

Impact of clinical practice guidelines (CPG's) on survival for sarcoma patients in first line treatment in Rhone-Alpes region

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Disclosures

- I have no conflict of interests

Background

A retrospective study*conducted in the Rhône–Alpes (RA) region had reported:

- Frequent inappropriate primary management of STS according to CPG's
- Impact of adhesion to CPG's and multidisciplinary management on survival for STS

Conclusions:

- The primary management of STS in France was conformed to CPGs in <35% of patients
- Multidisciplinary committees increase conformity to CPG's and possibly improve OS

Purpose of the present study

- Evaluate prospectively the management of sarcoma patients from initial diagnosis to follow up in the exhaustive population of the Rhone –Alpes region (5.9 M habitants)
- Evaluate the impact of CPG's and multidisciplinary committee on management and survival
- Confirm the strong relation between medical practice and survival

Study design

Period : From March 2005 to February 2007, 634 patients ≥ 18 years old, diagnosed with a localized sarcoma, living in Rhone-Alpes were included*

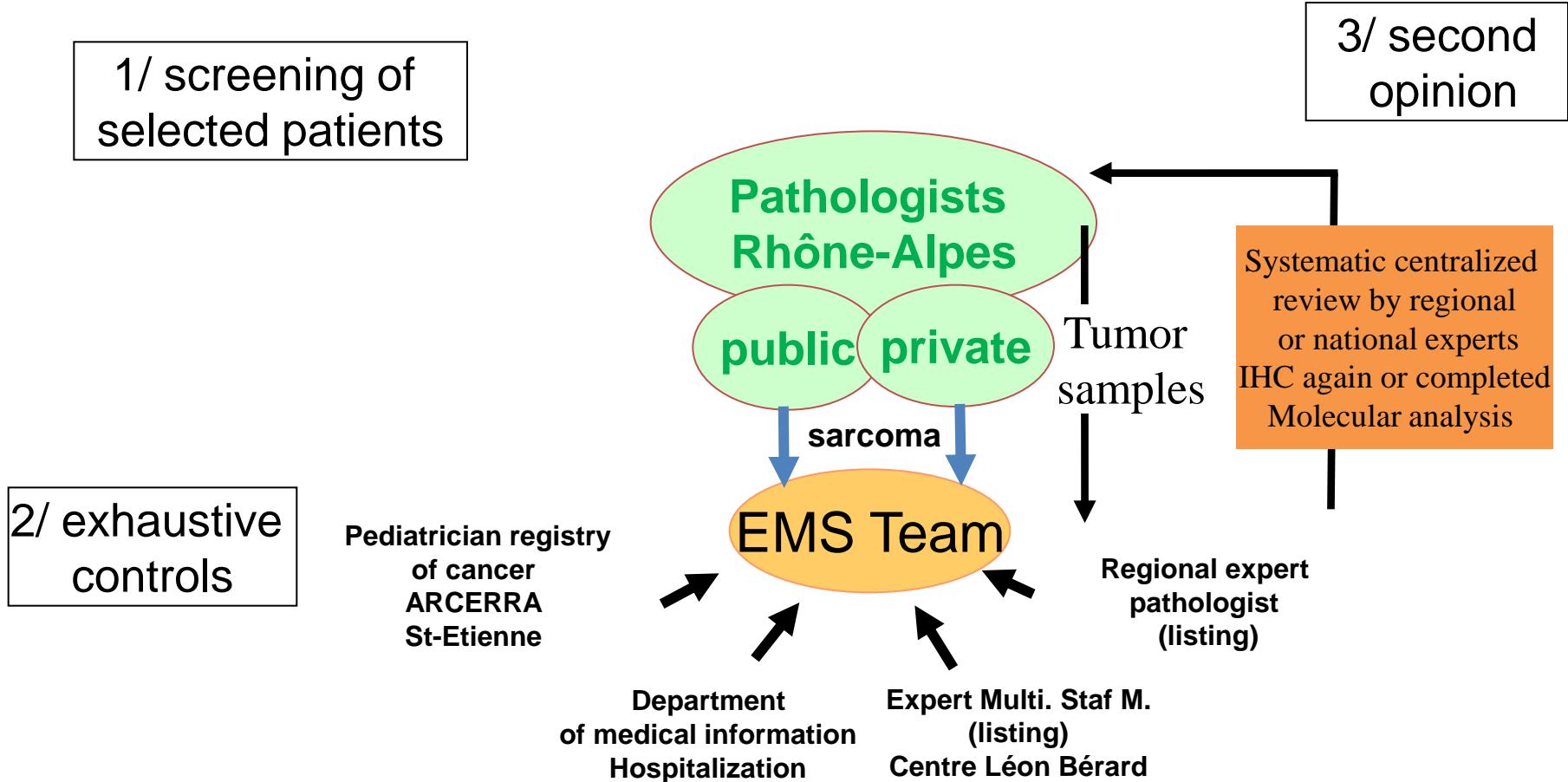
- **Soft tissue sarcoma (STS): 472**
- GIST: 129
- Bone primary site: n=33

Outcome: Each procedure and treatment sequence assessed in conformity with national CPGs.

Stat plan: Prognostic impact of conformity to CPG's on overall survival (OS) and progression free survival (PFS) analyzed for STS patients , in a univariate analysis and a Cox model regression

Methodology

- Controls for the exhaustivity of incidence :



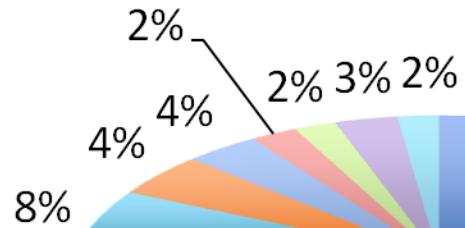
Summary of Practice guidelines for localized STS*

- Planned biopsy first
- Planned surgery resection with a goal of R0-R1
- Re-operation if unplanned (“whoops”) initial surgery
- Post operative RT (option: preoperative RT)
- No systematic adjuvant chemotherapy
- Organized follow up after initial treatment

Results: patients characteristics

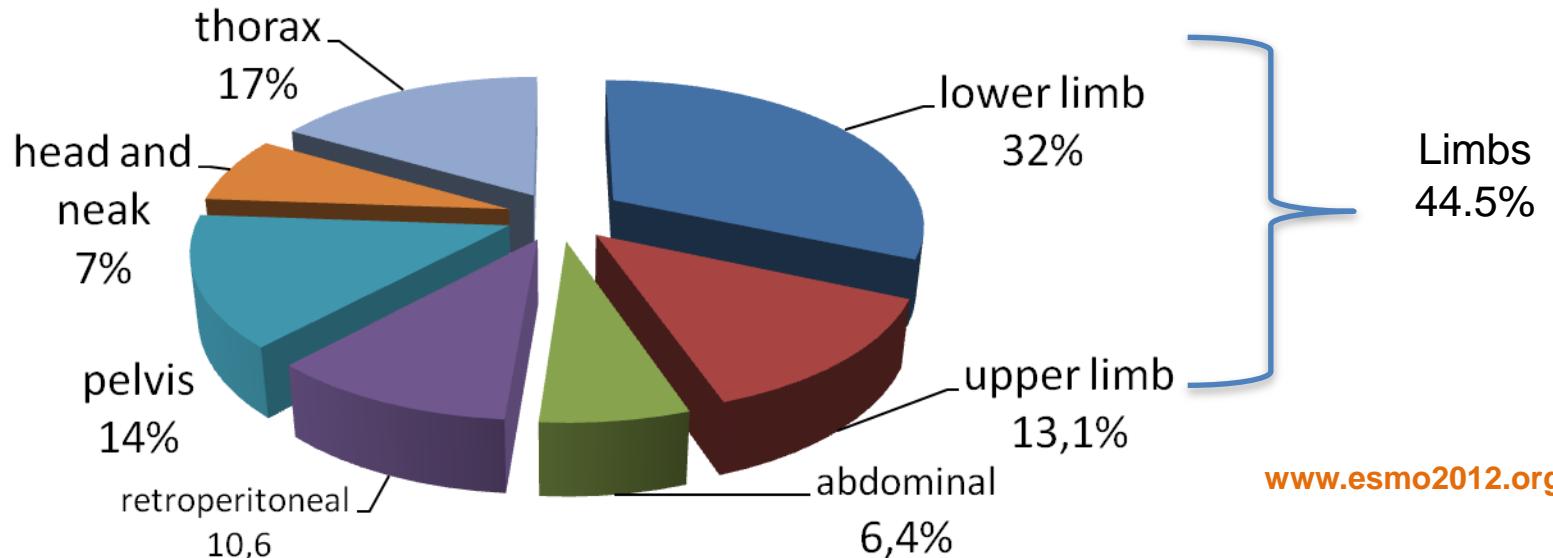
Patients characteristics	Rhône-Alpes n= 472 (%)
Sex	
Female	228 (48.3)
Male	244 (51.7)
Age median (min-max)	61 y (18-92)
Grade	
Low grade	155 (39.8)
Intermediate grade	98 (25.2)
High grade	136 (35)
Location	
Deep	395 (83.7)
Superficial	77 (16.3)
Size median (min-max)	70 mm (5-400)
Structures	
Private and general hospitals	293 (66.6)
University hospitals	147 (33.6)

Histology subtypes



- liposarcoma
- unclassified sarcoma
- leiomyosarcoma
- DFS
- Others
- myxofibrosarcoma
- angiosarcoma
- MPNST
- Rhabdomyosarcoma
- synovialosarcoma
- TFS+hemangioendothelioma

tumor localisation



Conformity results

Conformity to CPG of sarcoma patients

N=472 (%)

Initial diagnostic procedure

277(59)

Initial surgery

249 (55)

Radiation therapy

340 (85)

Chemotherapy

415 (95)

Follow-up

323 (84)

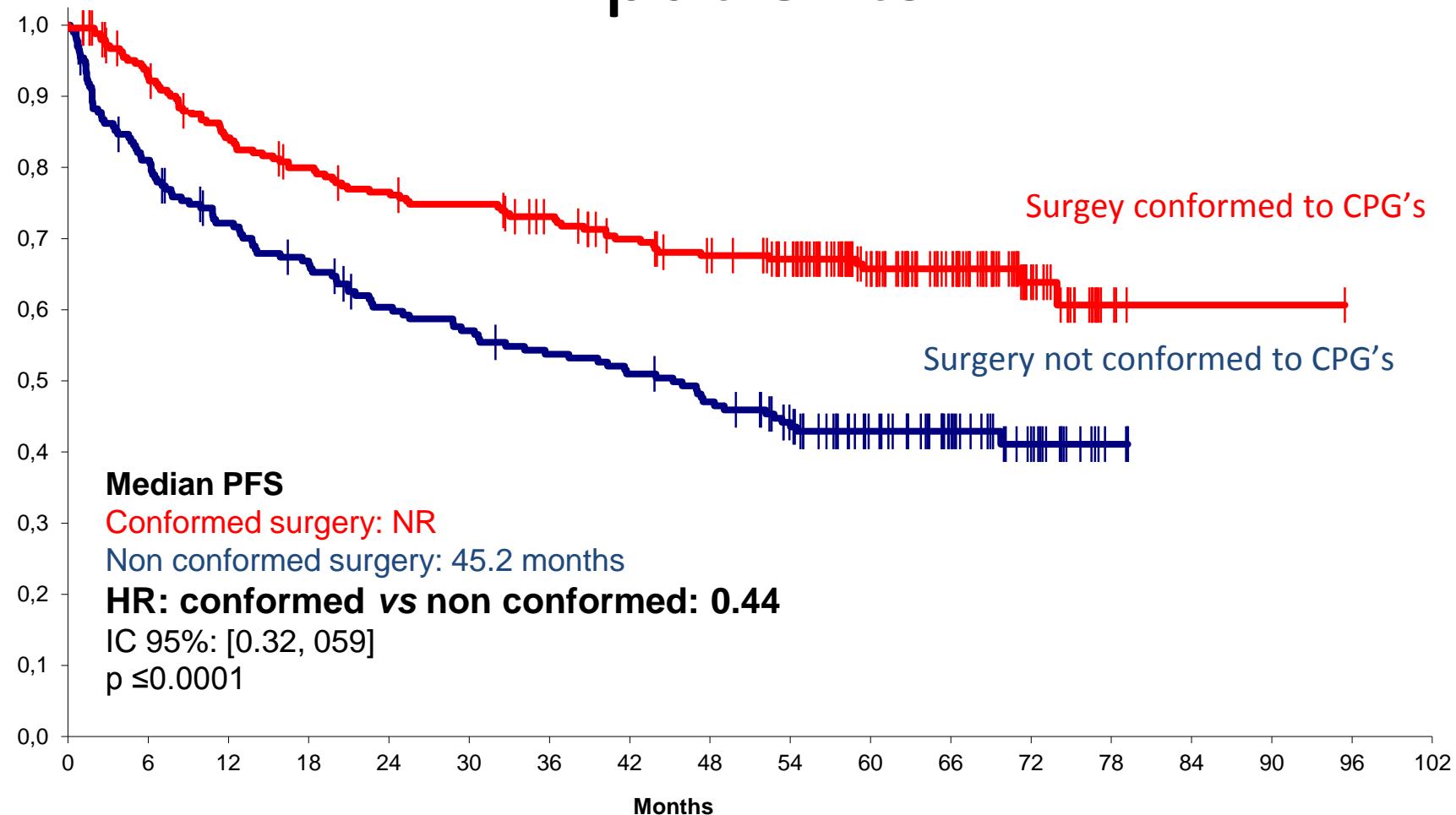
Global conformity to CPGs: 254 (36%)

Progression free survival for STS:

Univariate analysis

Factors	Median PFS (months)	p
Surgical conformity		
Y	NR	
N	45.2	p<0.0001
Age at diagnosis		
≤ 60 y	NR	
> 60	40.9	p<0.0001
Sex		
M	54.5	
F	NR	p=0.09
Grade		
Low grade	NR	
Intermediate grade	43.9	
High grade)	16.5	p<0.0001
Size		
≤50 mm	NR	
> 50	50.1	p=0.06
Histology		
Liposarcoma	NR	
Unclassified sarcomas	NR	
Leiomyosarcoma	52.4	p<0.0001
Site		
Limb	59	
Others	NR	p=0.02
Structure		
University	NR	
Private+general hospitals	71.3	p=0.007

PFS and surgical conformity for STS patients



Progression free survival for STS: multivariate analysis

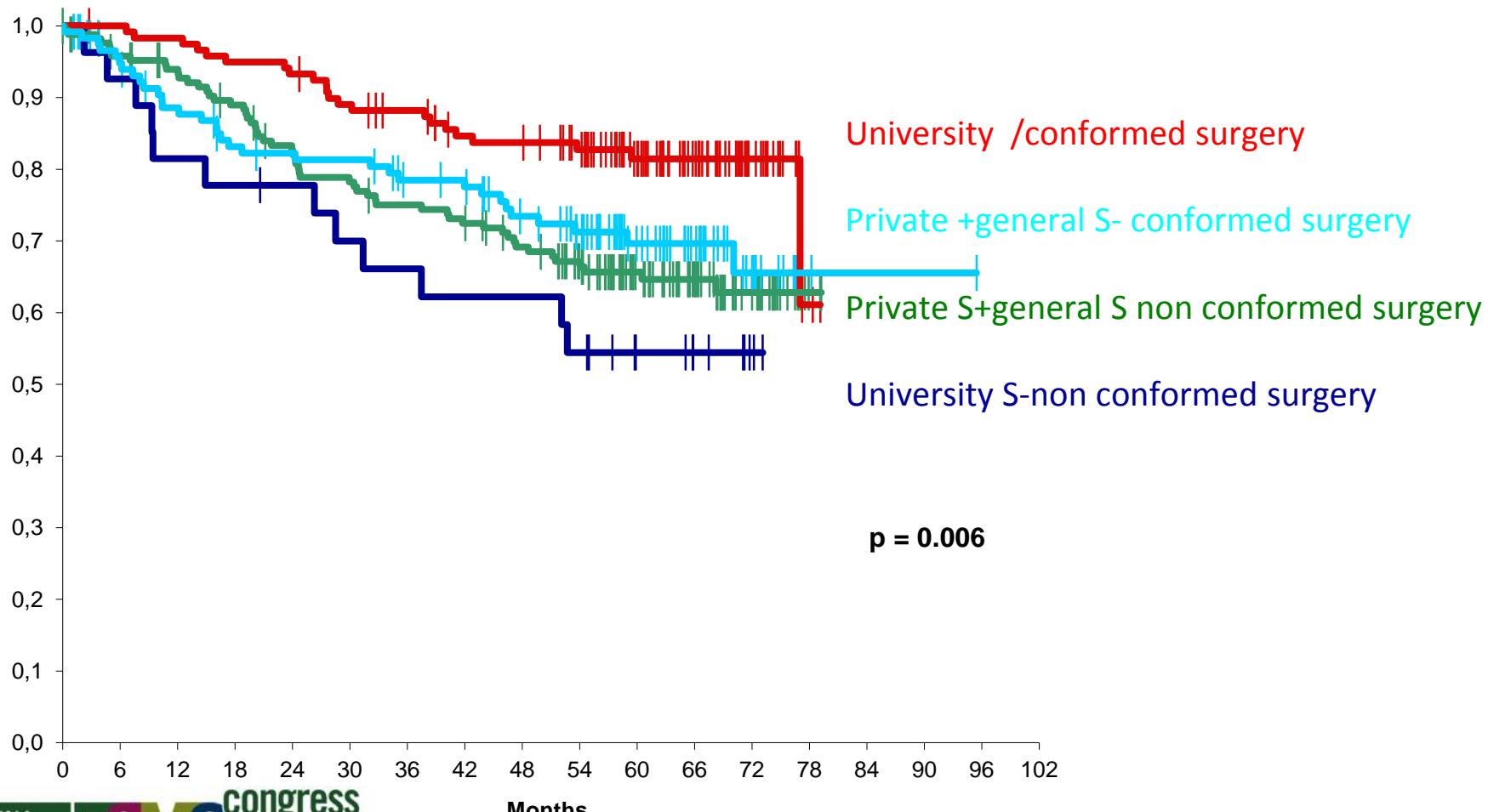
Factors	HR	IC 95%	p
Surgical conformity	0,44	[0,32, 0,54]	<0.001
Age at diagnosis (≤60 y vs > 60 y)	0,6	[0,43, 0,84]	p=0.003
Sex (F vs M)	0,7	[1.484, 2.755]	<0.001
Size ≤ (50 mm vs > 50 mm)	0,61	[0,43, 0,86]	p=0.005
Grade			
High grade	0		
Intermediate grade	0.2	[0,12, 0,32]	
Low grade	0.64	[0.42, 0.96]	<0.001
Histology			
Angiosarcoma vs liposarcoma	4.67	[2.13, 10.21]	
SFT+hemangioendothelioma vs liposarcoma	2.73	[1.14, 6.56]	
MPNST vs liposarcoma	1.48	[0.6, 3.63]	<0.001

Overall survival for STS patients

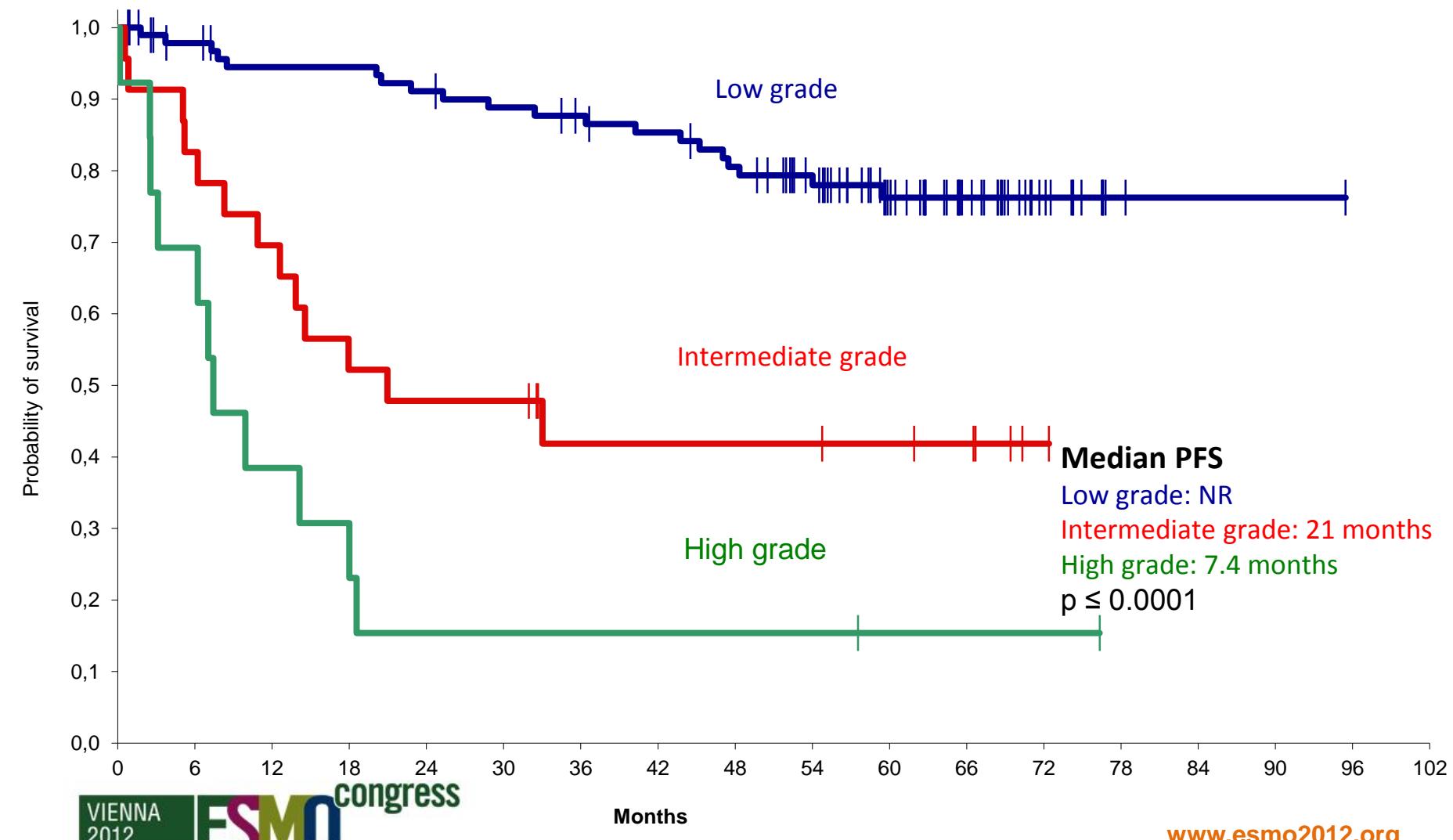
multivariate analysis

Factors	HR	IC 95%	p
Age(≤60 y vs > 60 y)	0.4	[0.26, 0.62]	<0.001
Sex F vs M	0.56	[0.38, 0.83]	0.004
Grade			
High grade	0.12	[0.07, 0.22]	
Intermediate grade	0.4	[0.24, 0.65]	<0.001
Low grade			
Histology			
<i>Angiosarcoma vs liposarcoma</i>	2.54	[1.15, 5.63]	
<i>Rhabdomyosarcoma vs liposarcoma</i>	1.46	[0.48, 4.45]	
<i>Leiomyosarcoma vs liposarcoma</i>	0.85	[0.46, 1.59]	p=0.03
Surgical conformity Y vs N			
Private + general hospitals			p=0.99
University structure	0.34	[0.16, 0.68]	p=0.003

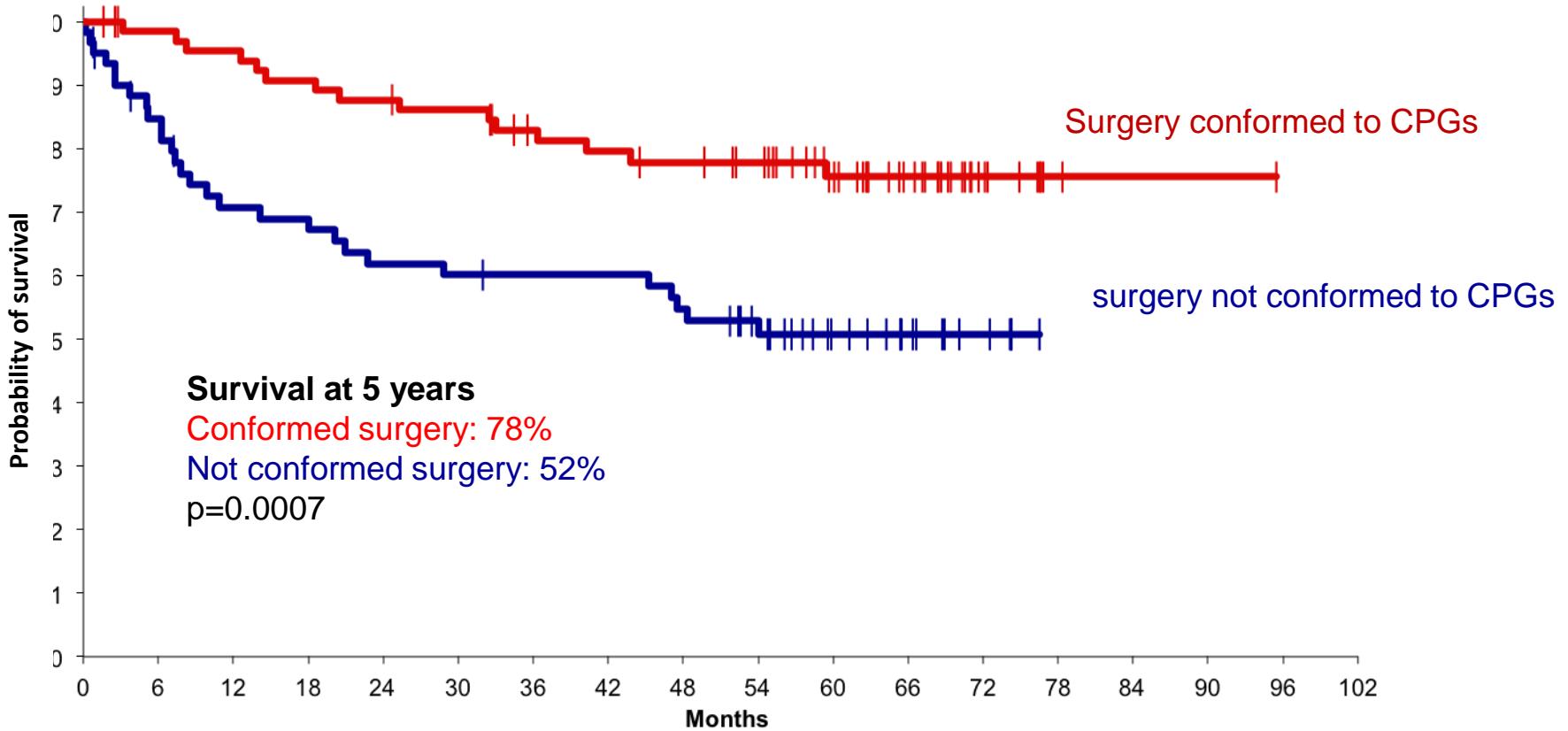
Overall survival and surgical conformity/structure



PFS and grade for liposarcoma patients



PFS and surgical conformity for liposarcoma patients

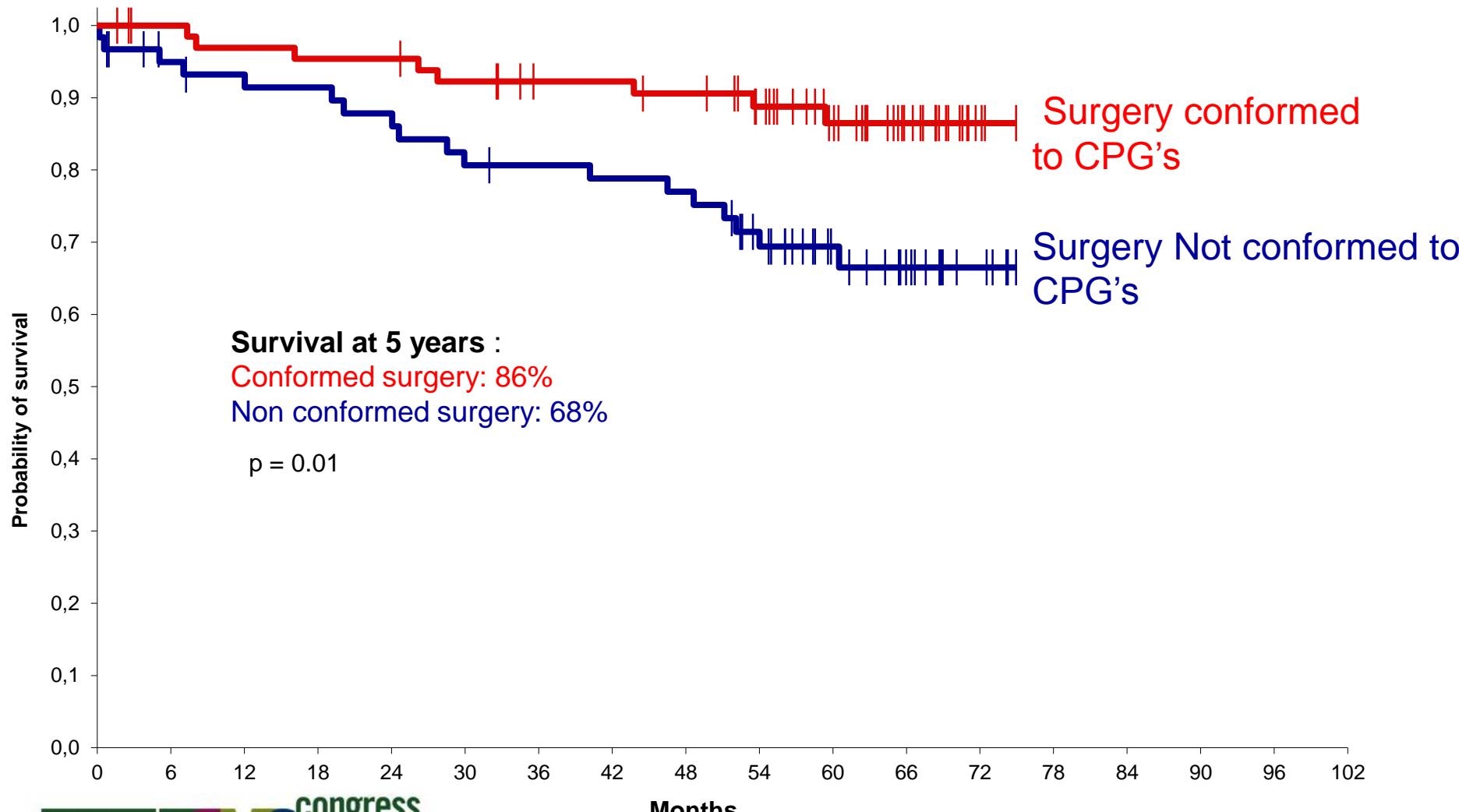


Progression free survival for liposarcoma patients

multivariate analysis

Factors	HR	IC 95%	p
Surgical conformity	0.32	[0.16, 0.61]	0.0006
Age(≤60 y vs > 60 y)	0.42	[0.21, 0.83]	0.01
Grade			
high grade	0		
Intermediate grade	0.8	[0.07, 0.37]	
Low grade	0.16	[0.34, 1.85]	<0.001
Site (limbs vs others)	0.49	[0.24, 1.01]	0.03

OS and surgical conformity for liposarcoma patients



Overall survival for liposarcoma patients

multivariate analysis

Factors	HR	IC 95%	p
Surgical conformity	0.36	[0.15, 0.84]	0.02
Age at diagnosis (≤60 y vs > 60 y)	0.34	[0.14, 0.85]	0.02
Grade			
High grade	0		
Intermediate grade	0.53	[0.02, 0.15]	
Low grade	0.05	[0.22, 1.29]	<0.001

Conclusion

- Global conformity to CPG's stable over time
 - 32% in 2004*
 - 36 % in 2012
- Conformity of surgery to CPG's improves PFS and OS for STS patients and specifically for liposarcoma patients
- Exhaustive cohort of STS
- High level of evidence
- Confirmation through an independent database

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