

# **Sarcomes**

## **(des tissus mous et des viscères)**

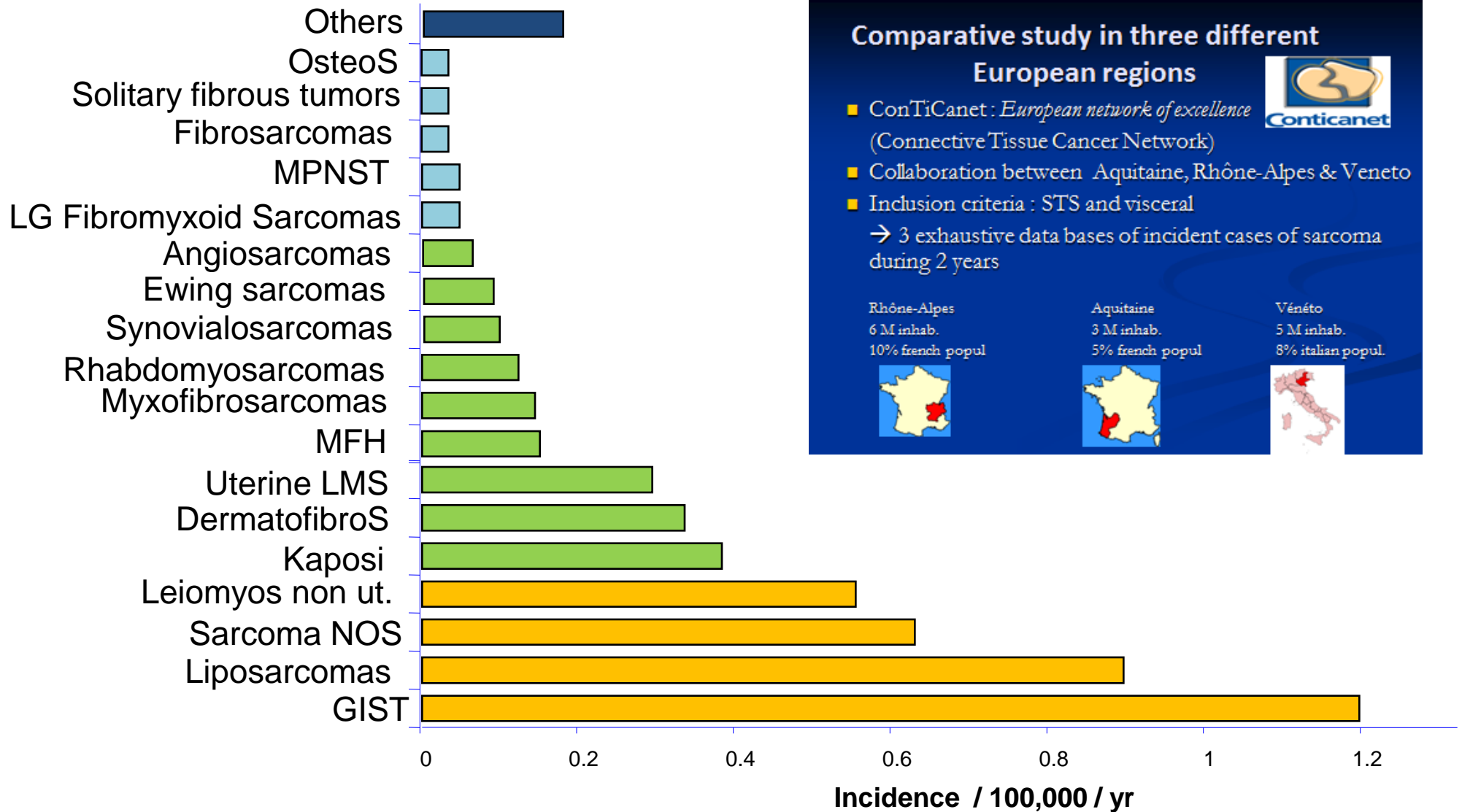
JY Blay

**Medical Oncology**  
**Director General Centre Leon Berard**  
**Université Claude Bernard Lyon 1**  
**LYRIC DGOS-INCA-4664, Devwecan Labex 061**  
**NETSARC, RREPS**


# Liens d'intérêt (Col?)

- Soutiens recherche:
  - Novartis, GSK, Pharmamar, Roche, MSD, Bayer, Cytheris, Oncotherapy Science
- Conseil/ Honoraires:
  - Novartis, GSK, Pharmamar, Roche, MSD, Bayer

# Over 80 histotypes of sarcomas...






**Comparative study in three different European regions**

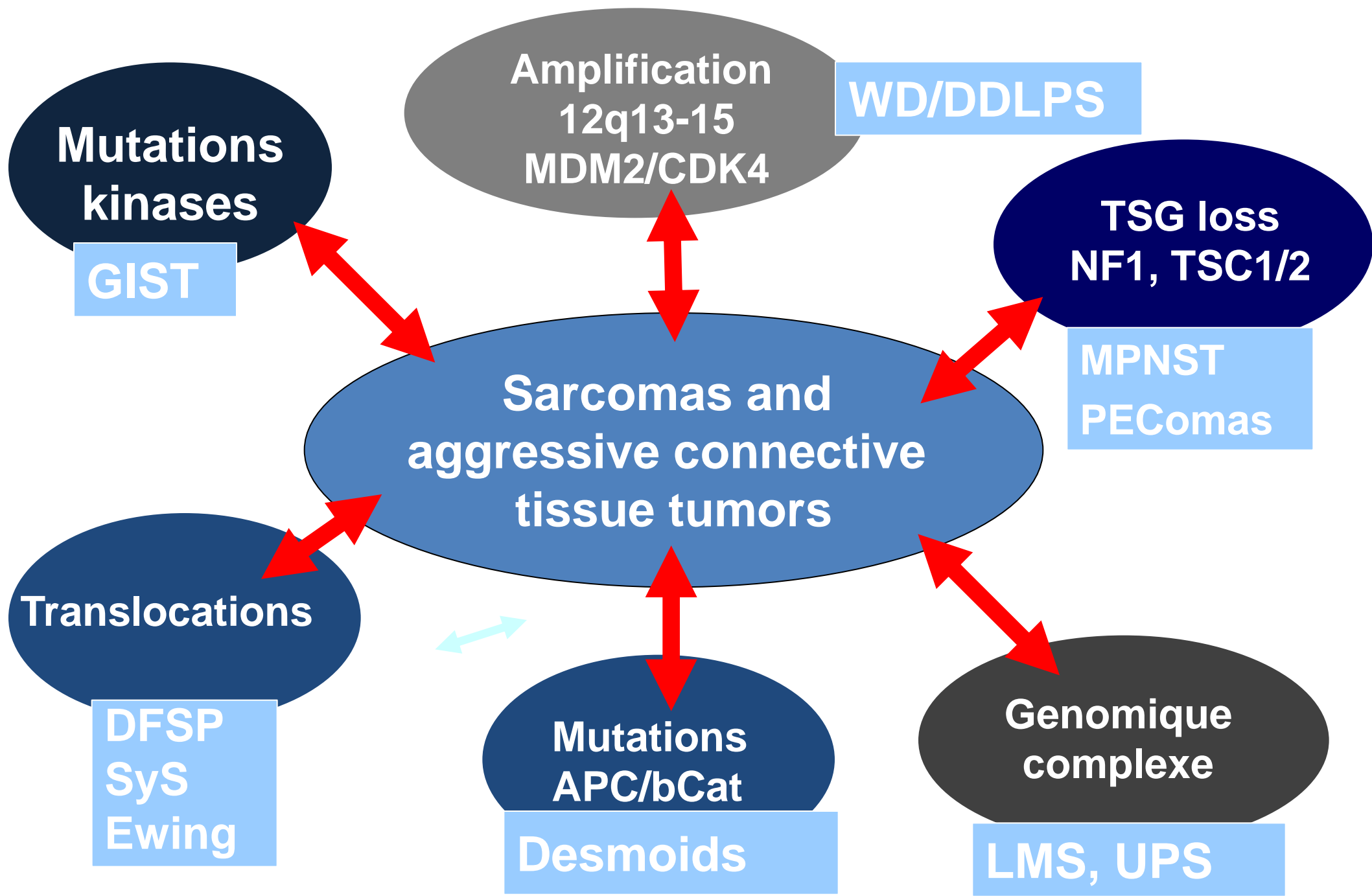

  
 ■ ConTiCanet : *European network of excellence* (Connective Tissue Cancer Network)

■ Collaboration between Aquitaine, Rhône-Alpes & Veneto

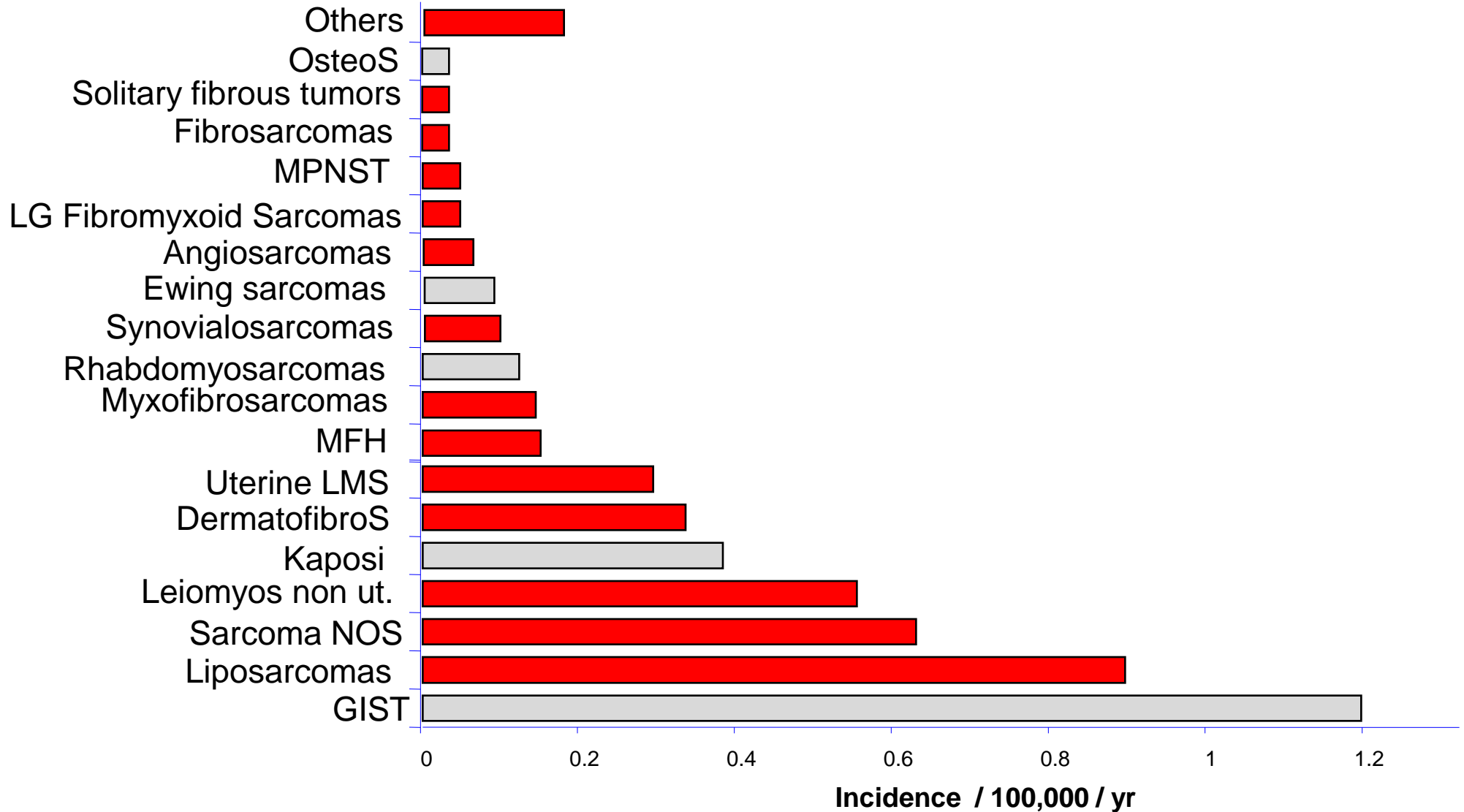
■ Inclusion criteria : STS and visceral

→ 3 exhaustive data bases of incident cases of sarcoma during 2 years

Rhône-Alpes 6 M inhab. 10% french popul.	Aquitaine 3 M inhab. 5% french popul.	Vénéto 5 M inhab. 8% italian popul.
		



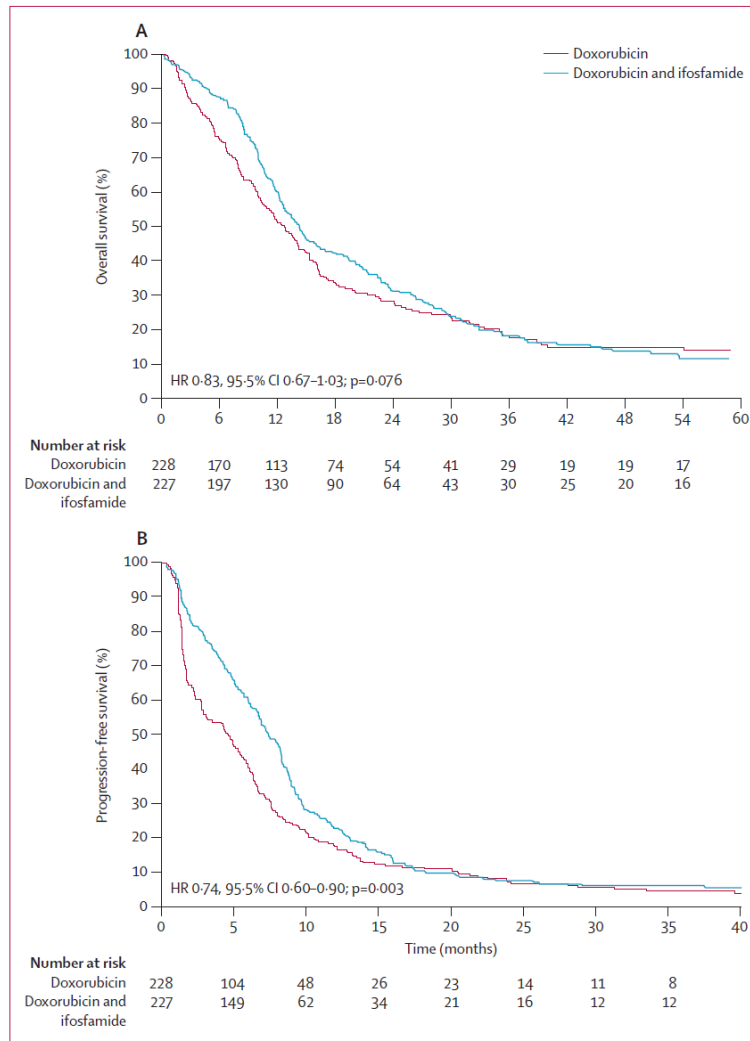
# Incidence of sarcoma



# Doxorubicin alone versus intensified doxorubicin plus ifosfamide for first-line treatment of advanced or metastatic soft-tissue sarcoma: a randomised controlled phase 3 trial

*Lancet Oncol* 2014; 15: 415–23

Ian Judson, Jaap Verweij, Hans Gelderblom, Jörg T Hartmann, Patrick Schöffski, Jean-Yves Blay, J Martijn Kerst, Josef Sufliarsky, Jeremy Whelan, Peter Hohenberger, Anders Krarup-Hansen, Thierry Alcindor, Sandrine Marreaud, Saskia Litière, Catherine Hermans, Cyril Fisher, Pancras C W Hogendoorn, A Paolo dei Tos, Winette T A van der Graaf, for the European Organisation and Treatment of Cancer Soft Tissue and Bone Sarcoma Group\*



	Doxorubicin group (n=228)	Doxorubicin and ifosfamide group (n=227)
Complete response	1 (<1%)	4 (2%)
Partial response	30 (13%)	56 (25%)
Stable disease	105 (46%)	114 (50%)
Progressive disease	74 (32%)	30 (13%)
Early death (progression)	4 (2%)	5 (2%)
Early death (other cause)	3 (1%)	2 (1%)
Not evaluable	11 (5%)	16 (7%)

Data are n (%).

**Table 3: Responses to treatment**

High doses when response or PFS is the most important endpoint (eg presurgery)

Figure 2: Kaplan-Meier curves for overall survival (A) and progression-free survival (B)  
HR=hazard ratio.

# After failure of anthracyclins

Ifosfamide

Trabectedine

Pazopanib

Gemcitabine and Docetaxel

Dacarbazine and Gem

# A Randomized Phase 3 Study of Trabectedin or Dacarbazine for the Treatment of Patients With Advanced Liposarcoma (LPS) or Leiomyosarcoma (LMS)

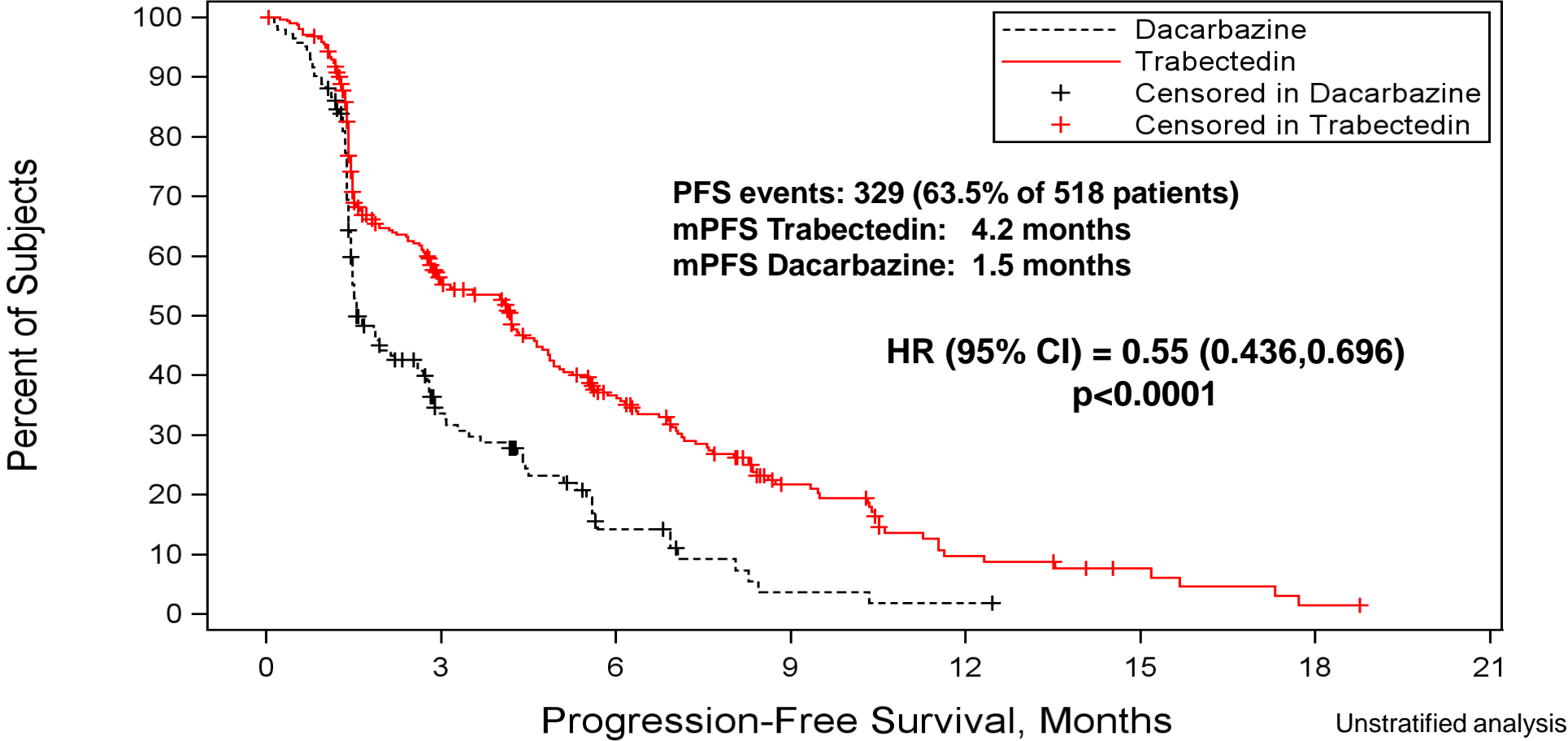
George D. Demetri, Margaret von Mehren, Robin Lewis Jones, Martee Leigh Hensley,  
Scott Schuetze, Arthur P. Staddon, Mohammed M. Milhem, Anthony D. Elias,  
Kristen N. Ganjoo, Hussein Abdul-Hassan Tawbi, Brian Andrew Van Tine,  
Alexander I. Spira, Andrew Peter Dean, Nushmia Z. Khokhar, Youn Choi Park,  
Roland E. Knoblauch, Trilok V. Parekh, Robert G. Maki, Shreyaskumar Patel

Dana-Farber Cancer Institute and Ludwig Center at Harvard Medical School, Boston, MA; Fox Chase Cancer Center, Philadelphia, PA;  
Seattle Cancer Care Alliance, Seattle, WA; Memorial Sloan Kettering Cancer Center, New York, NY;  
University of Michigan, Ann Arbor, MI; University of Pennsylvania, Philadelphia, PA; University of Iowa Hospitals and Clinics, Iowa City, IA;  
University of Colorado Cancer Center, Aurora, CO; Stanford Univ, Stanford, CA; University of Pittsburgh Cancer Institute, Pittsburgh, PA;  
Washington University in St Louis, St Louis, MO; Virginia Cancer Specialists, Fairfax, VA; St. John of God Hospital Subiaco, Subiaco, Australia; Janssen Pharmaceuticals,  
Raritan, NJ; Janssen Research & Development, LLC, Raritan, NJ;  
Mount Sinai School of Medicine, New York, NY; MD Anderson Cancer Center, Houston, TX



# Final Analysis of PFS

*(Investigator Assessed)*

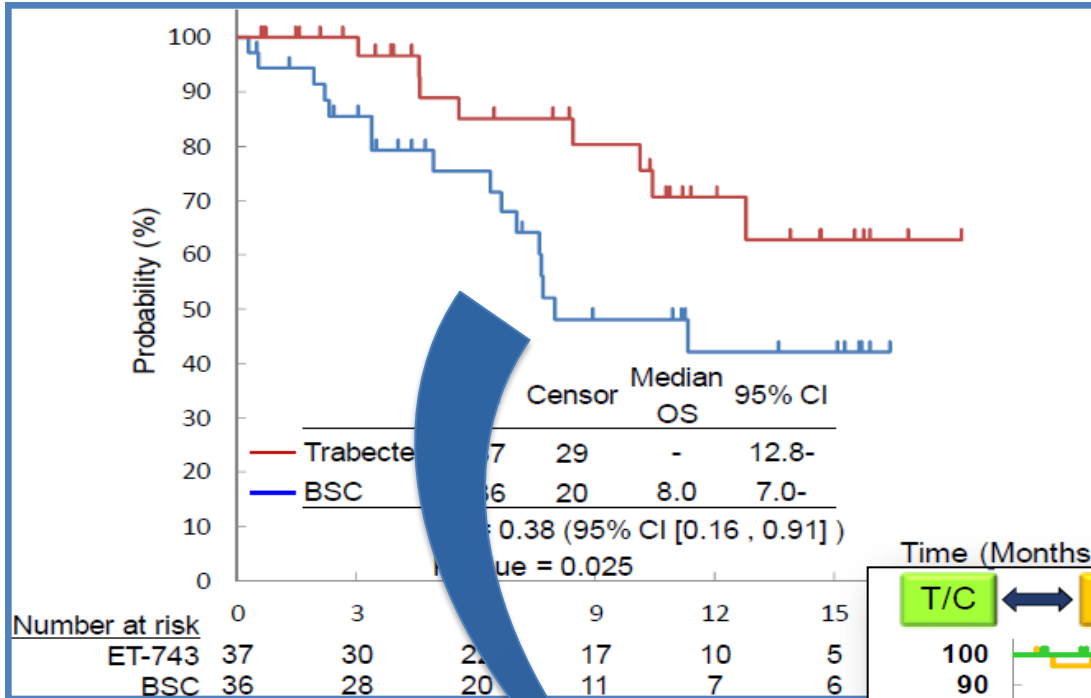


**No. Subjects at Risk**

Dacarbazine	173	35	10	2	1	0		
Trabectedin	345	133	71	29	10	5	1	0

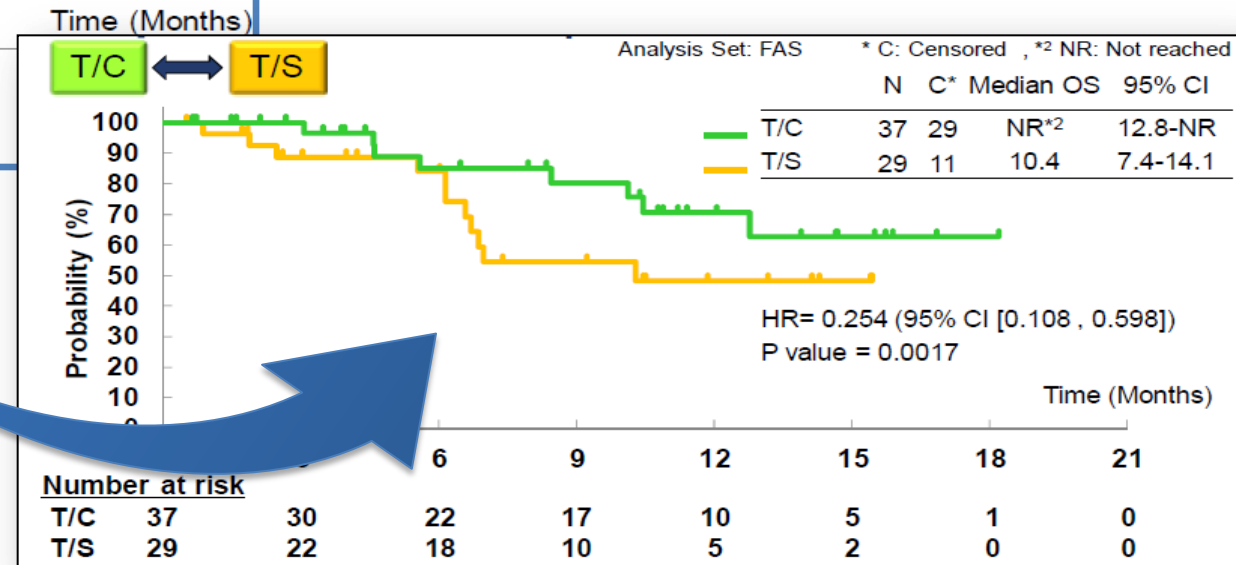
# Trabectedin vs BSC in Translocation-Related Sarcomas (TRS)

## Overall Survival



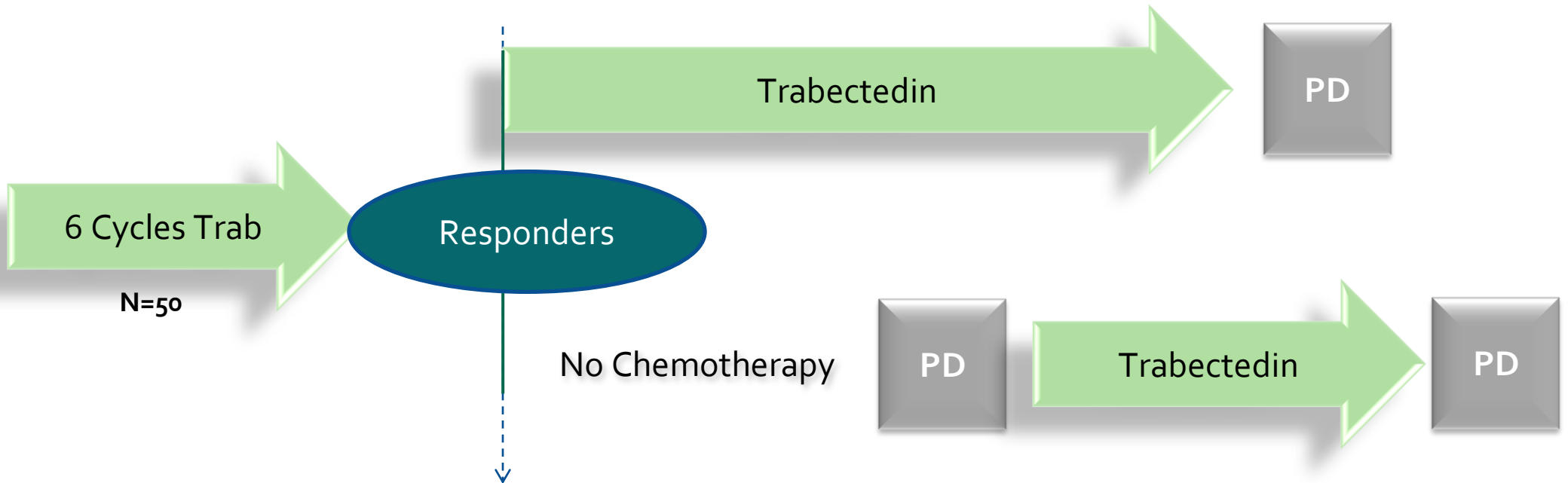
✓ Significant prolongation of OS HR=0,38

✓ Treatment with Trabectedin at crossover did not achieve same level of OS benefit that in the earlier line



# Trabectedin : T-DIS study – Drug Holiday and Rechallenge

## Interruption vs Continuation in Responding Patients After 6 Courses of Trabectedin



### Primary endpoint:

- PFR 24 weeks post Randomization

### Secondary endpoints:

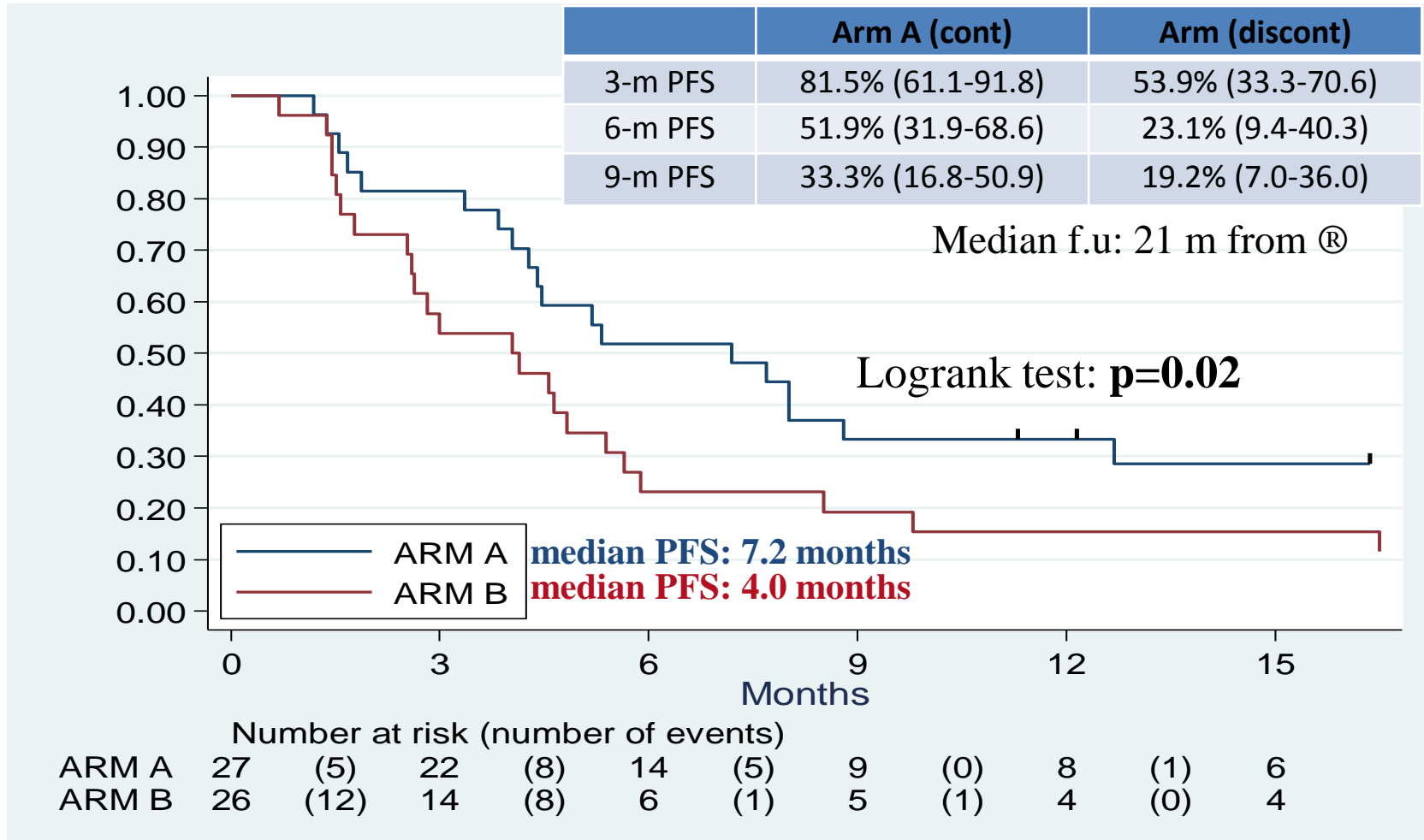
- ORR
- PFR at 12 & 54 weeks
- Survival at 12 & 24 months

N=156 at inclusion

® = 50

# T-Dis Maintenance Study

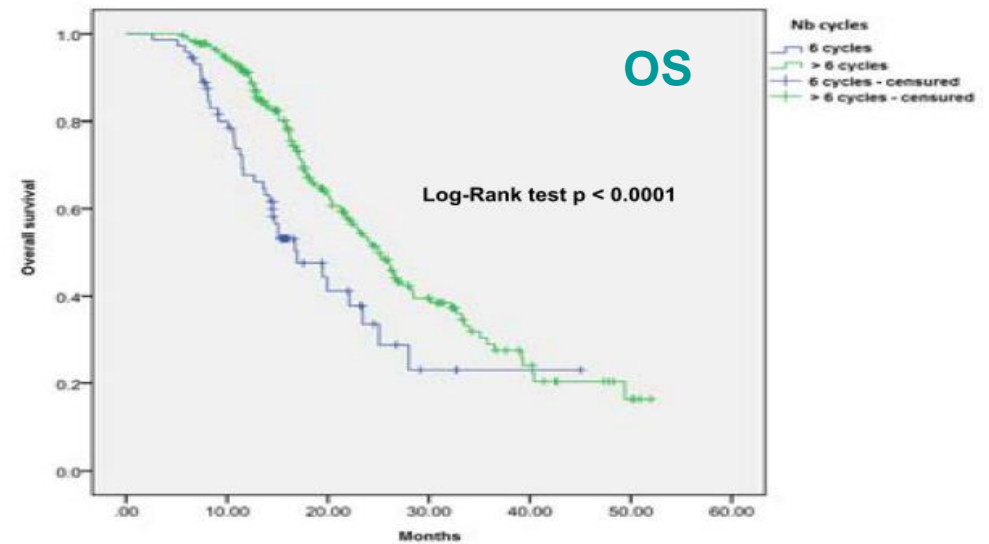
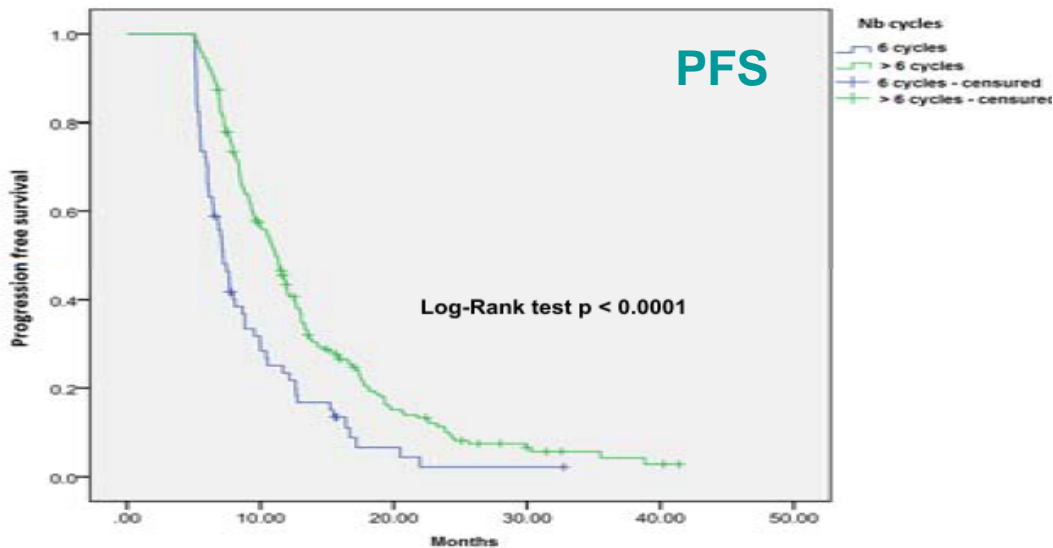
## Results: Progression Free Survival (ITT)



- After 6 cycles, 205 of the 273 patients with non-progressive disease received trabectedin as maintenance treatment and obtained a superior **PFS (median 11 vs. 7.2 months,  $p=0.0001$ )** and **OS (median 25.1 vs. 16.9 months,  $p<0.0001$ )** that those who stopped trabectedin after 6 cycles:

	Nb patients	Nb events	Median PFS	CI 95%
<b>Interruption</b>	68	61	7.2 months	(6.3 - 8)
<b>Maintenance therapy</b>	205	179	11.2 months	(10.3 - 12)

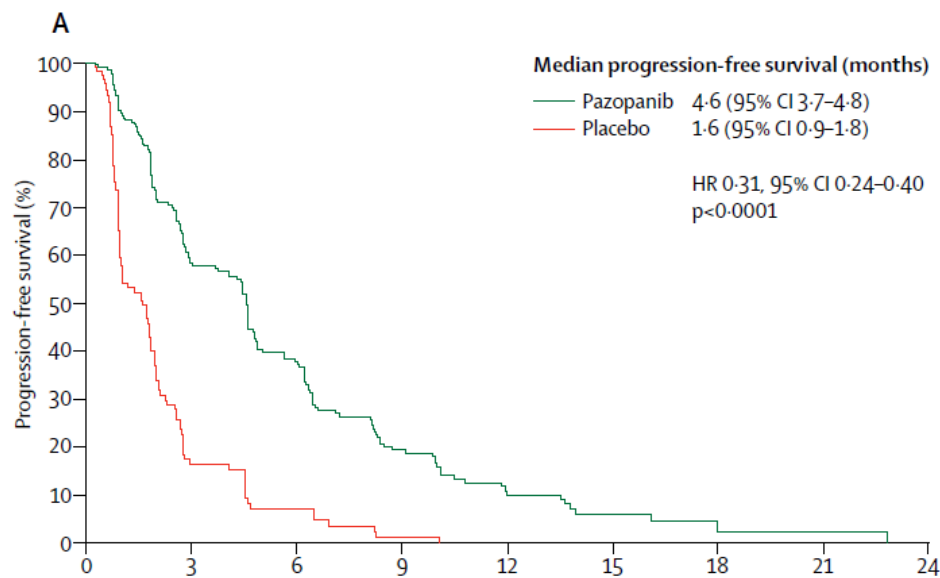
	Nb patients	Nb events	Median OS	CI 95%
<b>Interruption</b>	73	39	16.9 months	(11,8 - 22)
<b>Maintenance therapy</b>	223	113	25.1 months	(22.3 – 27.8)



# Pazopanib for metastatic soft-tissue sarcoma (PALETTE): a randomised, double-blind, placebo-controlled phase 3 trial

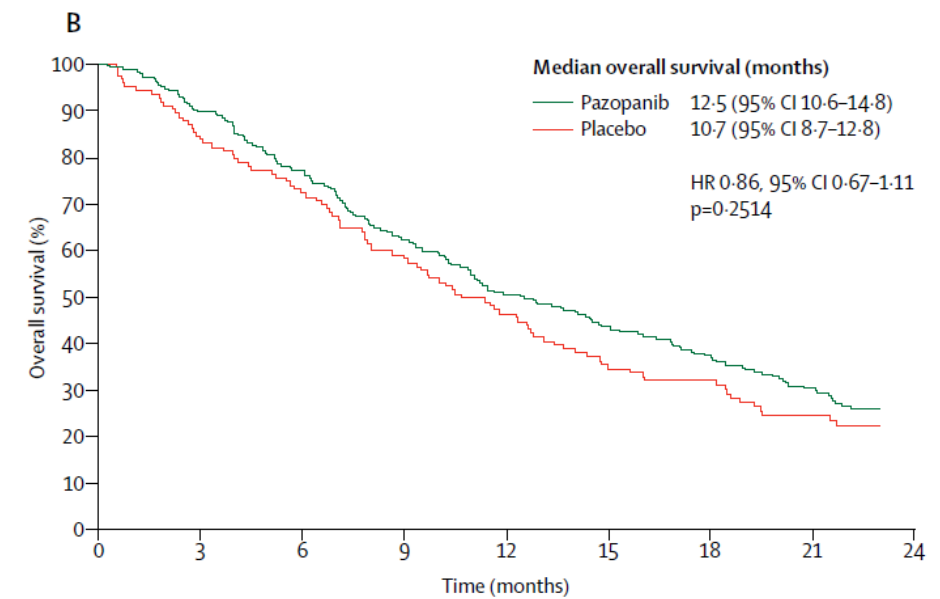


Winette T A van der Graaf, Jean-Yves Blay, Sant P Chawla, Dong-Wan Kim, Binh Bui-Nguyen, Paolo G Casali, Patrick Schöffski, Massimo Aglietta, Arthur P Staddon, Yasuo Beppu, Axel Le Cesne, Hans Gelderblom, Ian R Judson, Nobuhito Araki, Monia Ouali, Sandrine Marreaud, Rachel Hodge, Mohammed R Dewji, Corneel Coens, George D Demetri, Christopher D Fletcher, Angelo P Dei Tos, Peter Hohenberger, on behalf of the EORTC Soft Tissue and Bone Sarcoma Group and the PALETTE study group



Number at risk

Pazopanib	123	15	6	1	0	0	0	0
Placebo	246	103	63	30	12	4	1	1



Number at risk

Pazopanib	123	103	87	70	55	40	37	24
Placebo	246	216	185	149	119	103	87	57

# GeDDiS

A prospective randomised controlled phase III trial of gemcitabine and docetaxel compared with doxorubicin as first line treatment in previously untreated advanced unresectable or metastatic soft tissue sarcoma

Beatrice Seddon, Jeremy Whelan, Michael Leahy, Penella Woll, Fiona Cowie, Christian Rothermundt, Zoe Wood, Sharon Forsyth, Paul Patterson, Stephen Nash, Sandy Beare



CANCER  
RESEARCH  
UK

Cancer Research UK and  
**UCL Cancer Trials Centre**

# Trial Design

## Eligible patients (n=250)

### \*Stratification factors:

- age ( $\leq 18$  years,  $>18$  years)
- histological subtype:
  - Uterine leiomyosarcoma
  - Synovial sarcoma
  - Pleomorphic
  - Other types of eligible STS

1:1 randomisation\*

## Control Arm:

Doxorubicin 75 mg/m<sup>2</sup> day 1  
every 21 days x 6 cycles

## Investigational Arm:

Gemcitabine 675 mg/m<sup>2</sup> days 1, 8  
Docetaxel 75 mg/m<sup>2</sup> day 8  
every 21 days x 6 cycles

## Disease assessments (RECIST 1.1) at:

- Baseline
- 12 weeks post randomisation
- 24 weeks post randomisation
- 12 weekly thereafter

## Quality of life assessments at:

- Baseline
- 12 weeks post randomisation
- 18 weeks post randomisation
- 24 weeks post-randomisation

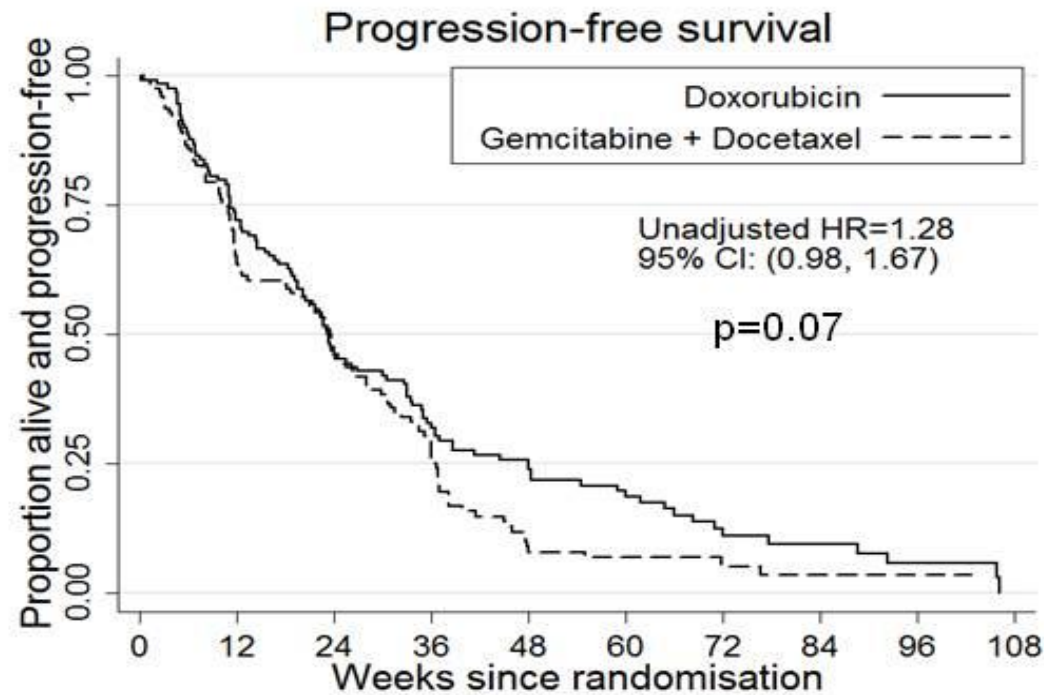
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PRESENTED AT:

ASCO Annual '15 Meeting



# Progression-free survival



Number at risk		0	12	24	36	48	60	72	84	96	108
Doxorubicin	129	93	58	39	26	18	9	5	3	0	0
Gemcitabine & Doc.	128	82	58	33	9	5	3	1	1	0	0

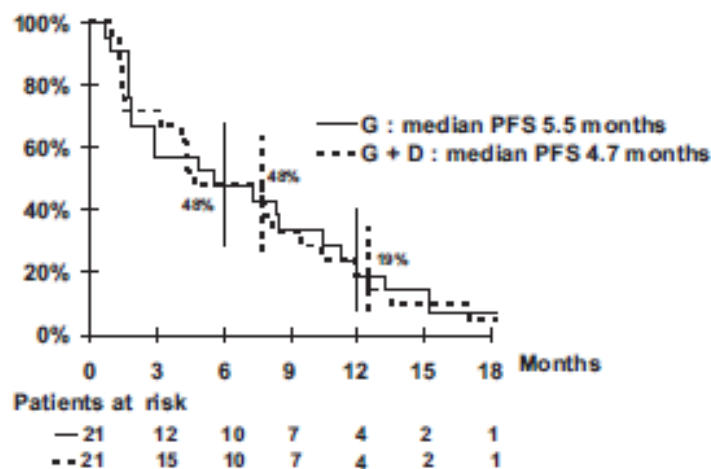
	Median PFS (months)	24 week PFS
Dox	5.4	46.1%
GemDoc	5.5	46.0%

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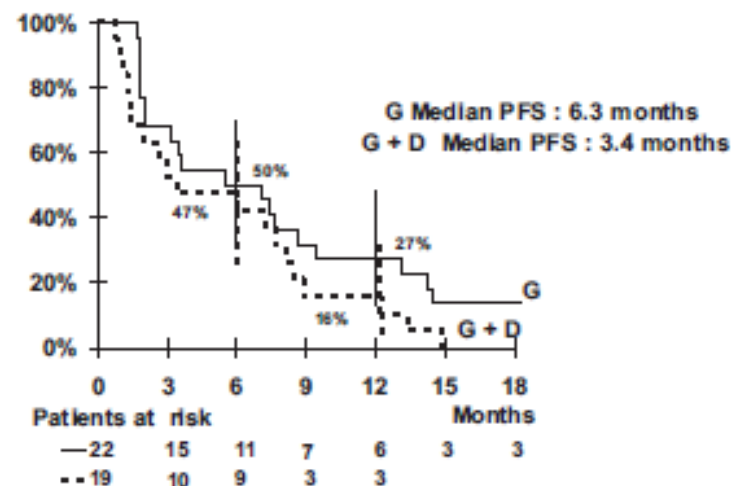
PRESENTED AT: ASCO Annual '15 Meeting

# Randomized Multicenter and Stratified Phase II Study of Gemcitabine Alone Versus Gemcitabine and Docetaxel in Patients with Metastatic or Relapsed Leiomyosarcomas: A Fédération Nationale des Centres de Lutte Contre le Cancer (FNCLCC) French Sarcoma Group Study (TAXOGEM study)

PATRICIA PAUTIER,<sup>a</sup> ANNE FLOQUET,<sup>c</sup> NICOLAS PENEL,<sup>d</sup> SOPHIE PIPERNO-NEUMANN,<sup>e</sup>  
 NICOLAS ISAMBERT,<sup>a</sup> ANNIE REY,<sup>b</sup> EMMANUELLE BOMPAS,<sup>h</sup> ANGELA CIOFFI,<sup>a</sup> CORINNE DELCAMBRE,<sup>i</sup>  
 DIDIER CUPISSOL,<sup>j</sup> FRANÇOISE COLLIN,<sup>f</sup> JEAN-YVES BLAY,<sup>k</sup> MARTA JIMENEZ,<sup>l</sup> FLORENCE DUFFAUD<sup>m</sup>



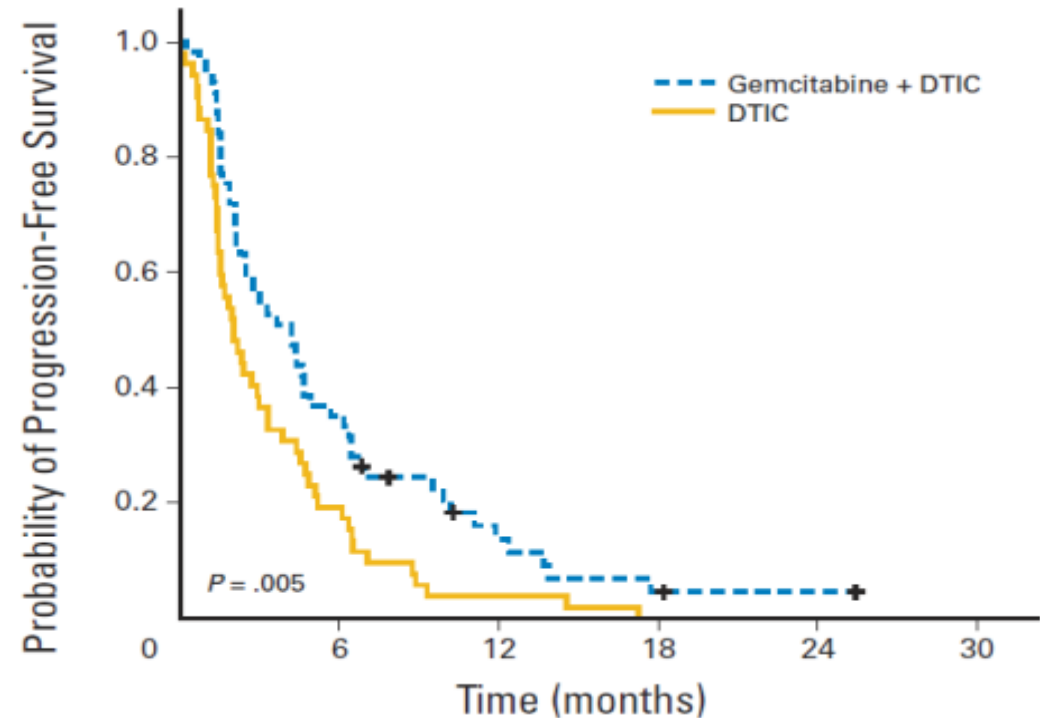
**Figure 1.** Kaplan–Meier curve of progression-free survival for the uterine leiomyosarcoma group.



**Figure 2.** Kaplan–Meier curve of progression-free survival for the nonuterine leiomyosarcoma group.

## ***Randomized Phase II Study Comparing Gemcitabine Plus Dacarbazine Versus Dacarbazine Alone in Patients With Previously Treated Soft Tissue Sarcoma: A Spanish Group for Research on Sarcomas Study***

- 113 pts with STS (2 previous lines of CT; adria & ifosfamide)
- Gem 1800mg/m<sup>2</sup> fixed + DTIC 500 mg/m<sup>2</sup> q2 weeks or DTIC 1200 mg/m<sup>2</sup> q3 weeks
- Primary endpoint, PFR @ 3 months (40% to 60%)



Novel agents  
for all sarcomas?

Randomized, open-label, multicenter,  
phase 3 study of eribulin versus dacarbazine in  
patients (pts) with leiomyosarcoma (LMS) and  
adipocytic sarcoma (ADI)

Professor Dr. Patrick Schöffski

Department of General Medical Oncology

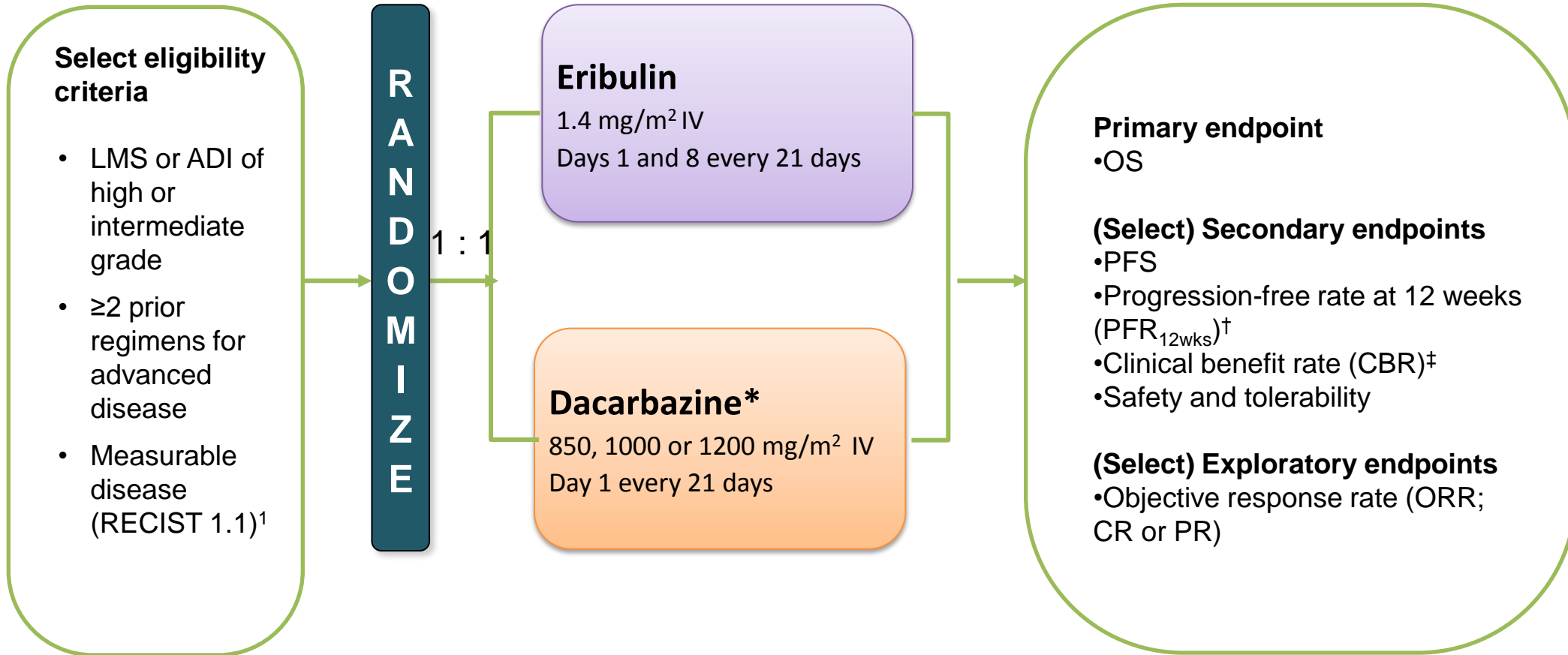
University Hospitals Leuven, Leuven Cancer Institute

KU Leuven, Leuven

Abstract # LBA10502 submitted by **P Schöffski**, R Maki, A Italiano, H Gelderblom, E Choy, G Grignani, V Camargo, S Bauer, SY Rha, S Chawla, JY Blay, P Hohenberger, DR D'Adamo, B Wang, B Chmielowski, AL Cesne, GD Demetri and S Patel.

Clinicaltrials.gov identifier: NCT01327885

# Study design and objectives



\*Starting dose selected by the Investigator at study initiation; <sup>†</sup>PFR<sub>12wks</sub>, proportion of patients who are still alive without disease progression at 12 weeks from randomization; <sup>‡</sup>CBR = CR or PR or durable SD, SD  $\geq 11$  weeks  
CR, complete response; PR, partial response; RECIST, Response Evaluation Criteria in Solid Tumors; SD, stable disease  
1. Eisenhauer et al. *Eur J Cancer* 2009;45:228–247.

# Key patient characteristics

- There were no significant differences in baseline characteristics between the 2 treatment arms:

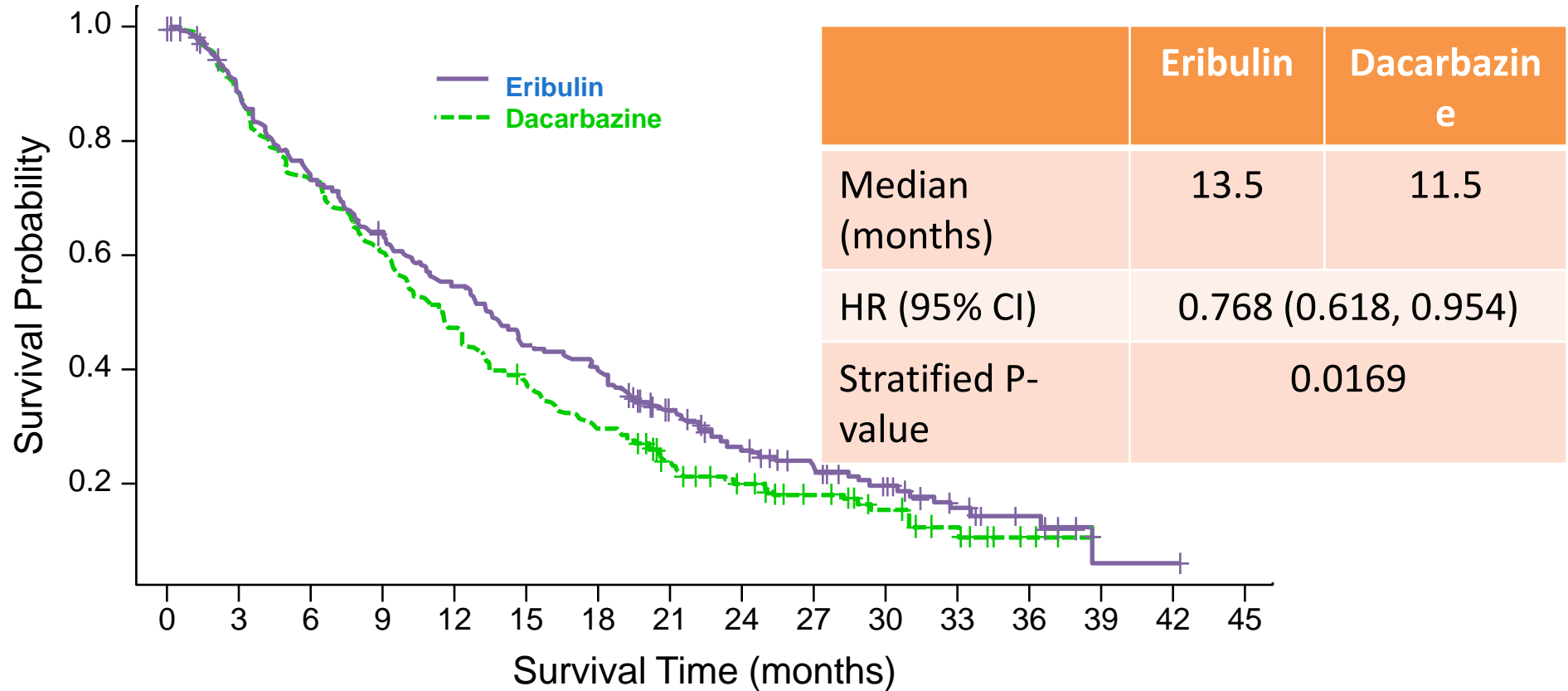
Category	Subgroup	Eribulin (n=228) n (%)	Dacarbazine (n=224) n (%)
Age	<65 years	178 (78.1)	178 (79.5)
	≥65 years	50 (21.9)	46 (20.5)
Sex	Female	161 (70.6)	142 (63.4)
Race	White	162 (71.1)	168 (75.0)
	Black or African American	6 (2.6)	6 (2.7)
	Asian*	18 (7.9)	16 (7.1)
	Other/NA	42 (18.4)	34 (15.2)
	ECOG PS	0	111 (48.7)
	1	114 (50.0)	121 (54.0)
	2	3 (1.3)	13 (5.8)
Geographic region <sup>†</sup>	Region 1	87 (38.2)	86 (38.4)
	Region 2	106 (46.5)	105 (46.9)
	Region 3	35 (15.4)	33 (14.7)

# Key patient characteristics (continued)

Category	Subgroup	Eribulin (n=228) n (%)	Dacarbazine (n=224) n (%)
Histology	ADI	75 (32.9)	78 (34.8)
	LMS	152 (66.7)	145 (64.7)
	Other	1 (0.4)	1 (0.4)
ADI histological subtype	Dedifferentiated	32 (14.0)	37 (16.5)
	Myxoid/Round cell	30 (13.2)	26 (11.6)
	Pleomorphic	13 (5.7)	15 (6.7)
LMS primary site	Uterine	68 (29.8)	63 (28.1)
	Nonuterine	83 (36.4)	82 (36.6)
	Unknown	1 (0.4)	0
Tumor grade	High	150 (65.8)	152 (67.9)
	Intermediate	77 (33.8)	69 (30.8)
	Not done	1 (0.4)	3 (1.3)
Number of prior regimens for advanced disease	0	1 (0.4)	1 (0.4)
	1	15 (6.6)	14 (6.3)
	2	116 (50.9)	98 (43.8)
	>2	96 (42.1)	111 (49.6)



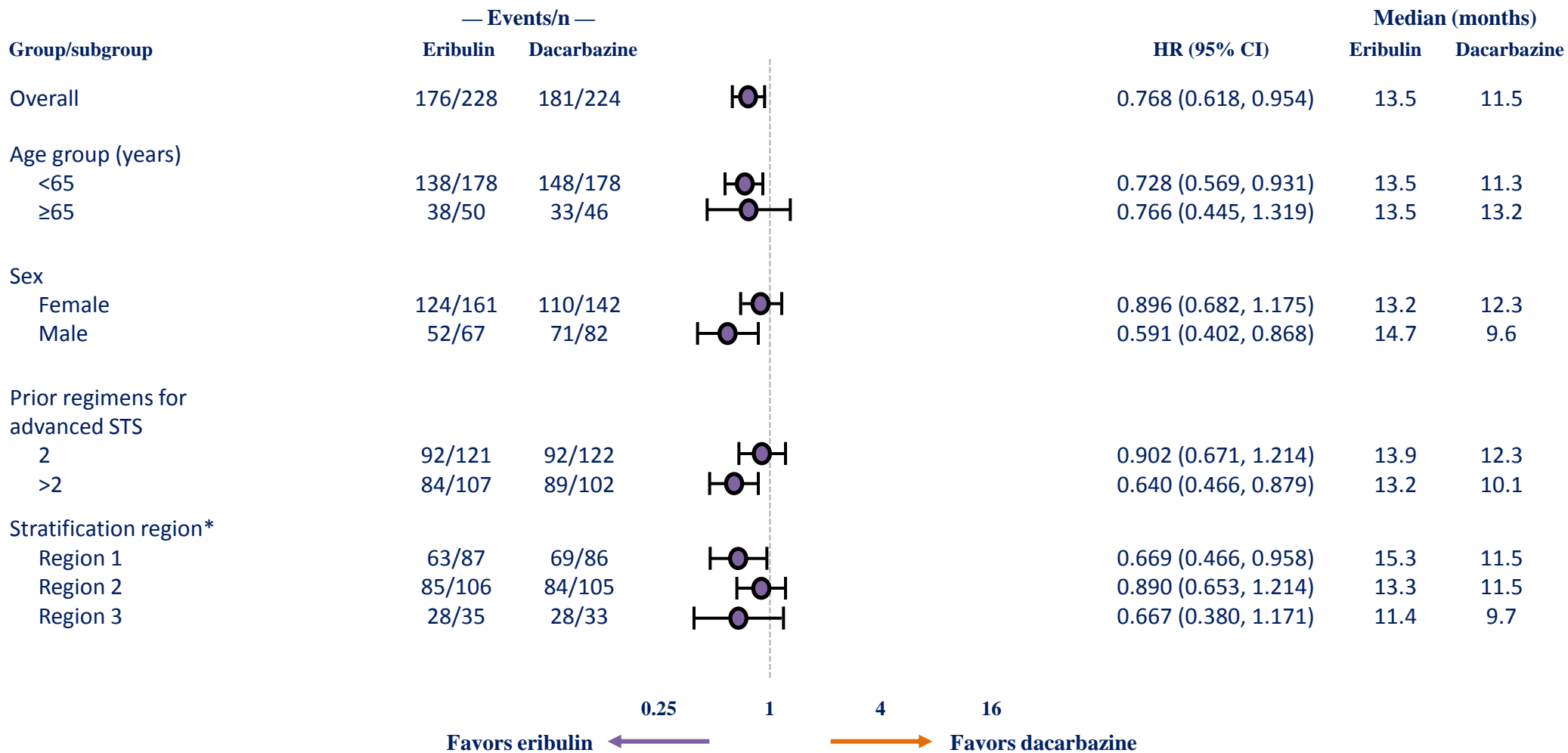
# Primary endpoint: OS



Patients at Risk:		0	3	6	9	12	15	18	21	24	27	30	33	36	39	42
Eribulin	228	197	162	138	120	97	88	64	45	34	25	14	7	1	1	0
Dacarbazine	224	190	158	130	103	81	64	45	32	24	16	8	3	0	0	0

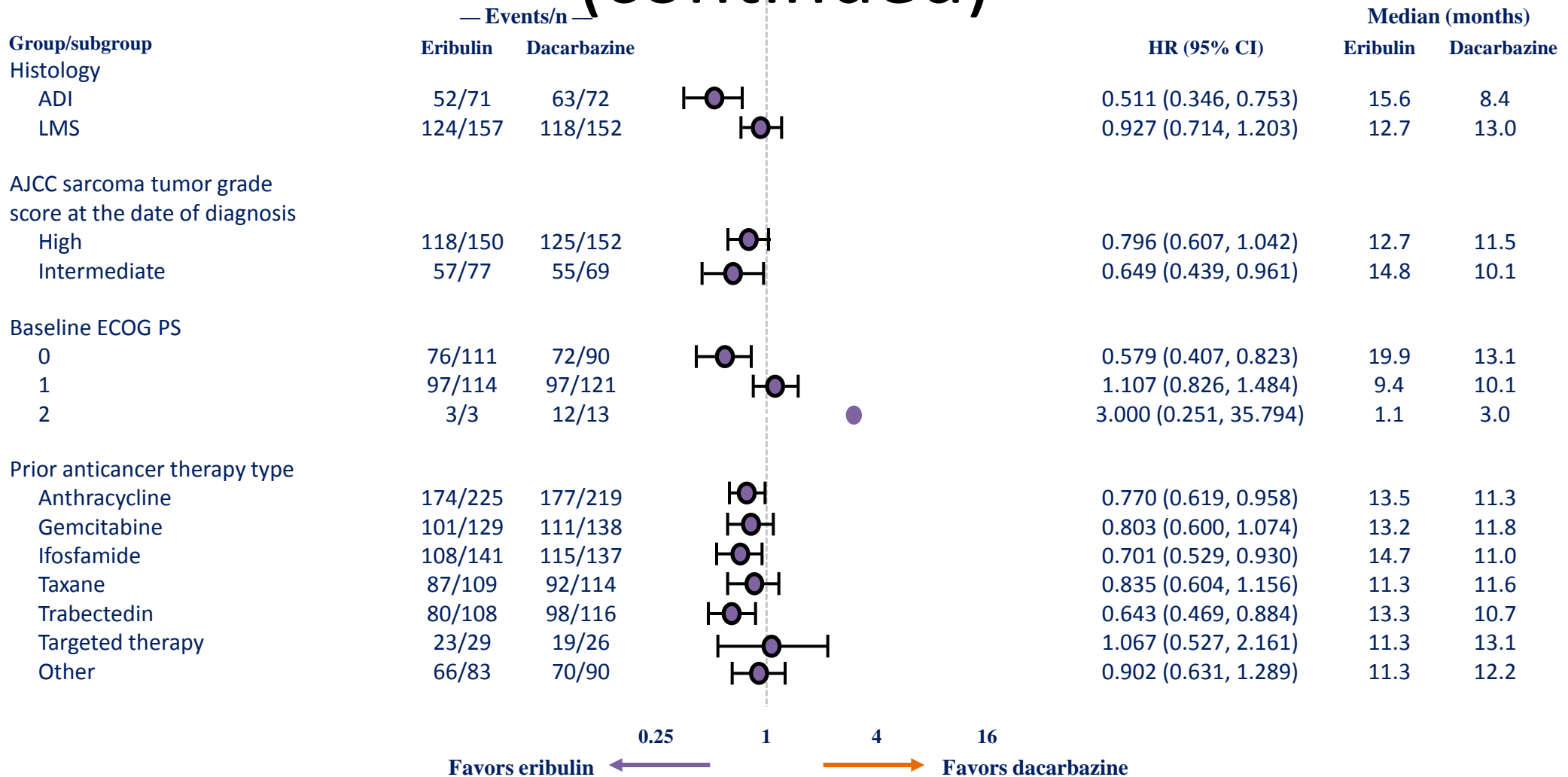
- The primary endpoint of OS was met, indicating a 30% improvement (based on HR) CI, confidence interval

# Preplanned OS subgroups analysis



\*Region 1: USA, Canada; Region 2: Western Europe, Australasia, Israel; Region 3: Eastern Europe, Latin America, Asia.  
 CI, confidence interval; HR, hazard ratio; OS, overall survival; STS, soft tissue sarcoma.

# Preplanned OS subgroups analysis (continued)



ADI, adipocytic sarcoma; AJCC, American Joint Committee on Cancer; CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group performance status; HR, hazard ratio; LMS, leiomyosarcoma; OS, overall survival.

# Additional efficacy endpoints

	<b>Eribulin (n=228)</b>	<b>Dacarbazine (n=224)</b>
PFR <sub>12wks</sub> , % (n) [95% CI*]	33.3% (76) [27.2, 39.9]	28.6% (64) [22.8, 35.0]
OR (95% CI); P-value <sup>†</sup>	1.3 (0.8, 1.9); 0.253	
ORR; % (n)	3.9 (9)	4.9 (11)

<b>Best overall response</b>	<b>Eribulin (n=228) % (n)</b>	<b>Dacarbazine (n=224) % (n)</b>
CR	0	0
PR	3.9 (9)	4.9 (11)
SD	52.2 (119)	47.8 (107)
PD	39.0 (89)	39.3 (88)
NE/Unknown	4.8 (11)	8.0 (18)

Tumor assessments are based on RECIST 1.1.<sup>1</sup>

\*95% CI was calculated using exact method of binomial distribution; <sup>†</sup>P-value and odds ratio were calculated using the stratified Cochran-Mantel-Haenszel method.

CI, confidence interval; CR, complete response; NE, not evaluable; OR, odds ratio; ORR, objective response rate; PD, partial disease; PFR<sub>12wks</sub>, proportion of patients who were still alive without disease progression at 12 weeks from randomization; PR, partial response; SD, stable disease.

Treatments specific for  
histological and molecular  
subsets of sarcomas?

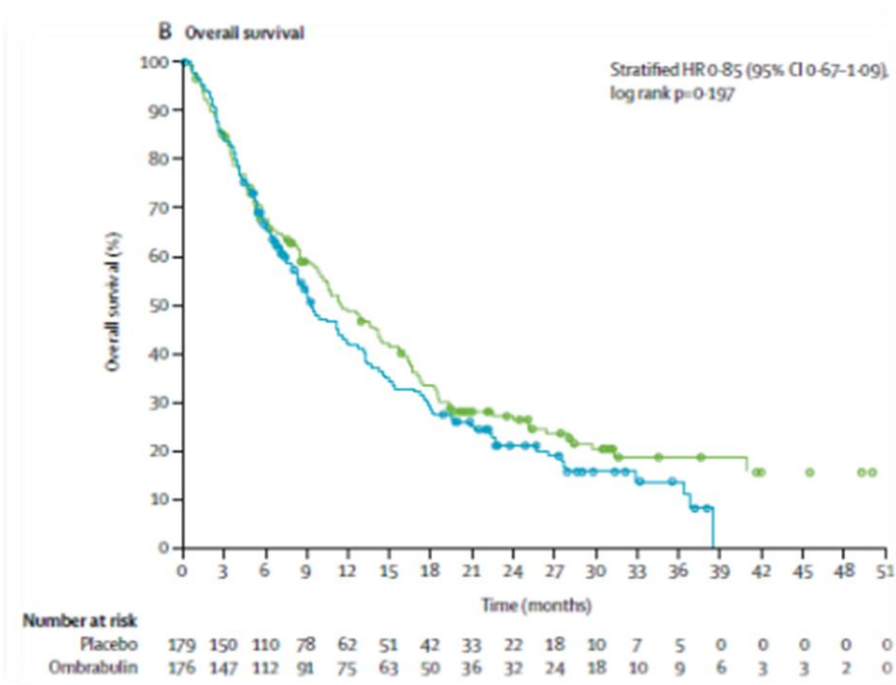
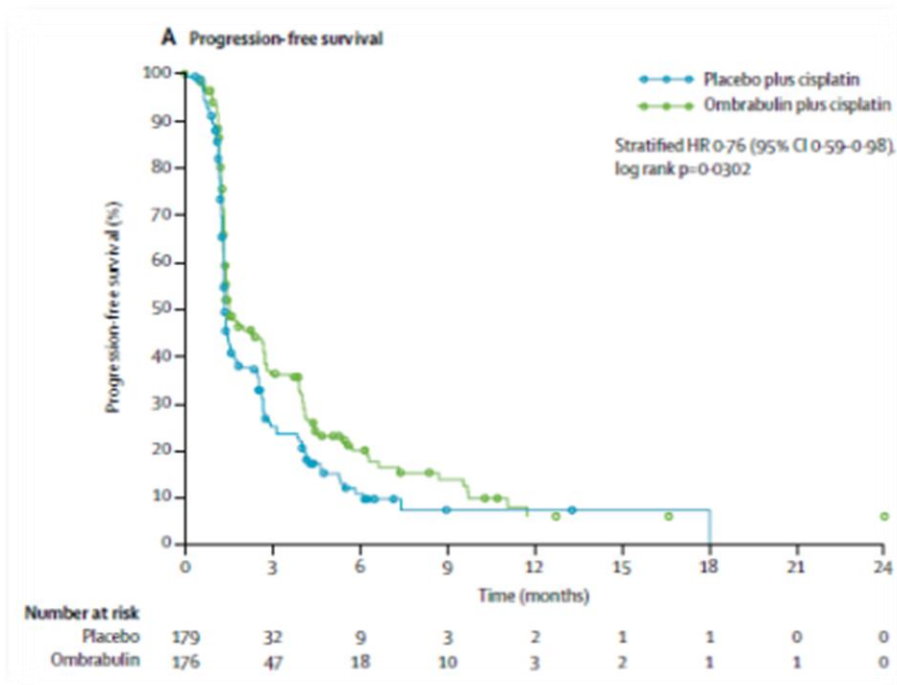
# Conclusions

- Doxo, Ifo, DTIC, Trabectedine, pazopanib
- Antiangiogéniques autres
- Gemcitabine, Taxol
- Eribuline
- Traitement adapté aux altérations moléculaires
- Immunothérapie en cours d'étude

# Ombrabulin plus cisplatin versus placebo plus cisplatin in patients with advanced soft-tissue sarcomas after failure of anthracycline and ifosfamide chemotherapy: a randomised, double-blind, placebo-controlled, phase 3 trial



Jean-Yves Blay, Zsuzsanna Pápai, Anthony W Tolcher, Antoine Italiano, Didier Cupissol, Antonio López-Pousa, Sant P Chawla, Emmanuelle Bompas, Nada Babovic, Nicolas Penel, Nicolas Isambert, Arthur P Staddon, Esma Saâda-Bouziid, Armando Santoro, Fabio A Franke, Patrick Cohen, Solenn Le-Guenec, George D Demetri



# Activity of regorafenib (RE) in leiomyosarcomas (LMS) and other types of soft-tissue sarcomas (OTS): results of a double-blind, randomized placebo (PL) controlled phase II trial

MIR Olivier, BRODOWICZ Thomas, WALLET Jennifer , ITALIANO Antoine , LE CESNE Axel , BLAY Jean-Yves, RYCKEWAERT Thomas , BERTUCCI François, PIPERNO-NEUMANN Sophie, PLONER Ferdinand, TOULMONDE Maud , DOMONT Julien, SAADA-BOUZID Esma, DELCAMBRE Corinne, ISAMBERT Nicolas, CLISANT Stéphanie, TAIEB Sophie, LINDNER Elisabeth, LIEGL-ATZAWAGER Bernadette, PENEL Nicolas

*On behalf of the French Sarcoma Group and Sarcoma Platform Austria*





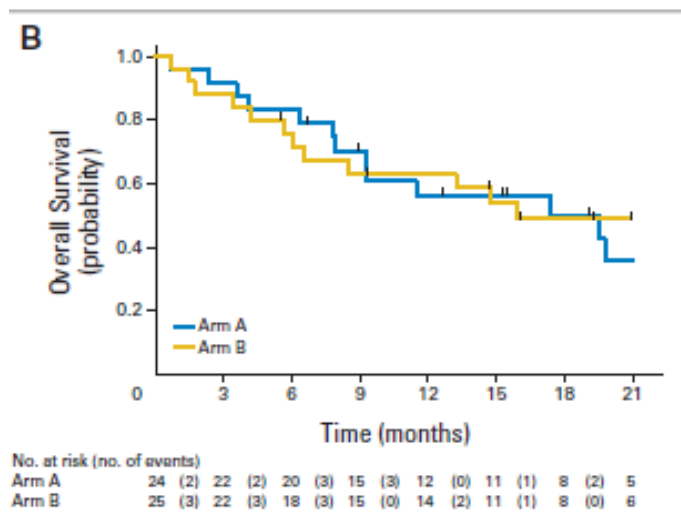
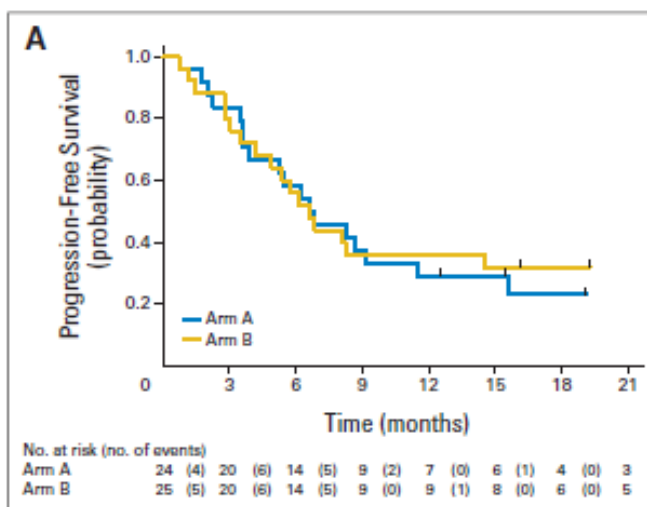
# Paclitaxel Given Once Per Week With or Without Bevacizumab in Patients With Advanced Angiosarcoma: A Randomized Phase II Trial

Isabelle L. Ray-Coquard, Julien Domont, Emmanuelle Tresch-Bruneel, Emmanuelle Bompas, Philippe A. Cassier, Olivier Mir, Sophie Piperno-Neumann, Antoine Italiano, Christine Chevreau, Didier Cupissol, François Bertucci, Jacques-Olivier Bay, Olivier Collard, Esma Saada-Bouziid, Nicolas Isambert, Corinne Delcambre, Stéphanie Clisant, Axel Le Cesne, Jean-Yves Blay, and Nicolas Penel

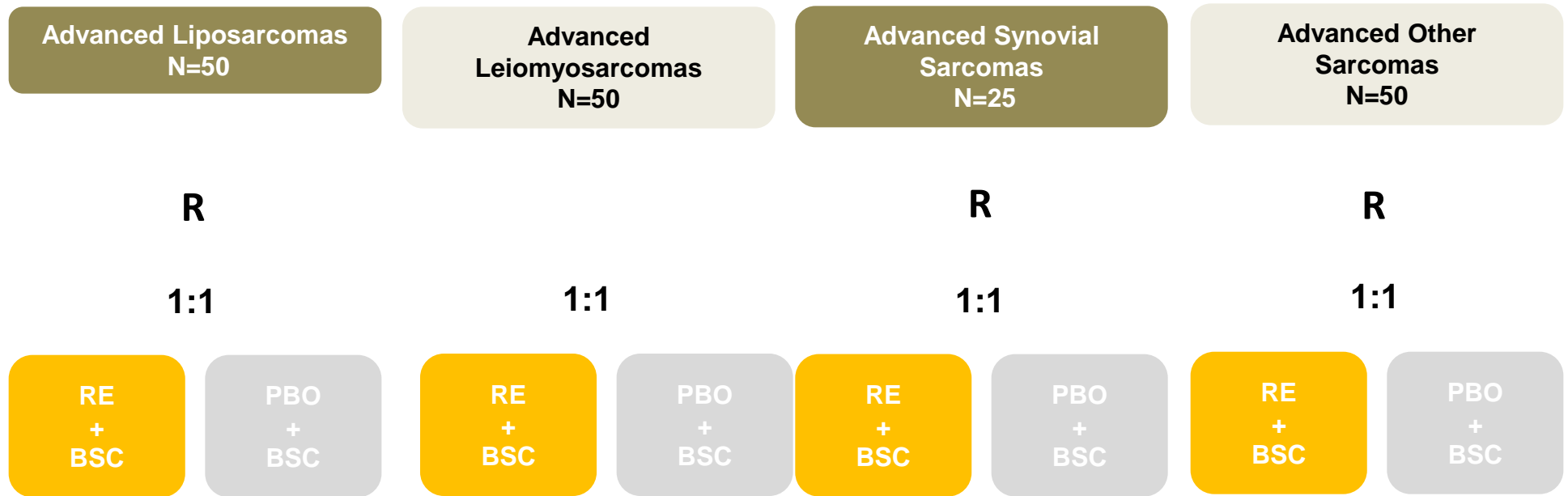
**Table 1.** Baseline Patient Demographics and Clinical Characteristics

Characteristic	No. (%) of Patients	
	Arm A (n = 24)	Arm B (n = 25)
<b>Sex</b>		
Female	18 (75.0)	20 (80.0)
Male	6 (25.0)	5 (20.0)
<b>Performance status*</b>		
0	12 (50.0)	12 (48.0)
1	12 (50.0)	13 (52.0)
<b>Stratification</b>		
Superficial angiosarcoma	16 (66)	16 (64)
Visceral angiosarcoma	8 (34)	9 (36)
Radiation induced	12 (50.0)	12 (48.0)
De novo	12 (50.0)	13 (52.0)
<b>Primary site of angiosarcoma</b>		
Breast	12 (50.0)	12 (48.0)
Skin	3 (12.5)	3 (12.0)
Liver	3 (12.5)	0
Bone	2 (8.3)	1 (4.0)
Heart	0	2 (8.0)
Spleen	0	2 (8.0)
Pleura	2 (8.3)	0
Mesentery	1 (4.2)	1 (4.0)
Parotid	0	1 (4.0)
Perineal wall	1 (4.2)	0
Retroperitoneum	0	1 (4.0)
Unknown	0	1 (4.0)
<b>Grade†</b>		
1	2 (8.3)	3 (12.0)
2	5 (20.8)	7 (28.0)
3	11 (45.8)	8 (32.0)
Unknown	6 (25.0)	7 (28.0)
<b>Metastatic disease</b>	13 (54.2)	16 (64.0)
<b>Only one metastatic site</b>	9 (37.5)	10 (40.0)
<b>Most common metastatic site</b>		
Lung	4 (16.7)	7 (28.0)
Liver	4 (16.7)	6 (24.0)
Bone	2 (8.3)	2 (8.0)
Soft tissue	2 (8.3)	0
Skin	5 (20.8)	3 (12.0)
Lymph nodes	1 (4.2)	1 (4.0)
Previous anthracycline	9 (37.5)	7 (28.0)

NOTE. Patients enrolled onto arm A received paclitaxel once per week alone; those in arm B, paclitaxel once per week plus bevacizumab.  
\*According to WHO criteria.  
†According to Fédération Nationale des Centres de Lutte contre le Cancer criteria.



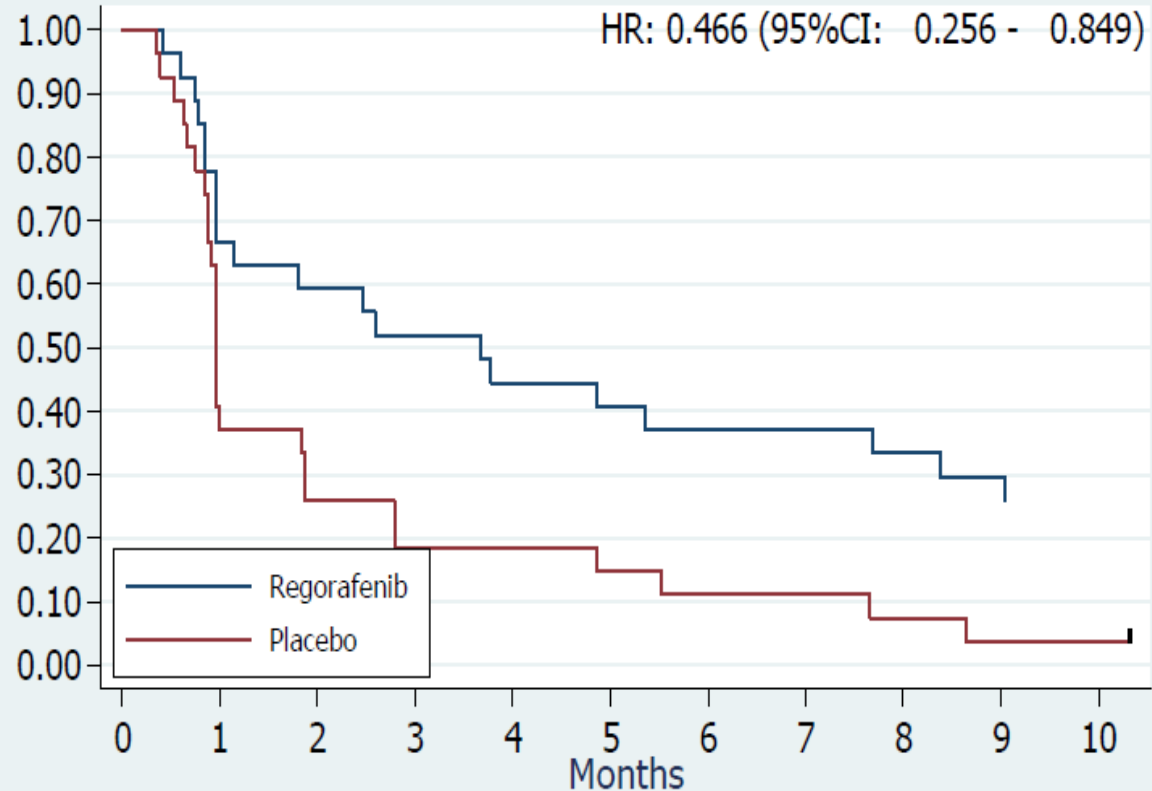
# Patients and methods



- 4 parallel randomized, double-blind, placebo-controlled, multi-center phase II studies in pts with refractory STS
- Regorafenib (160 mg once daily, three weeks on/one week off) plus BSC *versus* placebo plus BSC
- Stratification: prior exposure to pazopanib and country



# PFS – other sarcomas



**Median PFS**

**3.7 months (1.0 – 8.4)**

**vs**

**1.0 months (0.9 – 1.9)**

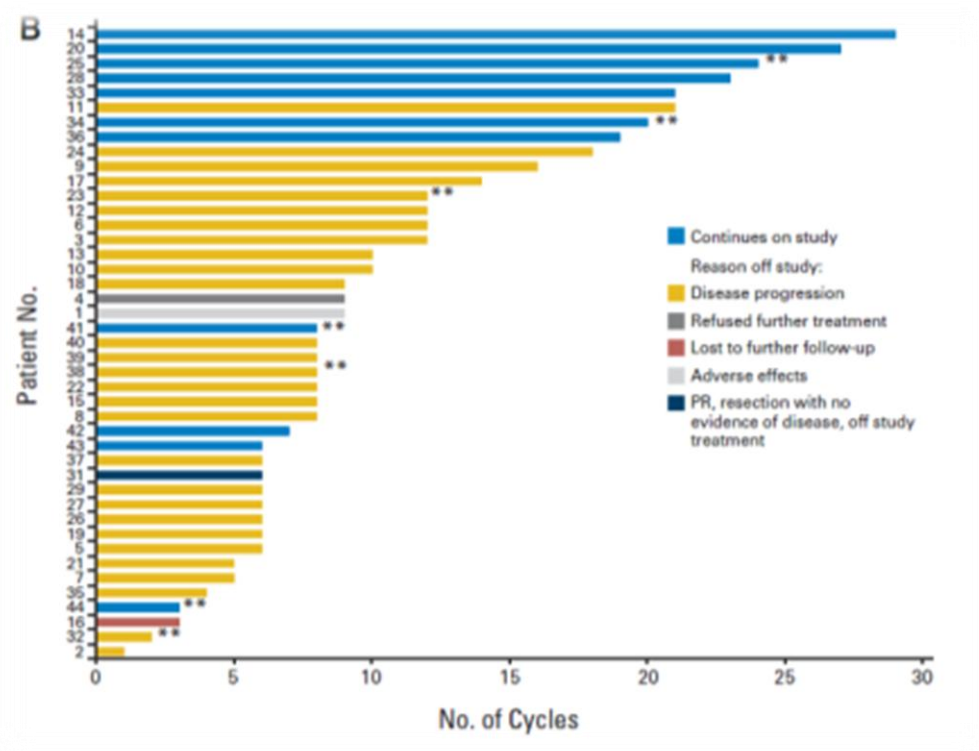
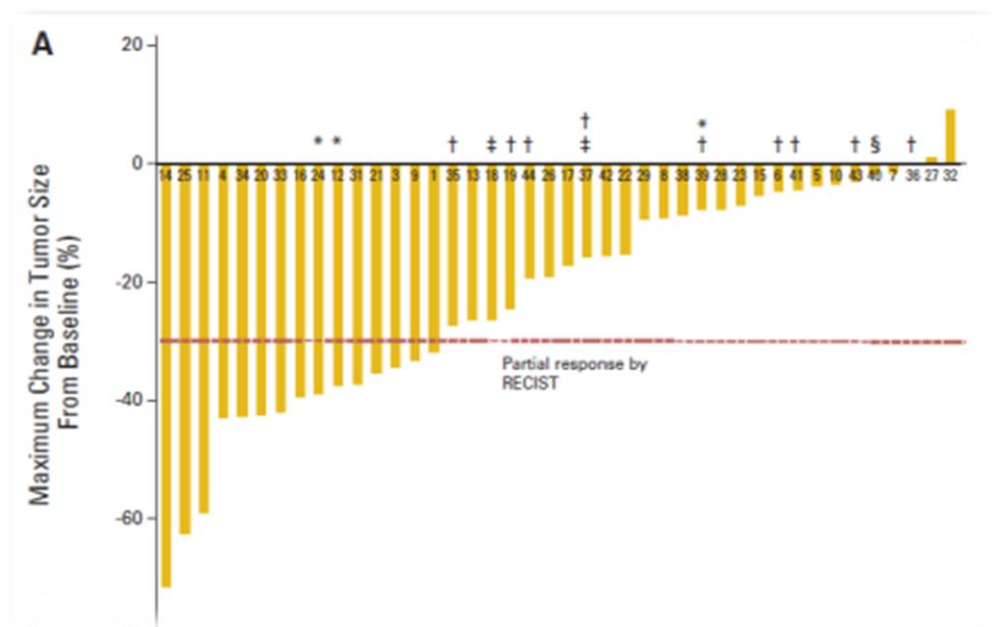
**P=0.008**

Number at risk (number of events)

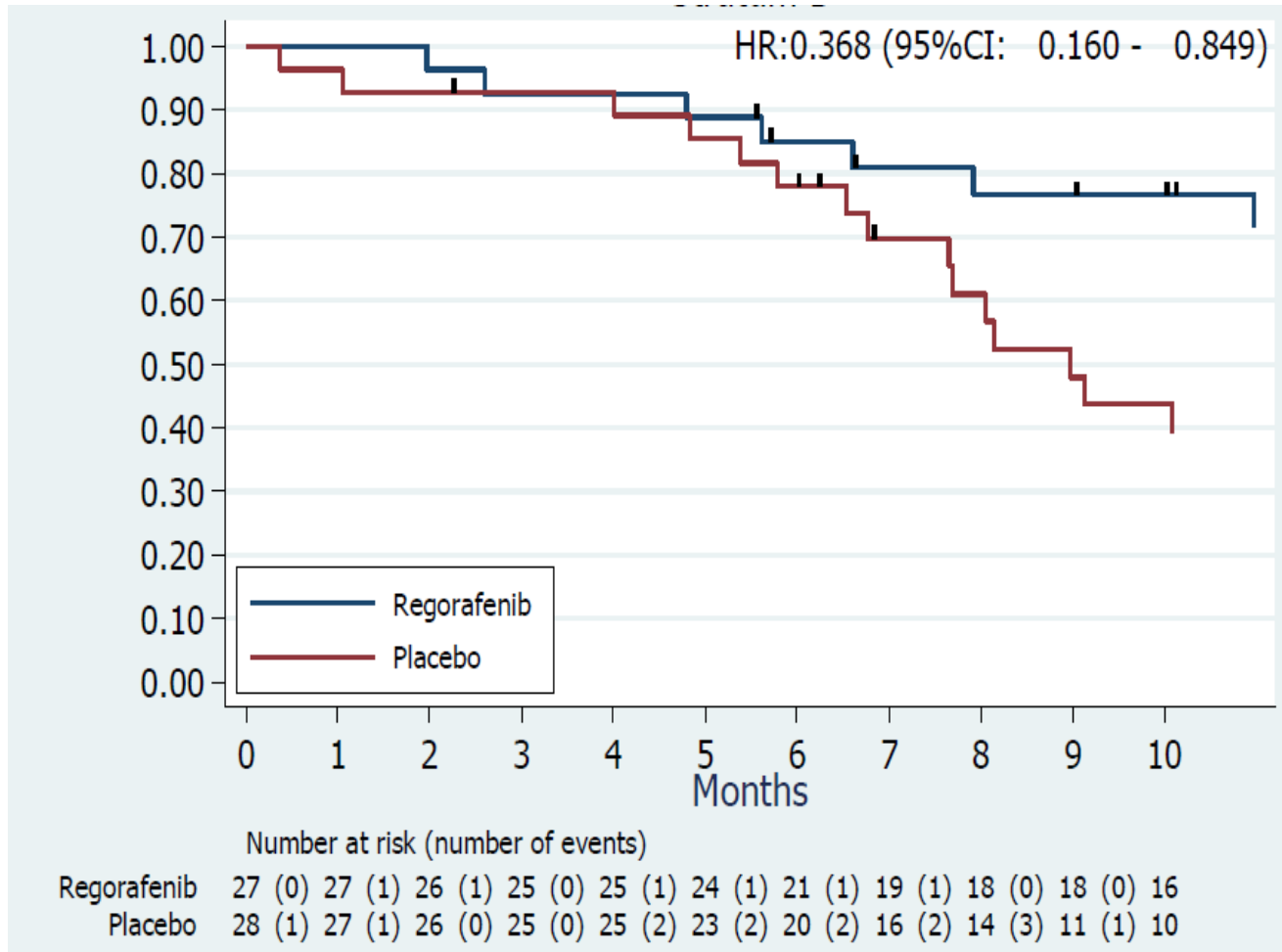
Regorafenib	27 (9)	18 (2)	16 (2)	14 (2)	12 (1)	11 (1)	10 (0)	10 (1)	9 (1)	8 (1)	7
Placebo	27 (17)	10 (3)	7 (2)	5 (0)	5 (1)	4 (1)	3 (0)	3 (1)	2 (1)	1 (0)	1

# Cediranib for Metastatic Alveolar Soft Part Sarcoma

Shivaani Kummar, Deborah Allen, Anne Monks, Eric C. Polley, Curtis D. Hose, S. Percy Ivy, Ismail B. Turkbey, Scott Lawrence, Robert J. Kinders, Peter Choyke, Richard Simon, Seth M. Steinberg, James H. Doroshow, and Lee Helman



# OS - Leiomyosarcoma



**P=0.01**

**Median not reached**

**Cross-over in Placebo  
arm: 20/28**

# The off-label use of targeted therapies in sarcomas: the OUTC'S program

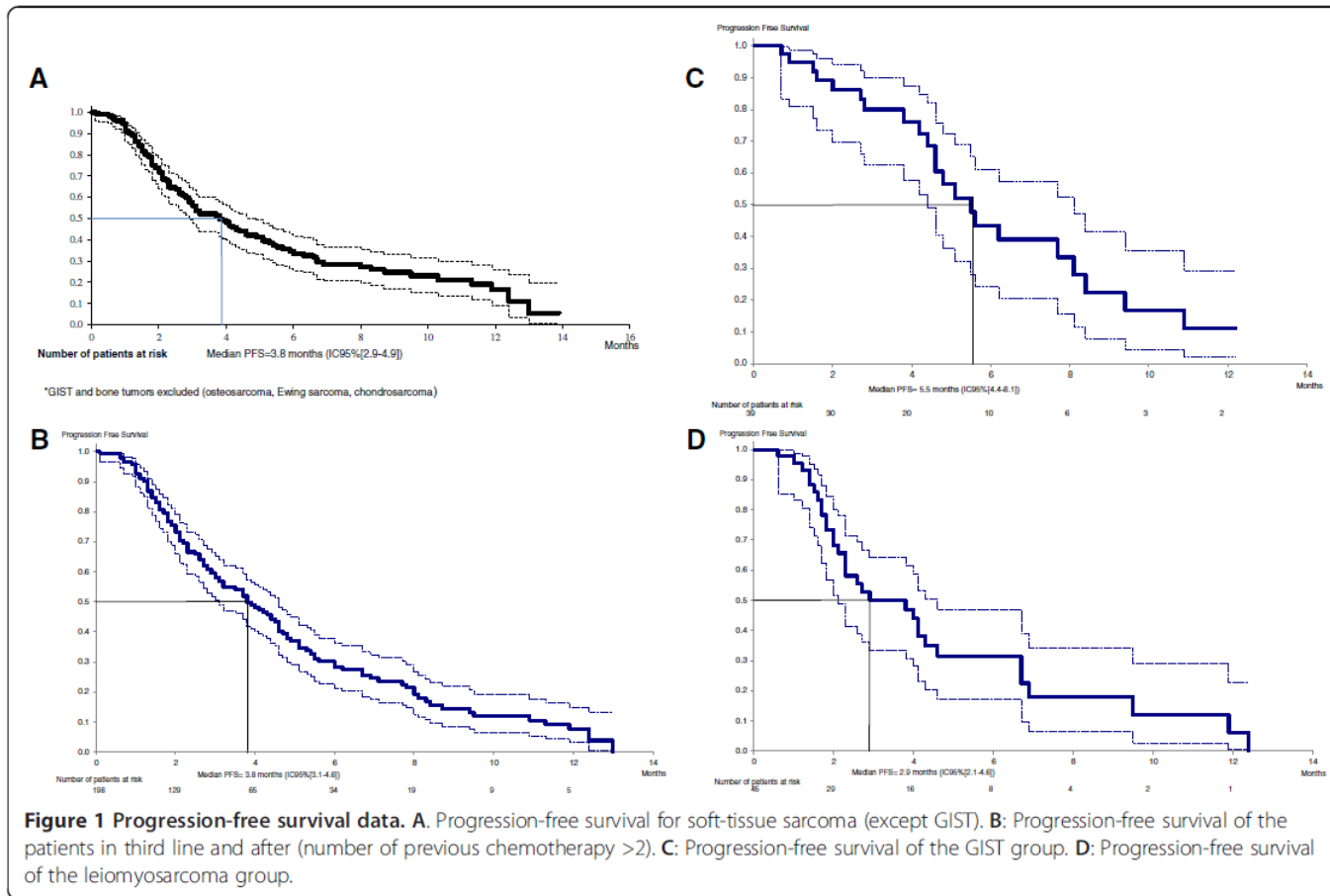
Lauriane Eberst<sup>1,2</sup>, Claire Cropet<sup>1</sup>, Axel Le Cesne<sup>3</sup>, Patricia Pautier<sup>3</sup>, Nicolas Penel<sup>4</sup>, Antoine Adenis<sup>4</sup>, Christine Chevreau<sup>5</sup>, Jacques-Olivier Bay<sup>6,7</sup>, Olivier Collard<sup>8</sup>, Didier Cupissol<sup>9</sup>, Florence Duffaud<sup>10</sup>, Jean-Claude Gentet<sup>10</sup>, Sophie Piperno-Neumann<sup>11</sup>, Perrine Marec-Berard<sup>1</sup>, Emmanuelle Bompas<sup>12</sup>, Antoine Thyss<sup>13</sup>, Loic Chaigneau<sup>14</sup>, Philippe Cassier<sup>1</sup>, François Bertucci<sup>15</sup>, Jean-Yves Blay<sup>1,2</sup> and Isabelle Ray-Coquard<sup>1,2\*</sup>

**Table 2 Targeted therapy by histotypes**

Targeted therapy	N	%	Histotype 1	n (%)	Histotype 2	n (%)	Histotype 3	n (%)	Histotype 4	n (%)	Histotype 5	n (%)
Sorafenib (1)	125	45	GIST	31 (25)	LMS	22 (18)	AS	14 (11)	Uterine LMS	8 (6)	Liposarcoma	8 (6)
Sunitinib (2)	67	24	LMS	9 (13)	Ewing	8 (12)	SS	8 (12)	Unclassified S	8 (12)	Uterine LMS	4 (6)
Imatinib	23	8	Chordoma	8 (35)	AF	4 (17)	DFSP	4 (17)	Epithelioid S	2 (9)	—	—
Sirolimus-cyclophosphamide	18	6	OsteoS	8 (44)	ChondroS	5 (27)	AS/chordoma/lipoS/Ewing/SFT	1 each (6)	—	—	—	—
Everolimus (3)	10	4	GIST	3 (30)	LMS	3(30)	KS/MPNST/SS	1 each (10)	Other	1(10)	—	—
Bevacizumab (4)	9	3	Other	5 (56)	MFST	2 (22)	AS	1 (11)	Epithelioid S	1 (11)	—	—
Sirolimus alone	5	2	OsteoS	2 (40)	PEComa	1 (20)	other	1 (20)	—	—	—	—

# The off-label use of targeted therapies in sarcomas: the OUTC'S program

Lauriane Eberst<sup>1,2</sup>, Claire Cropet<sup>1</sup>, Axel Le Cesne<sup>3</sup>, Patricia Pautier<sup>3</sup>, Nicolas Penel<sup>4</sup>, Antoine Adenis<sup>4</sup>, Christine Chevreau<sup>5</sup>, Jacques-Olivier Bay<sup>6,7</sup>, Olivier Collard<sup>8</sup>, Didier Cupissol<sup>9</sup>, Florence Duffaud<sup>10</sup>, Jean-Claude Gentet<sup>10</sup>, Sophie Piperno-Neumann<sup>11</sup>, Perrine Marec-Berard<sup>1</sup>, Emmanuelle Bompas<sup>12</sup>, Antoine Thyss<sup>13</sup>, Loic Chaigneau<sup>14</sup>, Philippe Cassier<sup>1</sup>, François Bertucci<sup>15</sup>, Jean-Yves Blay<sup>1,2</sup> and Isabelle Ray-Coquard<sup>1,2\*</sup>



**Figure 1** Progression-free survival data. **A**. Progression-free survival for soft-tissue sarcoma (except GIST). **B**: Progression-free survival of the patients in third line and after (number of previous chemotherapy >2). **C**: Progression-free survival of the GIST group. **D**: Progression-free survival of the leiomyosarcoma group.



# Immunotherapy

An Open Label Study of MPDL3280A in Advanced Solid Tumors

ClinicalTrials.gov Identifier:

NCT02458638

**ASSOCIATION DU MK3475 ET DU CYCLOPHOSPHAMIDE A POSOLOGIE  
METRONOMIQUE CHEZ LES PATIENTS PORTEURS D'UN SARCOMME AVANCE :  
ESSAI MULTICENTRIQUE DE PHASE II**

**Résumé *PEMBROSARC***

VERSION N°2.0 DU |30|04|2015| - N° : IB 2014-04

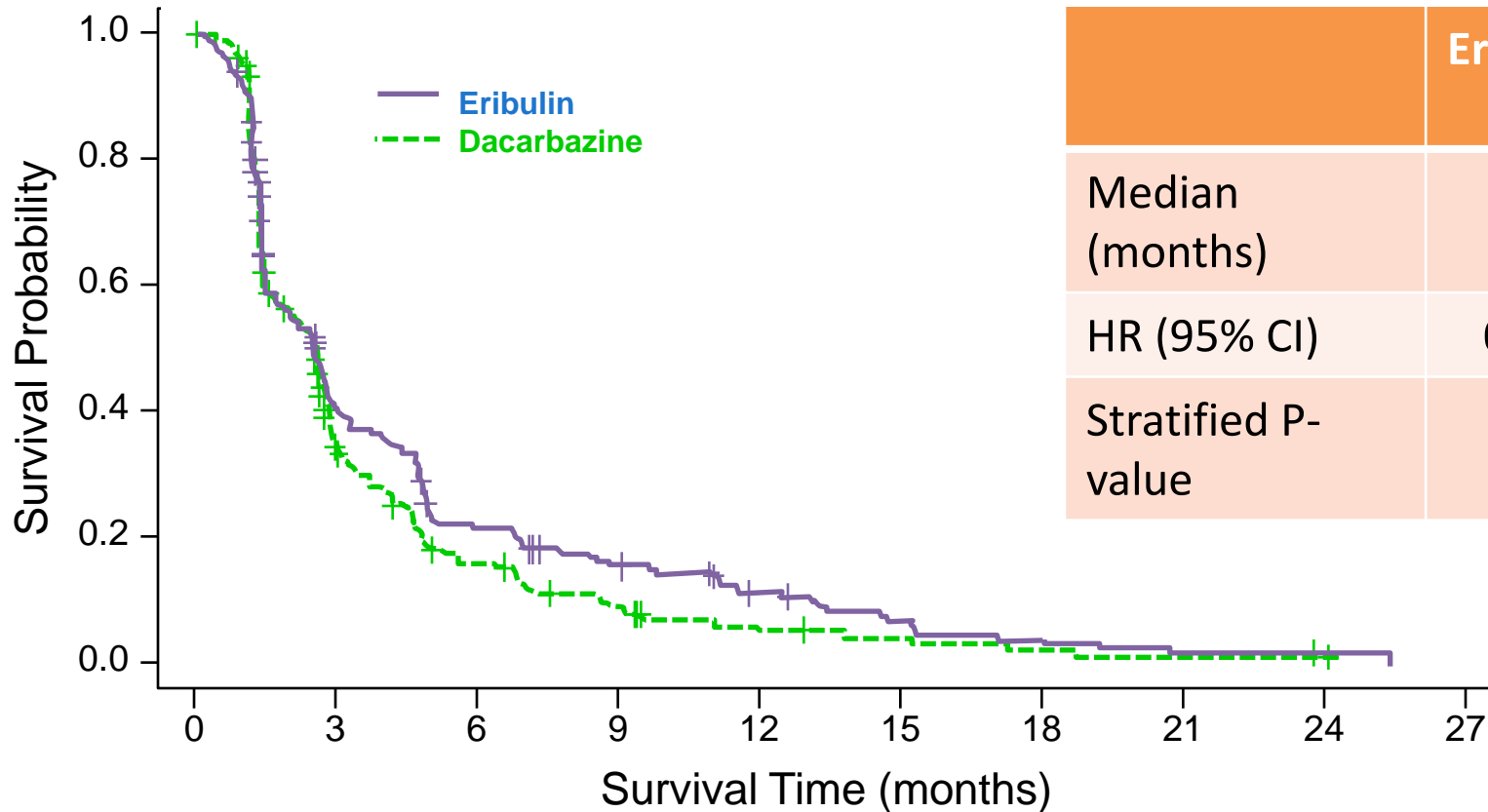
**EudraCT n° 2014-004568-39**



# Conclusions

- Doxo, Ifo, DTIC, Trabectedine, pazopanib
- Antiangiogéniques autres
- Gemcitabine, Taxol
- Eribuline
- Traitement adapté aux altérations moléculaires
- Immunothérapie en cours d'étude

# Secondary endpoint: PFS



	Eribulin	Dacarbazine
Median (months)	2.6	2.6
HR (95% CI)	0.877 (0.710, 1.085)	
Stratified P-value	0.2287	

## Patients at Risk:

	0	3	6	9	12	15	18	21	24	27
Eribulin	228	79	41	27	16	9	5	2	1	0
Dacarbazine	224	63	27	14	6	4	2	1	1	0