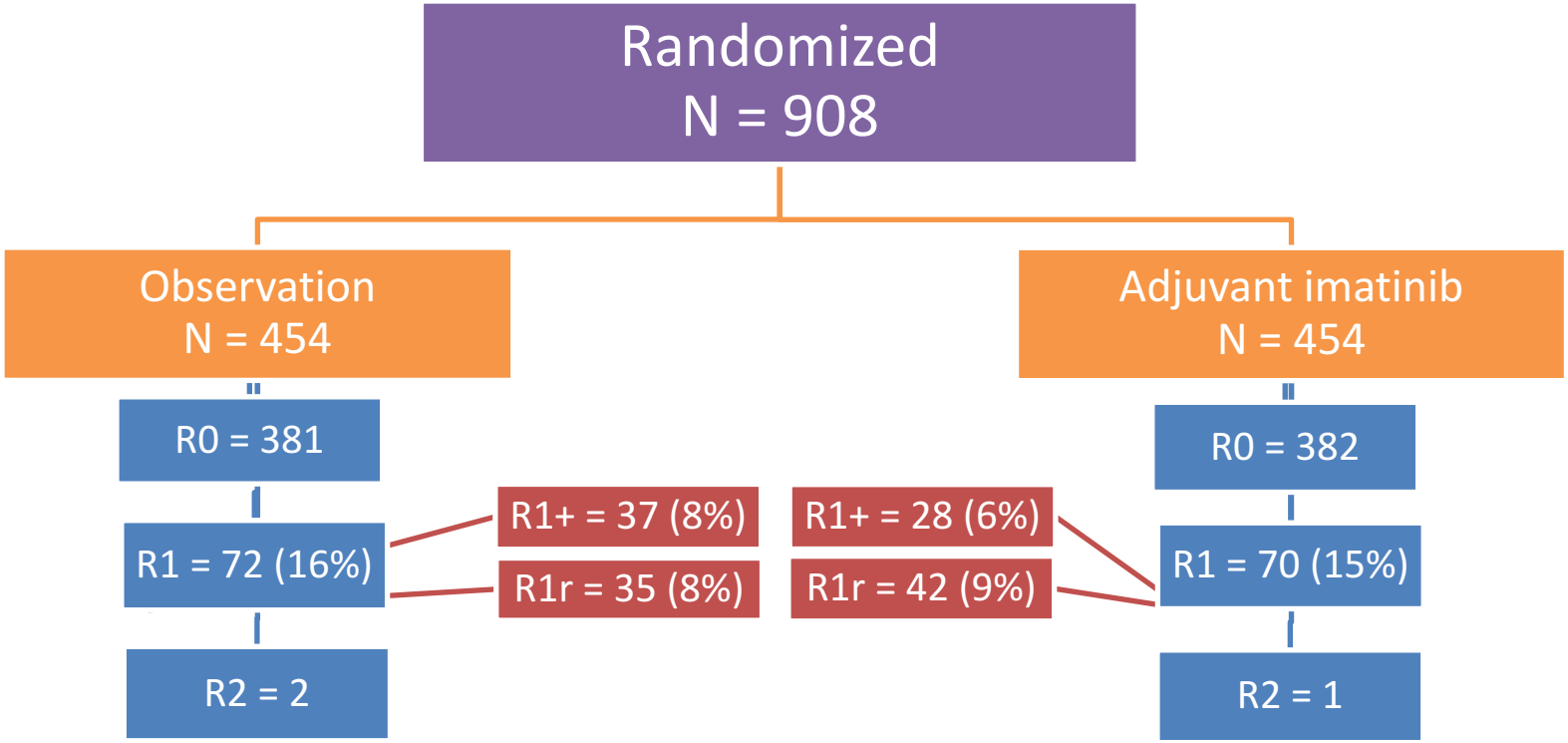
Classification of Surgical Margins in GIST

- R0 : microscopic negative margins over the organ of origin
- R1 : microscopic positive margins over the organ of origin
- R2 : macroscopic tumor left behind

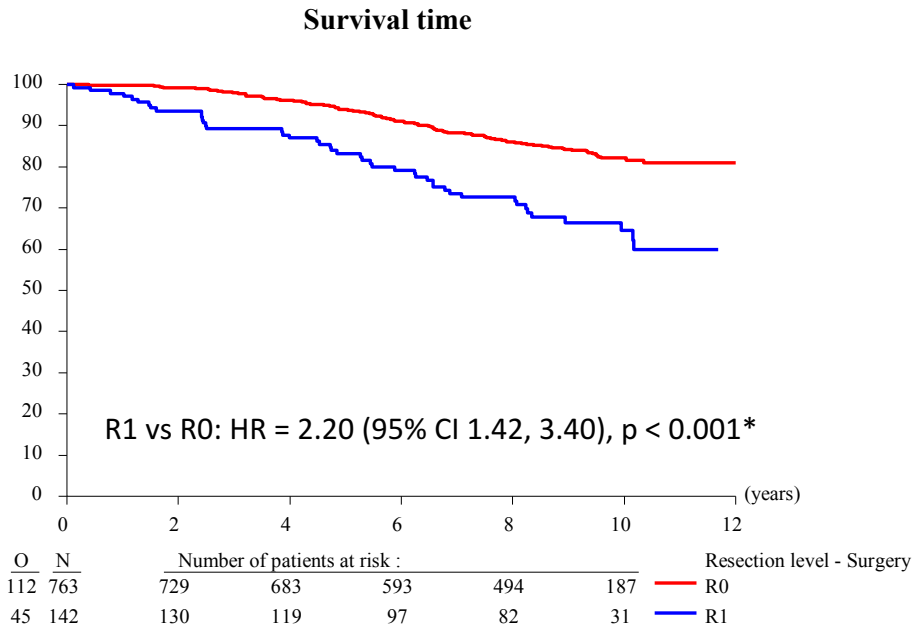
- Tumor rupture included in the R1 subgroup.



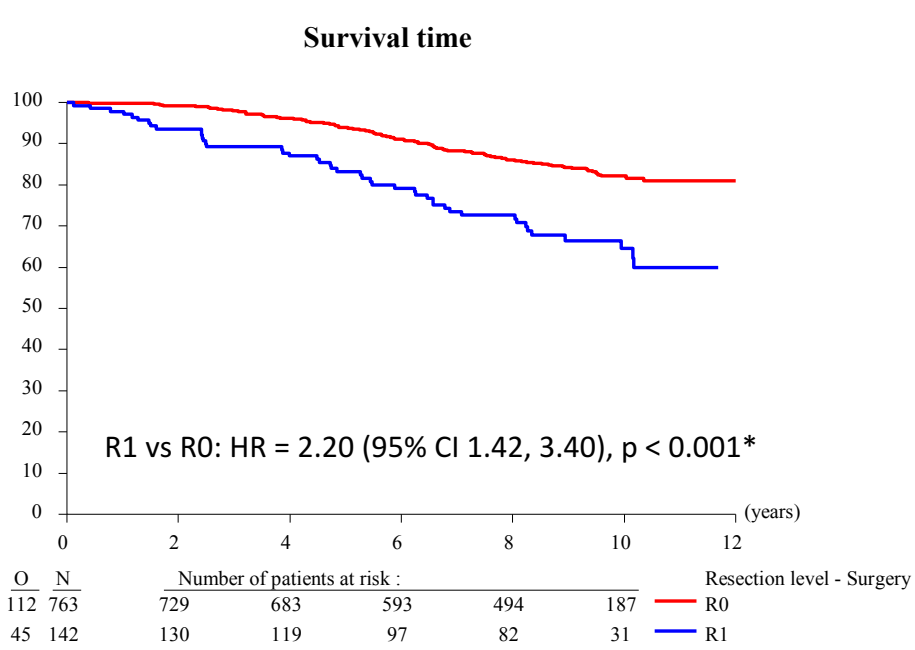
Median follow-up of 9.1 years (IQR: [8.0-10.1])

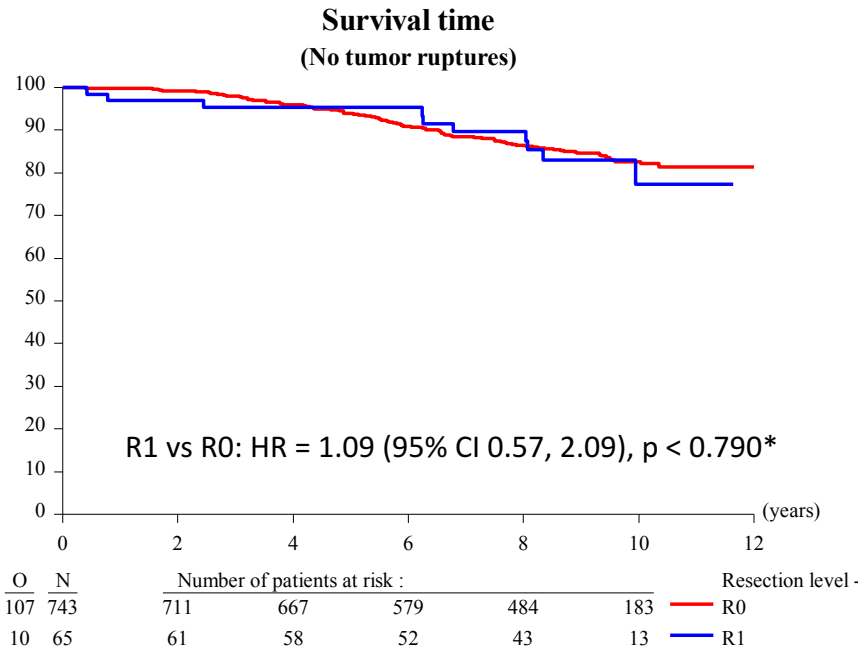

Randomized
N = 908
Observation
N = 454
Adjuvant imatinib
N = 454
R0 = 381
R1 = 72 (16%)
R2 = 2
R1+ = 37 (8%)
R1r = 35 (8%)
R1+ = 28 (6%)
R1r = 42 (9%)
R0 = 382
R1 = 70 (15%)
R2 = 1

Overall Survival



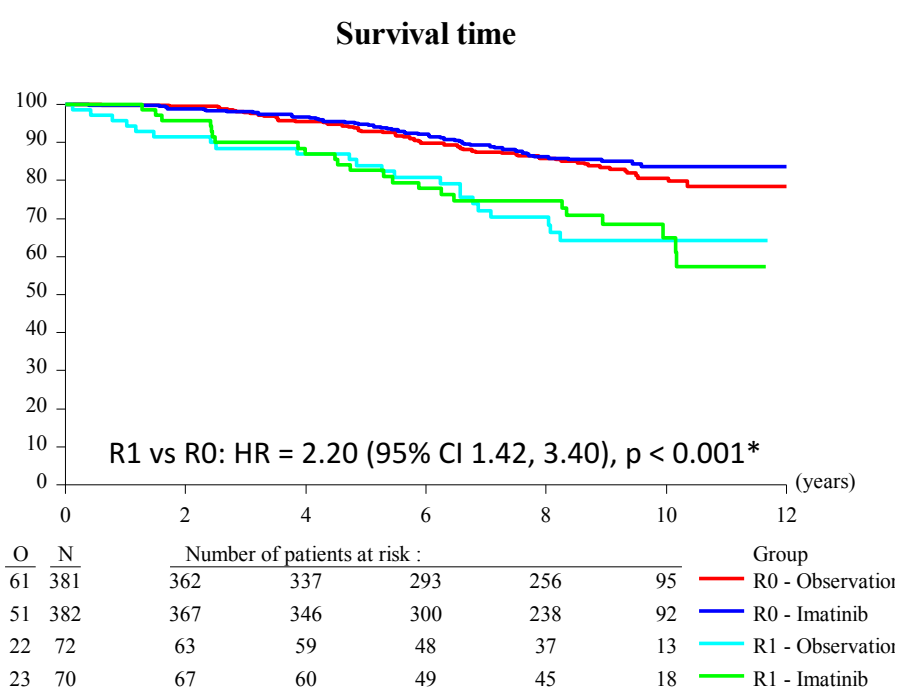
Overall Survival

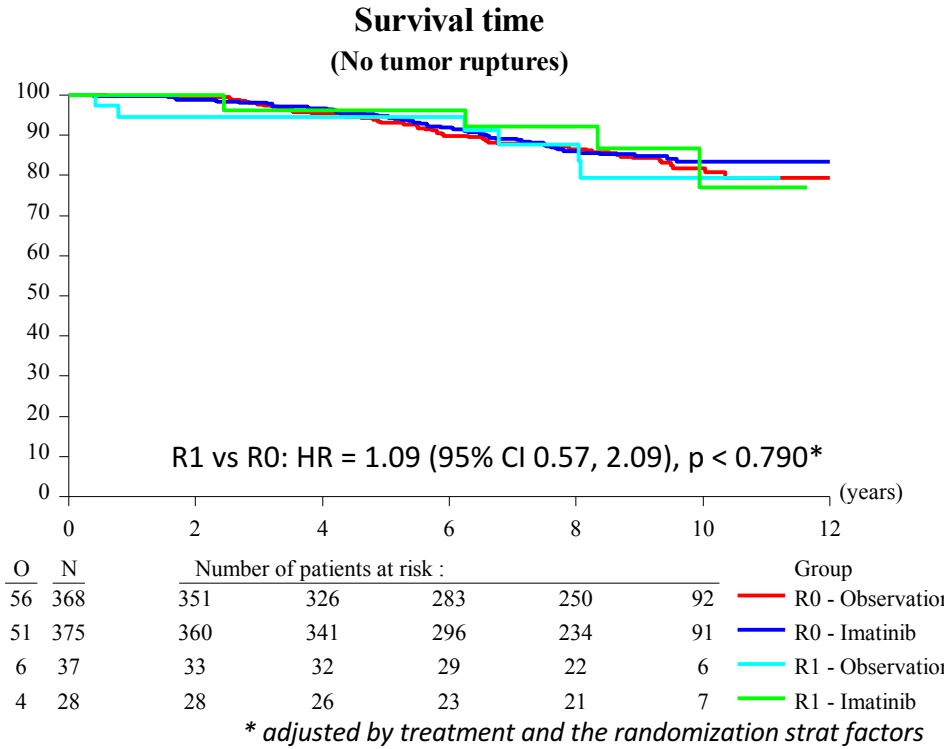




** adjusted by treatment and the randomization strat factors*

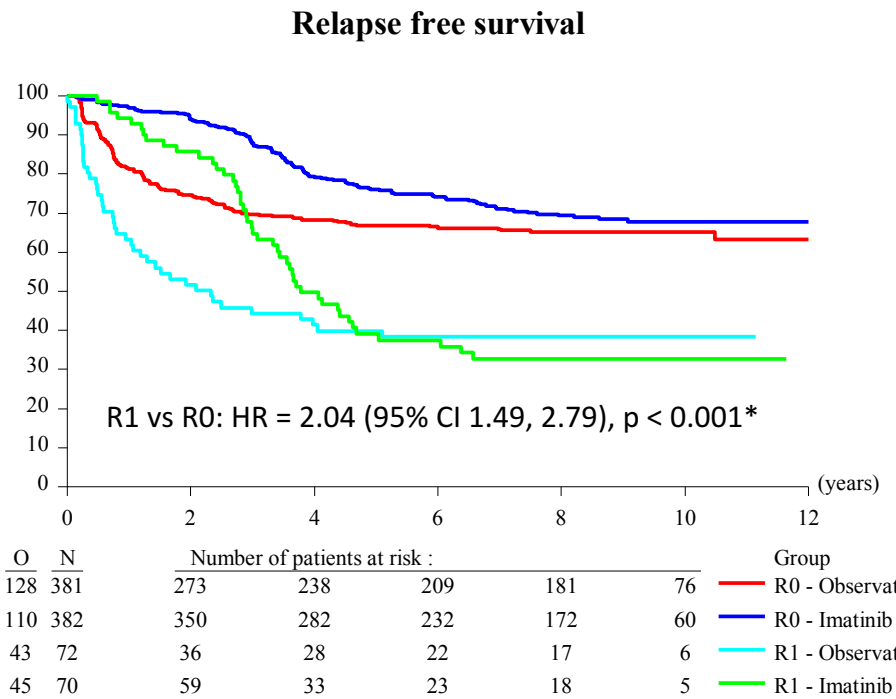
OS by study arm and R0/R1

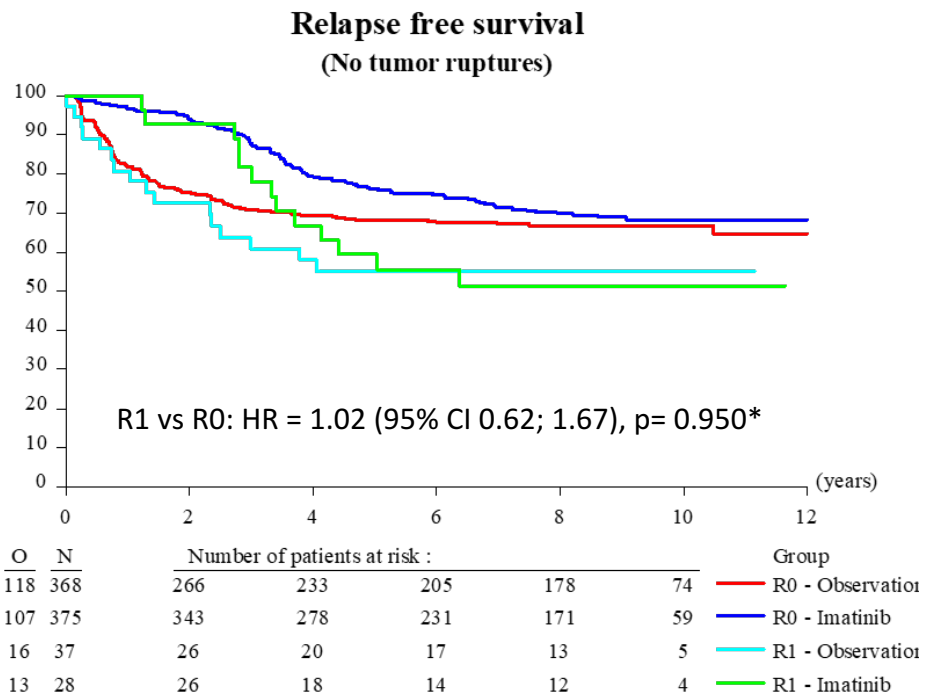




** adjusted by treatment and the randomization strat factors*

RFS by study arm and R0/R1





** adjusted by treatment and the randomization strat factors*

R0/R1 by site and treatment arm

	Resection	Observation	Adjuvant Imatinib	All
Gastric	R0 R1+ R1r	225 12 17	224 15 9	449 27 (6%) 26 (5%)
Small Bowel	R0 R1+ R1r	112 12 12	121 7 23	233 19 (8%) 35 (15%)
Other Duodenum Rectum Colon Oesophagus ExtraGI	R0 R1+ R1r	44 13 6	37 6 10	81 19 16

Conclusions

- 142 (15.6%) patients had an R1 resection, 77 (54%) with tumor rupture
- There was a significant difference in OS and RFS for pts undergoing an R1 vs R0 resection of GIST with or without adjuvant IM
- The risk of recurrence and death in R1 patients was driven largely by the presence of tumor rupture. When tumor rupture was excluded this difference in RFS and OS between R1 and R0 resections disappeared
- Quality of surgical margins over the organ of origin should not be considered an indication for surgical re-excision or adjuvant therapy.

Ann Surg Oncol (2018) 25:1536–1543
https://doi.org/10.1245/s10434-018-6393-x

Annals of
SURGICAL ONCOLOGY
OFFICIAL JOURNAL OF THE SOCIETY OF SURGICAL ONCOLOGY

ORIGINAL ARTICLE – BONE AND SOFT TISSUE SARCOMAS

Adequate Local Control in High-Risk Soft Tissue Sarcoma of the Extremity Treated with Surgery Alone at a Reference Centre: Should Radiotherapy Still be a Standard?

Marco Fiore, MD[1], Samuel Ford, MD[2], Dario Callegaro, MD[1], Claudia Sangalli, MD[3], Chiara Colombo, MD[1], Stefano Radaelli, MD[1], Anna Maria Frezza, MD[4], Salvatore L. Renne, MD[5], Paolo G. Casali, MD[4], and Alessandro Gronchi, MD[1]

TABLE 2 Individualized reasons for avoiding radiotherapy in 72 patients with high-risk soft tissue sarcomas

	N	%	Overall population (%)
Expected toxicity due to critical anatomical site	15	20.8	3.8
Wound complication	14	19.5	3.6
Liposarcoma histology	10	13.9	2.6
Isolated limb perfusion	7	9.8	1.8
Extreme age	6	8.3	1.5
Major flap reconstruction	5	6.9	1.3
Medical comorbidities	5	6.9	1.3
Patient choice	4	5.5	1.0
Early relapse (local, distant)	3	4.3	0.8
Vascular bypass	2	2.7	0.5
Pregnancy	1	1.4	0.2

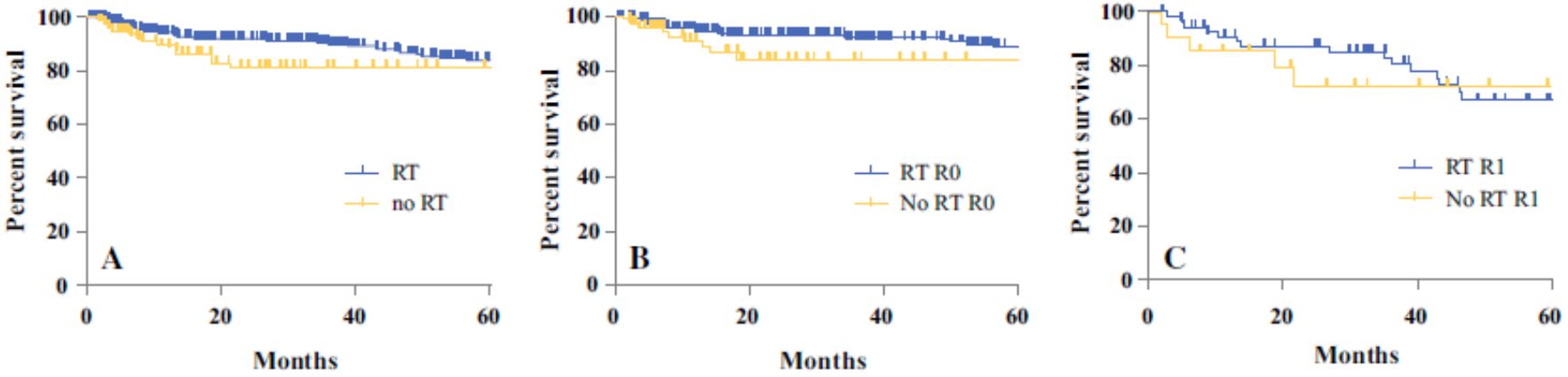


FIG. 1 Kaplan–Meier curves for local recurrence-free survival according to RT or surgery alone. **a** Overall series; **b** patients receiving microscopic R0 resection; **c** patients receiving microscopic R1 resection. *RT* radiation therapy

5 y LRFS (%)	All pts	R0	R1
RT +	84	88	72
RT -	81	85	66

390 pts

Randomized Prospective Study of the Benefit of Adjuvant Radiation Therapy in the Treatment of Soft Tissue Sarcomas of the Extremity

By James C. Yang, Alfred E. Chang, Alan R. Baker, William F. Sindelar, David N. Danforth, Suzanne L. Topalian, Thomas DeLaney, Eli Glatstein, Seth M. Steinberg, Maria J. Merino, and Steven A. Rosenberg

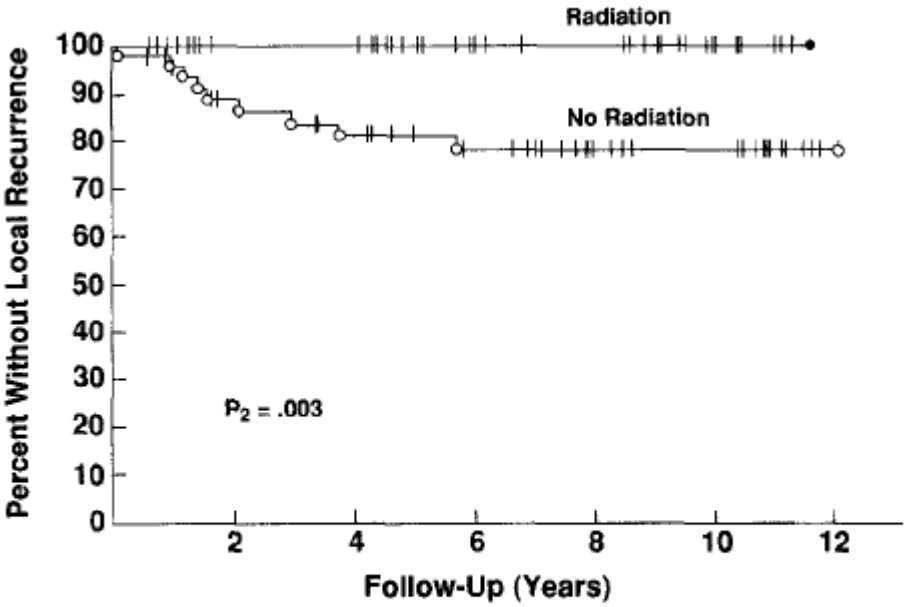


Fig 2. Local recurrence-free survival in patients with high-grade, locally resectable extremity soft tissue sarcomas randomized to treatment with surgery and adjuvant chemotherapy versus surgery, adjuvant chemotherapy, and postoperative XRT. LR occurred only in the absence of XRT.

91 pts

Long-Term Results of a Prospective Randomized Trial of Adjuvant Brachytherapy in Soft Tissue Sarcoma

By Peter W.T. Pisters, Louis B. Harrison, Denis H.Y. Leung, James M. Woodruff, Ephraim S. Casper, and Murray F. Brennan

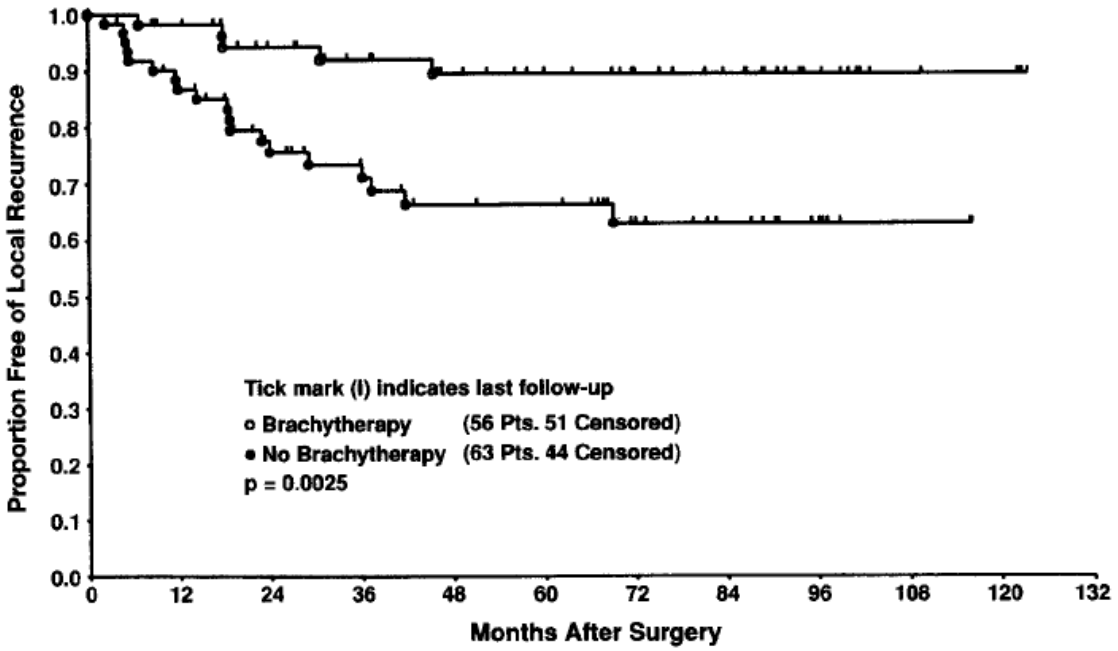


Fig 2. Actuarial plot of freedom from local recurrence for the 119 patients with histopathologic high-grade lesions.

Total 164 pts
G3 119

AACR American Association for Cancer Research

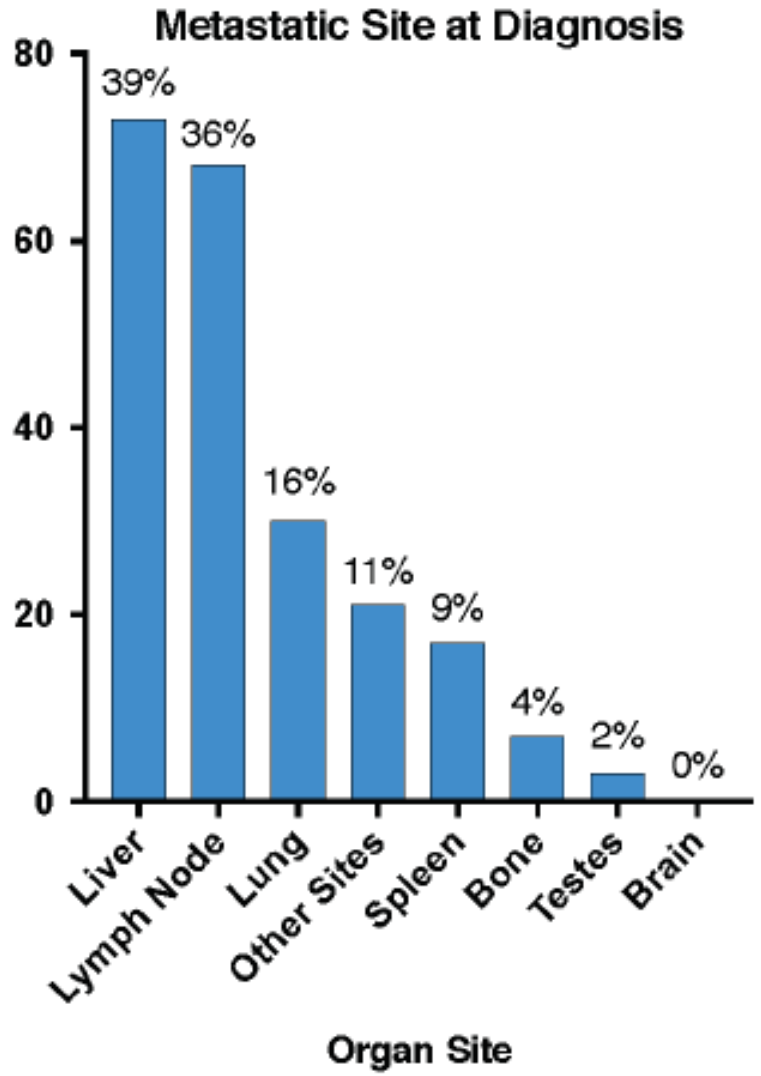
Clinical Cancer Research

Multimodality Treatment of Desmoplastic small round cell tumor: Chemotherapy and Complete Cytoreductive Surgery Improve Patient Survival

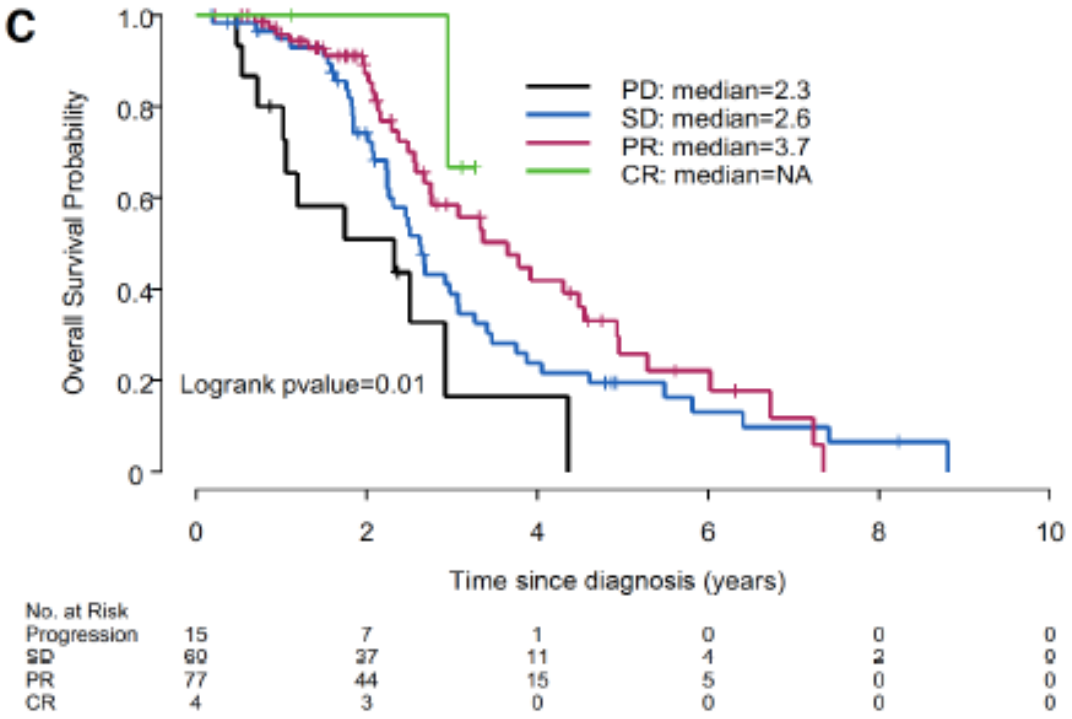
Vivek Subbiah, Salah-Eddine Lamhamedi-Cherradi, Branko Cuglievan, et al.

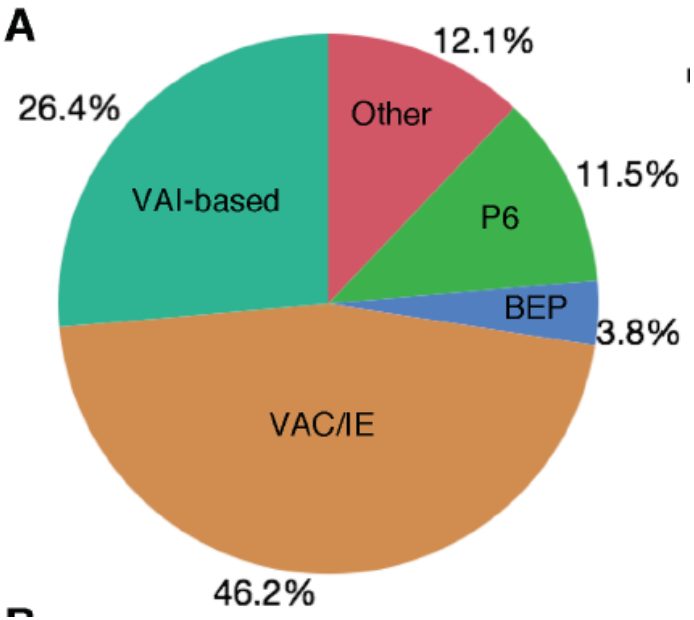
Clin Cancer Res Published OnlineFirst June 5, 2018.

114 pts/187 (60%) métastatiques au diagnostique



Chimiothérapie

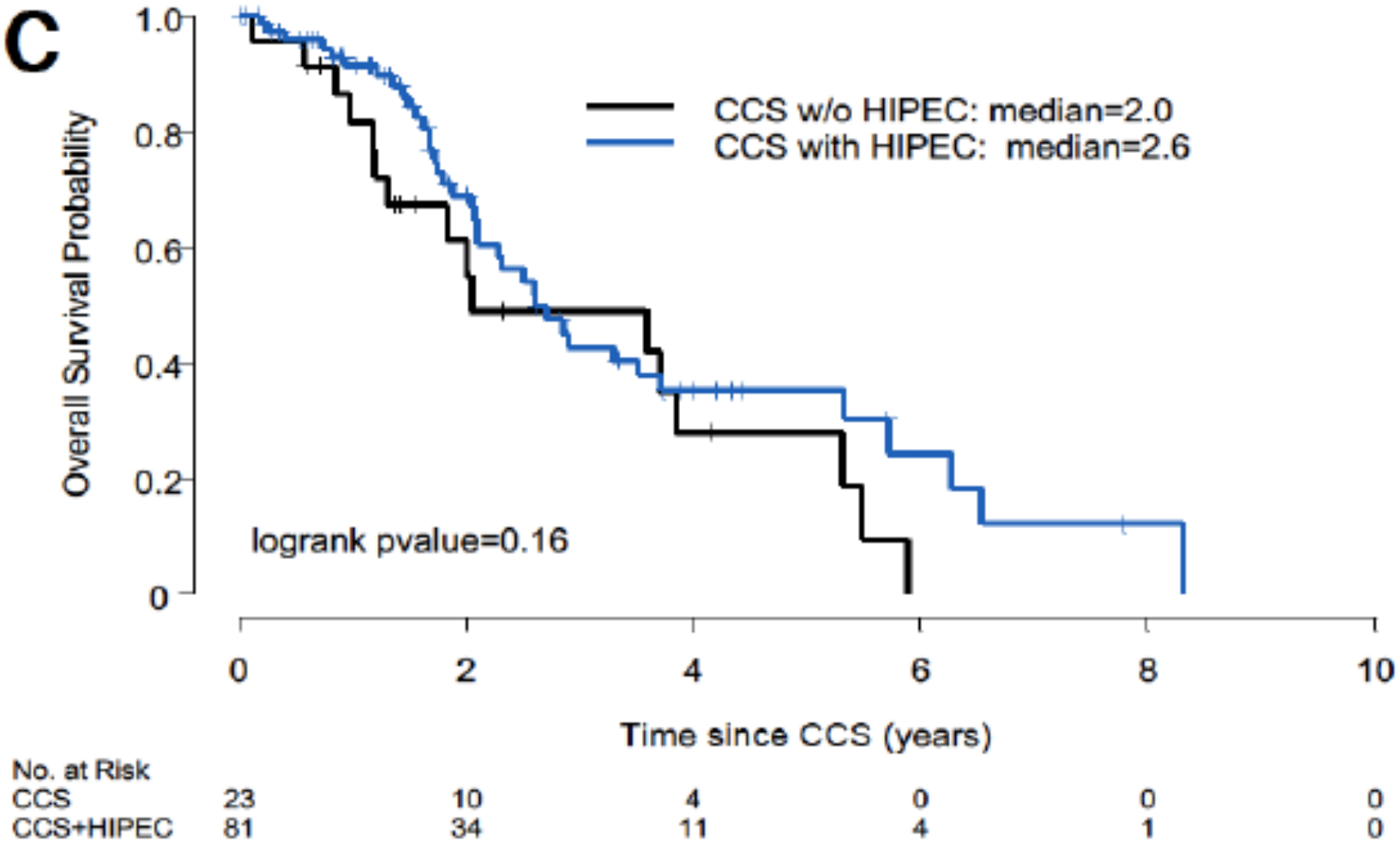


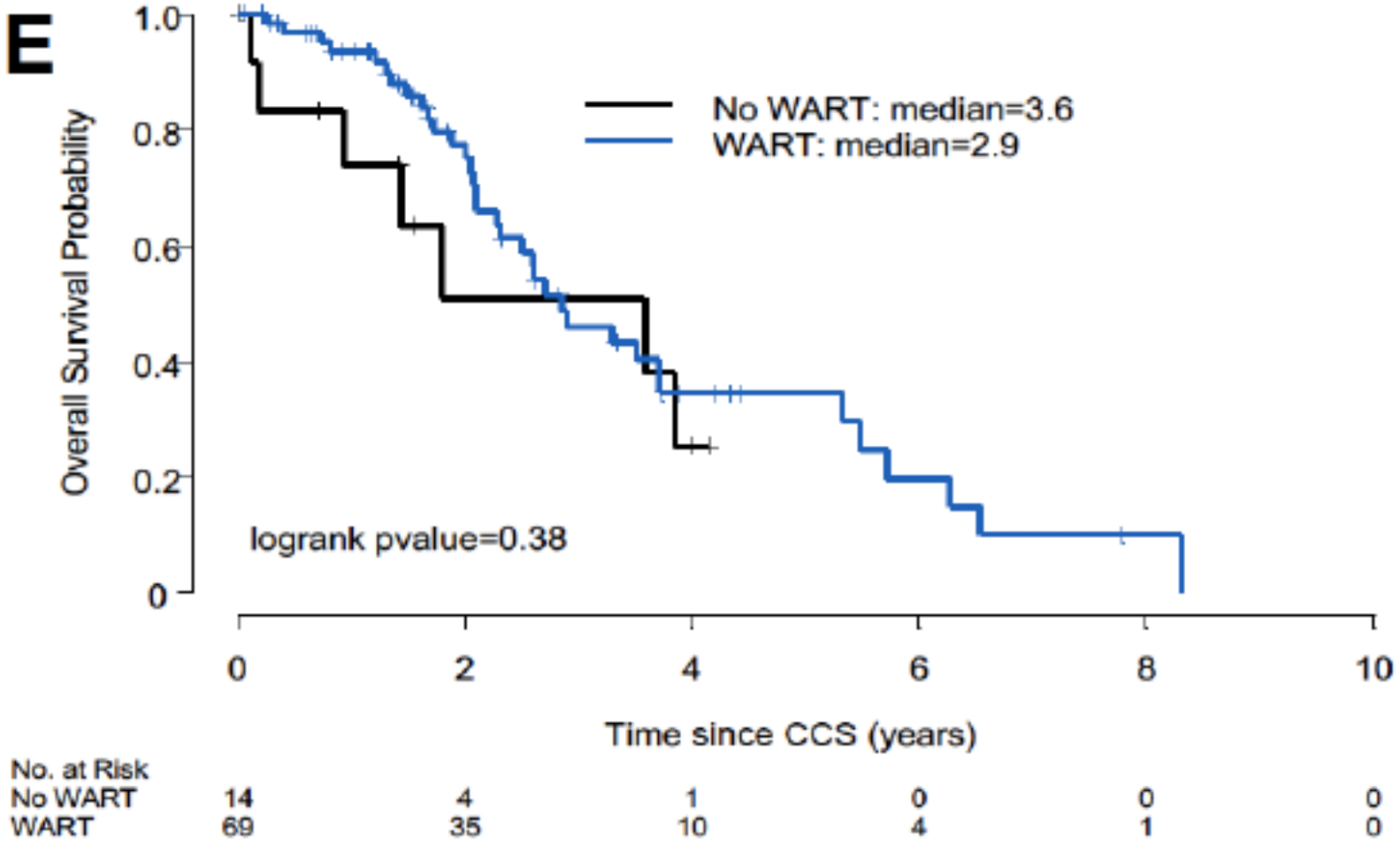


P6 = 7 cycles of IE/VDC (Ifosfamide, Etoposide, Vincristine, Adriamycin, and Cytoxan); BEP = bleomycin, etoposide, and cisplatin; VAI = Vincristine, actinomycin & ifosfamide; VAC/IE = Vincristine, Adriamycin, Cyclophosphamide, Ifosfamide and Etoposide; Cy = cyclophosphamide; Topo = topotecan; HD ifos = high dose ifosfamide; Tem = temozolomide; Irino = irinotecan; Vcr = vincristine; N = number of metastatic sites

Table 1. Desmoplastic Small Round Cell Tumor Clinical Trials

	Cancer Center				
Published Clinical Trials	**Current Study**	**MSKCC**	**MDACC**	**UK Centers**	**France GR Center**
Study dates	1990-2016	1972-2003	Until 1998	1991-2012	1991-2013
Patient Demographics					
No. of patients	187	66	39	41	38
Median age, y	22.6	19	25	27	27
Male:Female ratio	4.8:1	10:1	4.5:1	3.1:1	3.5:1
Caucasian race	75.4%	75%	N/A	N/A	N/A
Treatment modality (% of patients)					
Chemotherapy	98%	>92%	92%	93%	100%
Surgery	61%	71%	92%	20%	60.5%
Radiotherapy	49%	>44%	N/A	15%	30%
HIPEC[1]	72%	N/A	N/A	N/A	5%
SCT	6.4%	0%	0%	0%	N/A
Survival					
Median survival (months)	35	28	N/A	16	25.7
3-year OS rate	48.2%	44%	N/A	N/A	31.6%
5-year OS rate	21.6%	15%	N/A	N/A	8.3%
Improved by surgery	Yes (p=0.04)	Yes		Yes (p=0.024)	Yes (p=0.026)
Improved by radiation	Yes (p<0.01)	Yes		Yes (p=0.015)	Yes (p=0.022)
Improved by HIPEC	No (p=0.26)	N/A	N/A	N/A	N/A


C
1.0
0.8
0.6
0.4
0.2
0
Overall Survival Probability
CCS w/o HIPEC: median=2.0
CCS with HIPEC: median=2.6
logrank pvalue=0.16
0
2
4
6
8
10
Time since CCS (years)
No. at Risk
CCS 23 10 4 0 0 0
CCS+HIPEC 81 34 11 4 1 0


E
1.0
0.8
0.6
0.4
0.2
0
Overall Survival Probability
No WART: median=3.6
WART: median=2.9
logrank pvalue=0.38
0
2
4
6
8
10
Time since CCS (years)
No. at Risk
No WART 14 4 1 0 0 0
WART 69 35 10 4 1 0

Importantly, our data indicate that complete cytoreductive surgery (CCS) and chemotherapy are essential modalities of proven clinical benefit, whereas HIPEC and WART warrant further study in randomized prospective clinical trials.

Original article

Prediction of morbidity following cytoreductive surgery for metastatic gastrointestinal stromal tumour in patients on tyrosine kinase inhibitor therapy

M. Fairweather[1,2], M. J. Cavnar[3], G. Z. Li[1], M. M. Bertagnolli[1,2], R. P. DeMatteo[3] and C. P. Raut[1,2]

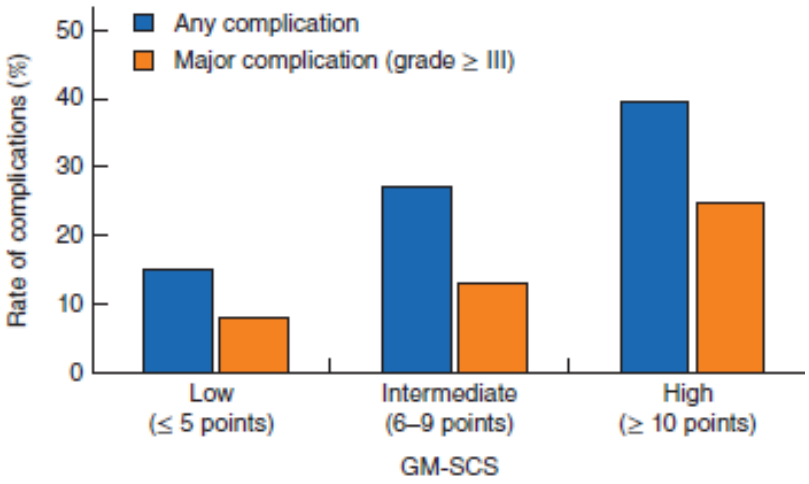
[1]Department of Surgery, Brigham and Women's Hospital and Dana-Farber Cancer Institute, and [2]Center for Sarcoma and Bone Oncology, Dana-Farber/Brigham and Women's Cancer Center, Boston, Massachusetts, [3]Department of Surgery, Memorial Sloan Kettering Cancer Center, New York, New York, USA

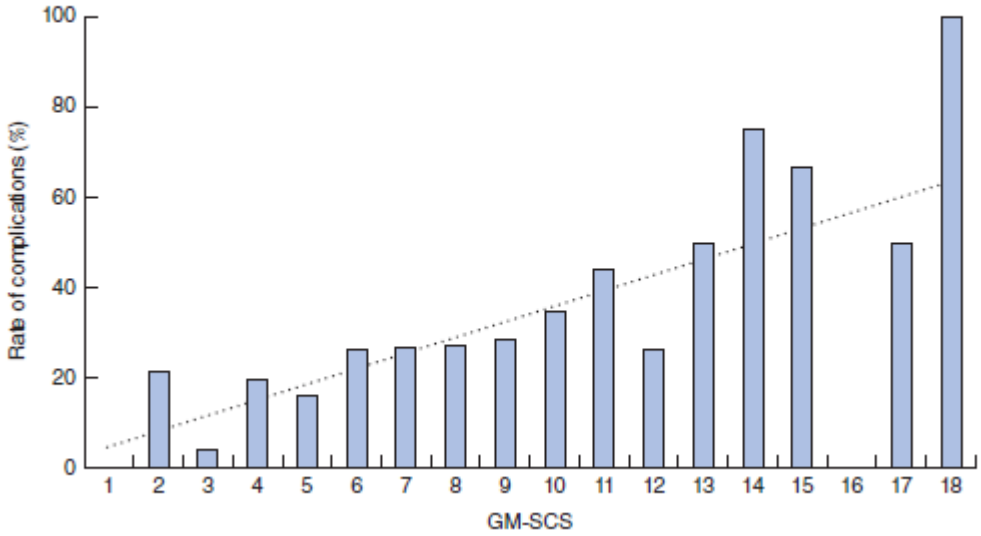
Correspondence to: Dr C. P. Raut, Department of Surgery, Brigham and Women's Hospital, 75 Francis Street, Boston, Massachusetts 02115, USA (e-mail: craut@bwh.harvard.edu)

BJS 2018; **105**: 743–750

	Score	No. of patients ($n = 400$)
Patient factors		
Age ≥ 65 years	1	97 (24·3)
Diabetic	1	12 (3·0)
Current smoker	1	22 (5·5)
Previous abdominal surgery	1	336 (84·0)
Emergency surgery	2	25 (6·3)
Clean-contaminated procedure	1	333 (83·3)
Surgical procedure		$n = 808$
Abdominoperineal resection	3	3 (0·4)
Low anterior resection	2	19 (2·4)
Bowel anastomosis*	1	222 (27·5)
Liver lobectomy	3	48 (5·9)
Liver wedge resection*	1	184 (22·8)
Left lateral segmentectomy	1	14 (1·7)
Caudate resection	2	8 (1·0)
Whipple procedure†	3	4 (0·5)
Distal pancreatectomy	2	21 (2·6)
Lysis of adhesions (> 45 min)	1	163 (20·2)
Duodenectomy	2	12 (1·5)
Total gastrectomy	3	3 (0·4)
Subtotal gastrectomy	2	9 (1·1)
Gastric wedge resection*	1	50 (6·2)
Laparoscopic approach	1	5 (0·6)
Vascular dissection/repair	1	18 (2·2)
Vascular reconstruction	2	1 (0·1)
Hysterectomy	2	6 (0·7)
Nephrectomy	1	1 (0·1)
Complex bladder repair	1	17 (2·1)
Organs resected		$n = 914$
Stomach	1	64 (7·0)
Duodenum	1	16 (1·8)
Small bowel	1	112 (12·3)
Right colon	1	38 (4·2)
Left colon	1	67 (7·3)
Pancreas	1	30 (3·3)
Liver	1	153 (16·7)
Diaphragm	1	32 (3·5)
Spleen	1	40 (4·4)
Peritoneum/abdominal wall	1	151 (16·5)
Adrenal gland	1	7 (0·8)
Kidney	1	1 (0·1)
Gallbladder‡	1	48 (5·3)
Bladder	1	16 (1·8)
Ovary	1	16 (1·8)
Uterus	1	9 (1.0)
Omentum	1	109 (11·9)
Other	1	5 (0·5)
Disease burden (cumulative size of resected tumours)		
Low (< 10 cm)	0	190 (47·5)
Medium (10–20 cm)	1	109 (27·3)
High (> 20 cm)	2	101 (25·3)
GM-SCS		
Low	≤ 5	100 (25·0)
Intermediate	6–9	191 (47·8)
High	≥ 10	109 (27·3)

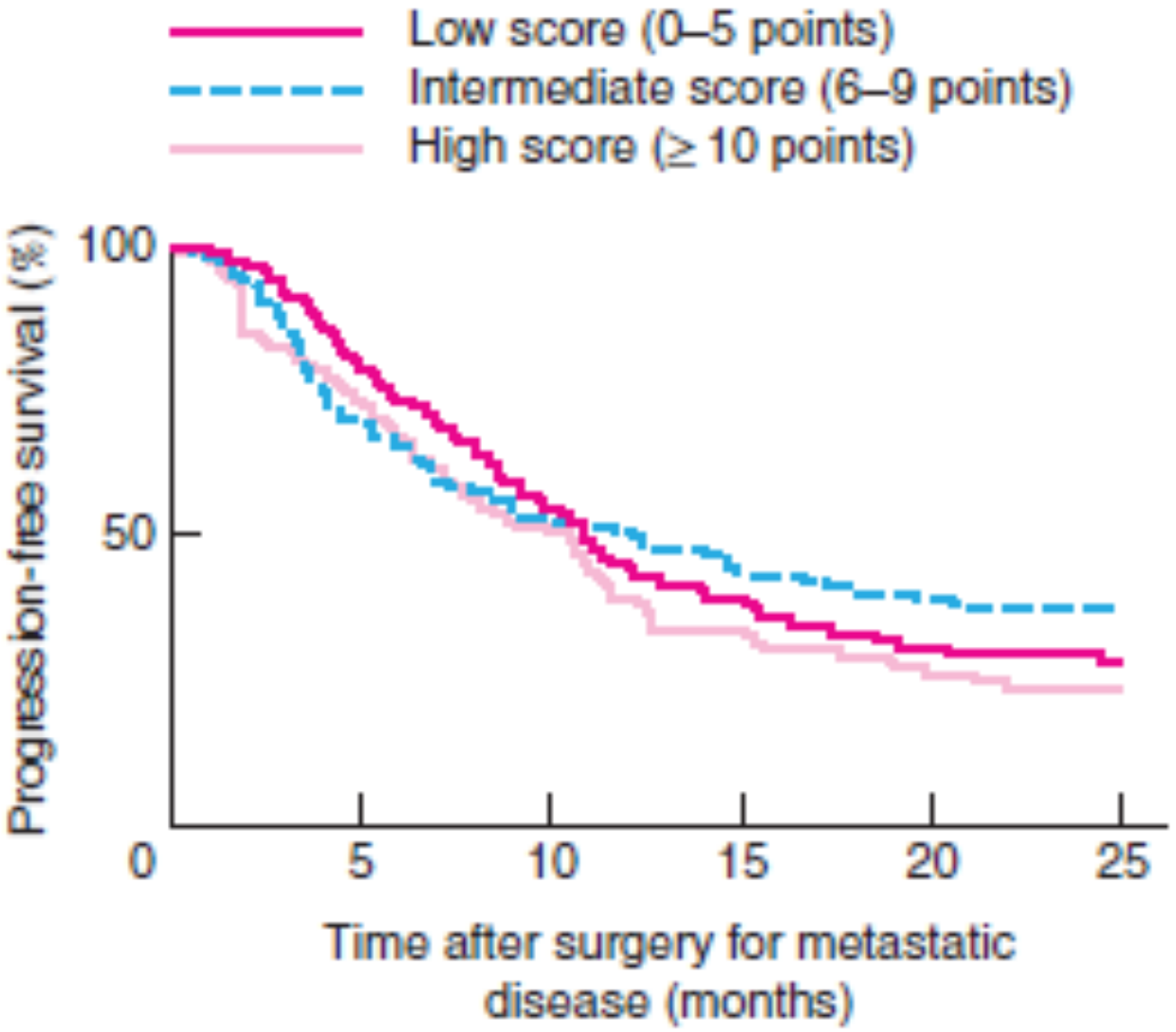
323 pts





Major Complications G 3-4	Score 1 ≤ 5 pts	Score 6-9 pts	Score 3 ≥ 10 pts	All
	15	27	39.4%	17.5%

	Overall complications (grade I–V)		Major complications (grade III–V)	
	Odds ratio	*P*	Odds ratio	*P*
TKI at time of metastasectomy				
Imatinib	1·00 (reference)		1·00 (reference)	
Sunitinib	1·20 (0·61, 2·36)	0·597	1·71 (0·77, 3·83)	0·190
Other	1·08 (0·51, 2·30)	0·837	2·17 (0·92, 5·13)	0·078
Duration of TKI (months)				
≤ 24	1·00 (reference)		1·00 (reference)	
> 24	1·15 (0·66, 2·01)	0·630	1·23 (0·64, 2·35)	0·537
Radiographic response				
Stable	1·00 (reference)		1·00 (reference)	
Responsive	1·37 (0·51, 3·67)	0·531	0·73 (0·20, 2·63)	0·626
Unifocal progression	0·48 (0·22, 1·06)	0·070	0·50 (0·20, 1·25)	0·139
Multifocal progression	1·23 (0·57, 2·63)	0·595	1·18 (0·51, 2·76)	0·699
Metastatic mitotic index (per 50 HPF)				
< 5	1·00 (reference)		1·00 (reference)	
≥ 5	2·55 (1·01, 6·42)	0·047	2·15 (0·64, 7·19)	0·214
Extent of resection				
R0	1·00 (reference)		1·00 (reference)	
R1	0·62 (0·31, 1·25)	0·185	0·64 (0·28, 1·45)	0·283
R2	0·96 (0·46, 1·98)	0·905	0·73 (0·31, 1·74)	0·479
No. of metastases				
≤ 5	1·00 (reference)		1·00 (reference)	
> 5	0·59 (0·32, 1·10)	0·096	0·69 (0·34, 1·42)	0·312
No. of organs resected				
≤ 2	1·00 (reference)		1·00 (reference)	
> 2	0·62 (0·33, 1·16)	0·133	0·72 (0·34, 1·52)	0·393
GM-SCS				
Low (0–5)	1·00 (reference)		1·00 (reference)	
Intermediate (6–9)	2·88 (1·32, 6·29)	0·008	2·03 (0·79, 5·20)	0·142
High (≥ 10)	5·40 (2·16, 13·55)	< 0·001	3·65 (1·25, 10·67)	0·018


Low score (0–5 points)
Intermediate score (6–9 points)
High score (≥ 10 points)
Progression-free survival (%)
100
50
0
5
10
15
20
25
Time after surgery for metastatic disease (months)