

# French Networks for Sarcoma and GIST

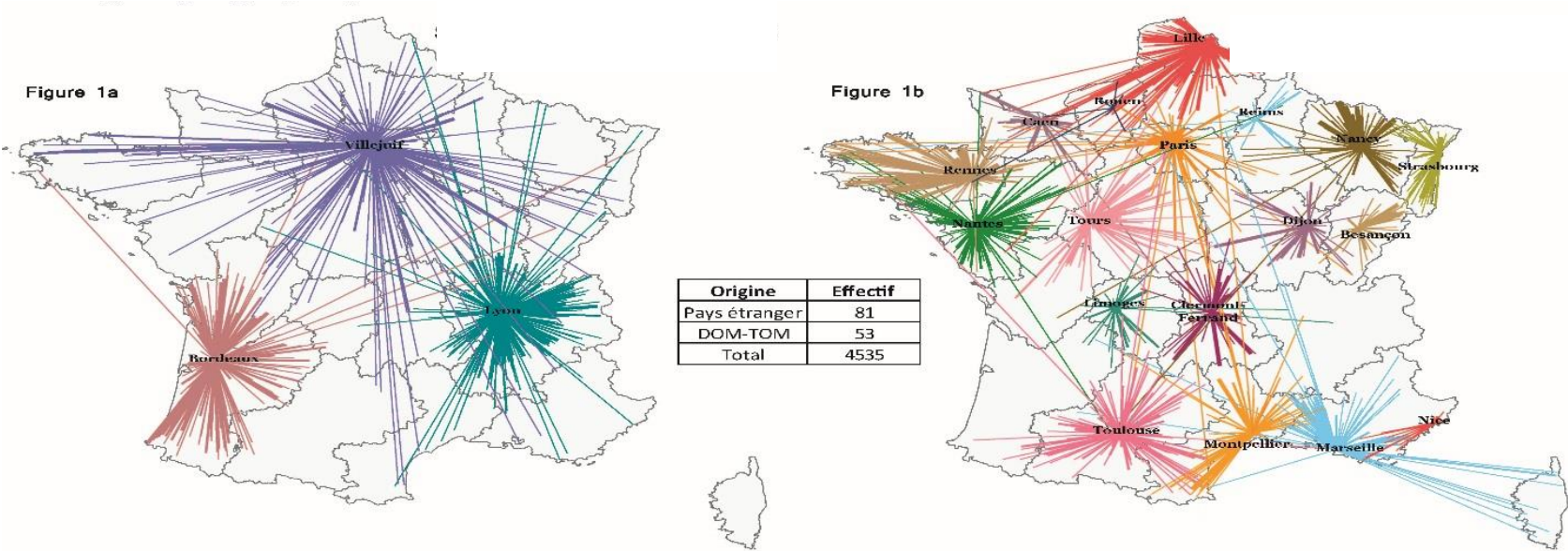
O Mir, JY Blay

# Introduction

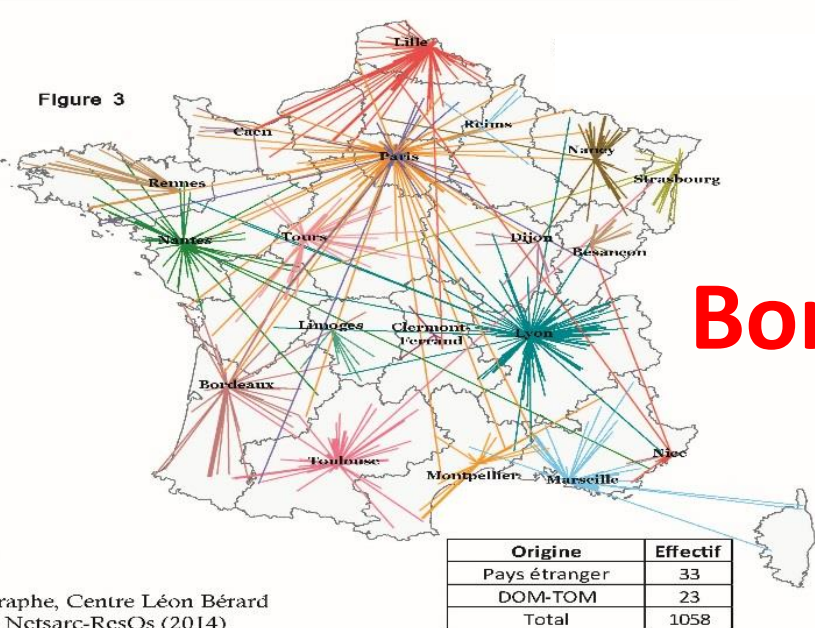
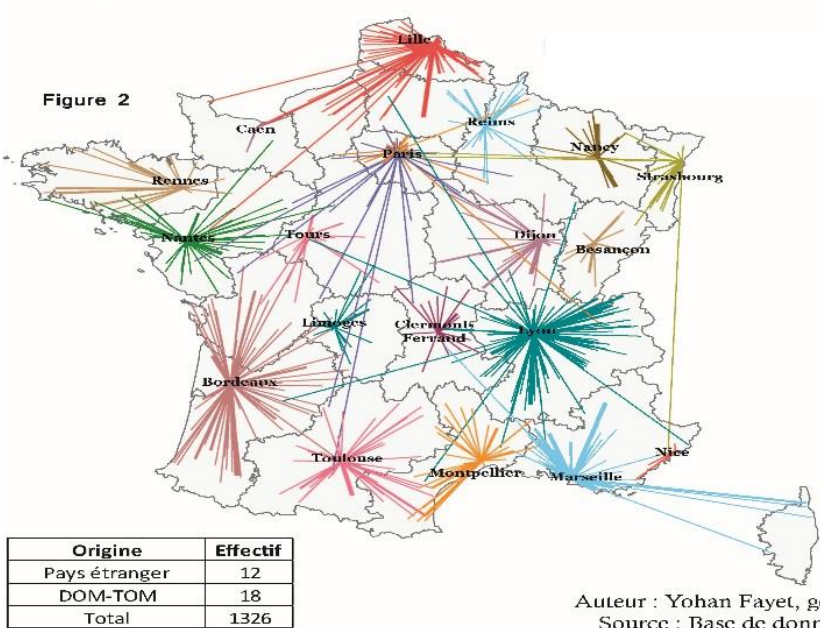
- Since 2009 a network of 26 reference multidisciplinary centers aiming to improve the quality of care for sarcoma patients in France was granted by the French National Cancer Institute (Netsarc.org).
- All contribute to clinical trials
- 24 contribute to TR and/or preclinical research
- NETSARC is associated to a pathology review network (RREPS) and a bone sarcoma network (RESOS).
- The outcome of the patients discussed in these 26 NETSARC multidisciplinary tumor board (NMTB) is presented.

# Patients in MDT of NetSARC

Soft tissue



Visceral



Bone



# **The nationwide cohort of 26883 patients with sarcomas & connective tissue tumors treated in NETSARC reference network between 2010 and 2015 in France: major impact of multidisciplinary board presentation prior to first treatment**

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# Material and methods

- Data of the NetSarc network database include pts characteristics, previous treatment and diagnosis procedures, medical decision, survival and progression.
- Of all patients reviewed in NETSARC MDTB between 2010 and 2015.
- From Jan 2010 to Dec 2015, 20562 newly diagnosed patients were included in this database, while 6321 patients with an initial diagnosis prior to this date were included (total 26883).
- The NetSarc database includes pts characteristics, treatment and diagnosis procedures, survival and progression.
- Individual NETSARC centers managed a median of 678 (range 116-3801) pts in 5 yrs.

# Patients included in the present analysis

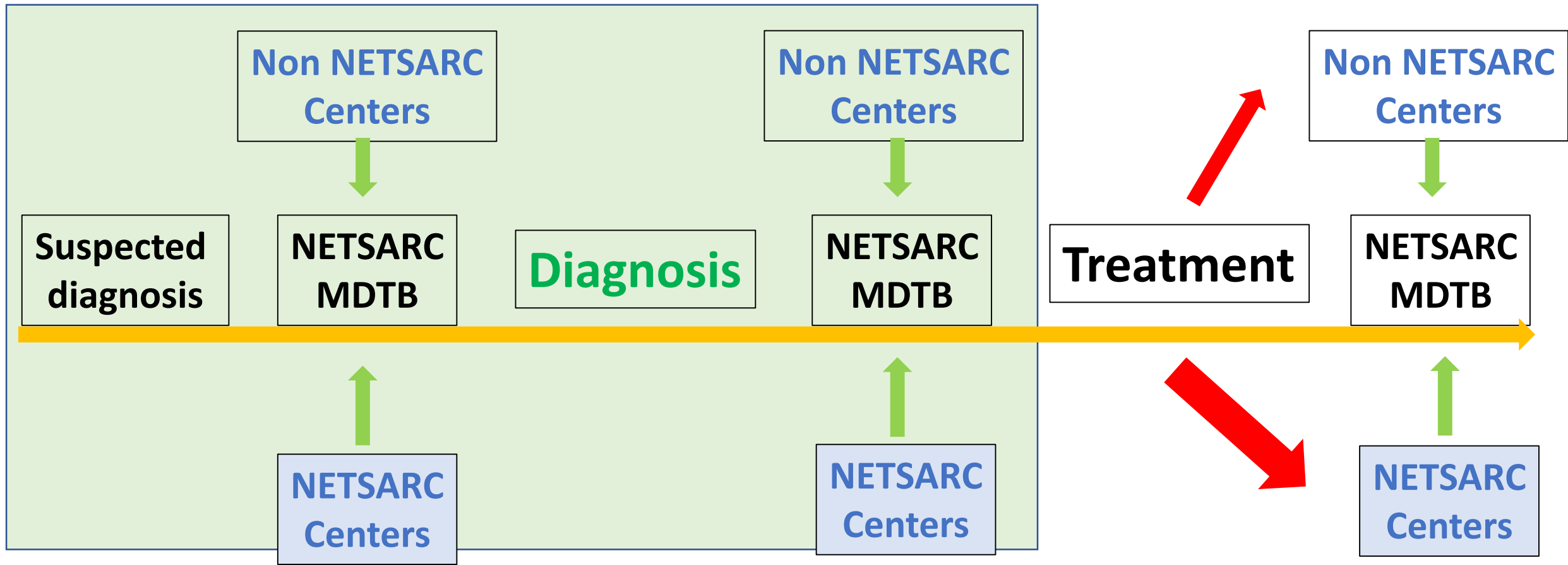
	N	%
<b>Sarcoma</b>	<b>16689</b>	<b>62,1</b>
Benign connective tissue tumors	4215	15,7
GIST	1563	5,8
<b>Intermediate malignancy</b>	<b>1490</b>	<b>5,5</b>
Malignant tumor non sarcoma	1147	4,3
Desmoïds	985	3,7
Other	793	2,9
Total	26883	100,0

# Patients in the next slides

- All patients:
  - Sarcoma
  - Diagnosis>2009
  - N=13598 patients with local treatment and F.Up

# Previous question (ESMO 2016)

- Does presentation of the patient to a NetSARC MDT prior to treatment impact on management and prognosis?





# Results

## MDT before treatment

- Overall **37%** were presented to a Netsarc multidisciplinary board (NMTB) prior to initial treatment
- Between 2010 and 2015, the proportion of pts reviewed in Netsarc MDT prior to surgery increased from **30,3% to 41,6%** .

## Results (3)

### Better management when MDT before treatment

- A higher number of pts presented in Netsarc MDTB had
  - Adequate imaging of the tumor before treatment/surgery (87,9% vs 67,8%,  $p<0.0001$ )
  - Biopsy prior the first resection (87% vs 55,0%,  $p<0.0001$ ).

## Results (4)

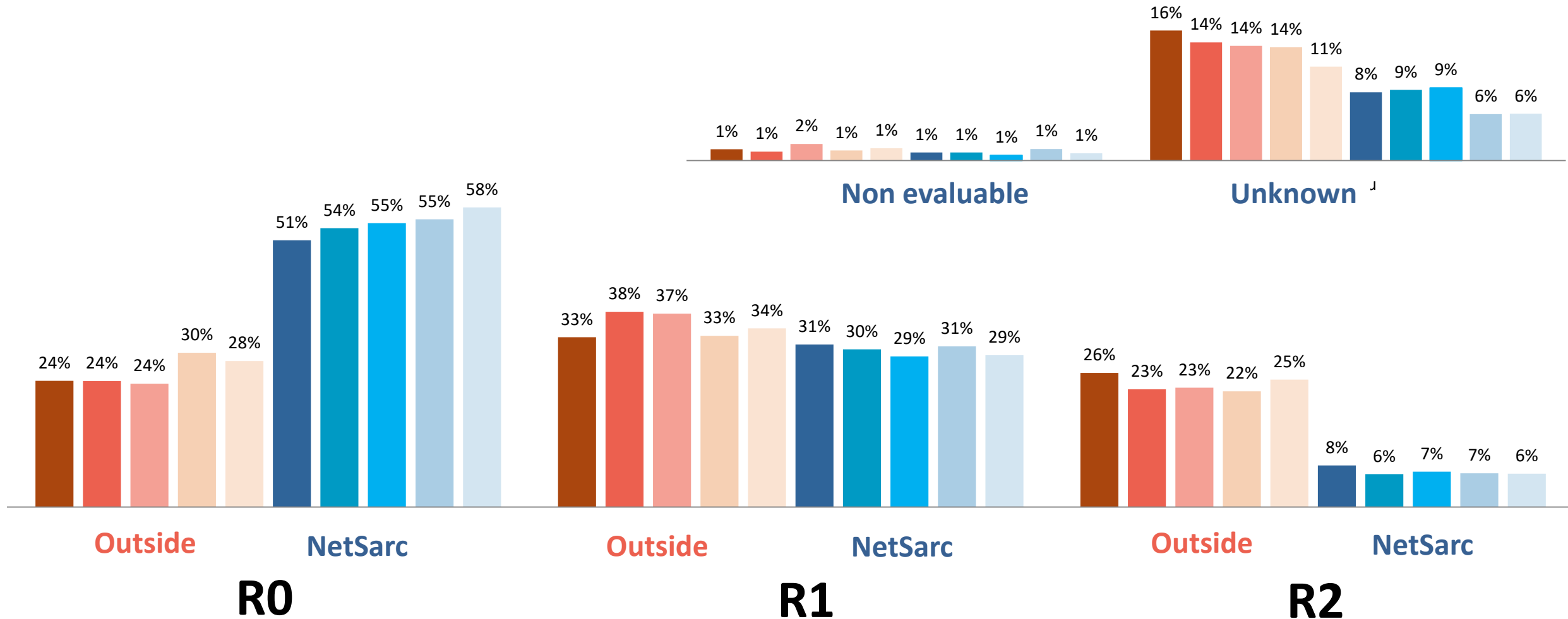
### *Better adherence to CPGs when MDT before treatment*

- **Primary surgery** performed before vs after presentation to a Netsarc MDT:  
R0, R1, R2, and R (unk or NE) surgery in:
  - 53.0%, 26.8%, 9.1%, 11.0% (MDT before) vs
  - 34,2%, 32.7%, 17,6%, 15.5% (MDT after) ( $p<0.0001$ ).
- 1125 (15.3%) pts had **secondary resection** after primary surgery performed without previous NetSarc MDT vs 99 (5.5%) in NetSARC centers ( $p<0.0001$ ).
- **Final surgery:**  
R0, R1, R2, and R (unk or NE) surgery in:
  - 57.9%, 25.8%, 6.5%, 9.8% (MDT before) vs
  - 48,8%, 26,9%, 10,6%, 13.7% (MDT after) ( $p<0.0001$ ).

# Quality of initial surgery, incident patients (STS & visceral sarcomas operated)

2011 N=724    2012 N=824    2013 N=791    2014 N=888    2015 N=668  
2011 N=712    2012 N=806    2013 N=941    2014 N=923    2015 N=670

ASCO16



# Multivariate analysis for LRFS

Parameter	HR	p value
No NMDT before	1,769	,000
GRADE3	1,515	,000
GRADE2	1,225	,009
Age	1,011	,000
Size	1,001	,005
Upper limb	,789	,011
Lower limb	,669	,000

# Results for MFS and OS

Results for LRFS are similar when metastatic patients are included as well as patients diagnosed before 1/1/2010

NMDT before is not retained by the multivariate analysis for MFS or OS.

# Conclusions

- Sarcoma patients presented to MDT prior to initial treatment have
  - Worse prognostic factors
  - a significantly higher rate of management according to CPGs,
  - Higher rates of R0 surgery (lower of R2/R.unk)
  - less re-operations
  - better LRFS.
- The number of patients managed prior to surgery in reference centers increases slightly overtime.
- Management of sarcoma patients in reference centers improves patient outcome.
- Longer follow-up is needed for MFS and overall survival

# Better overall and progression free survival after surgery in expert sites for sarcoma patients: a nationwide study of FSG-GETO/NETSARC

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# Patients included in the present analysis

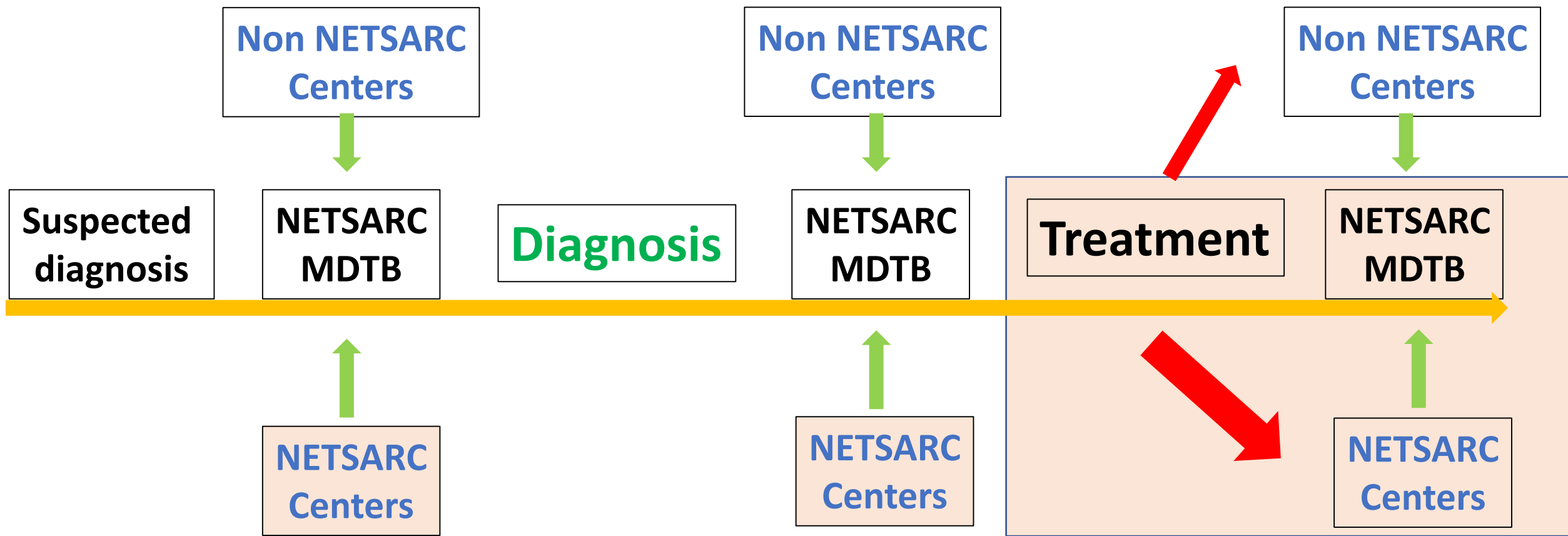
	<b>N</b>	<b>%</b>
<b>Sarcoma ST/visceral</b>	<b>7966</b>	<b>82,6</b>
<b>GIST</b>	<b>835</b>	<b>8,7</b>
<b>Intermediate malignancy</b>	<b>845</b>	<b>8,8</b>
<b>Total</b>	<b>9646</b>	<b>100,0</b>

# Material and methods

- Data of the NetSarc network database include pts characteristics, previous treatment and diagnosis procedures, medical decision, survival and progression.
- LRFS, MFS, OS defined according to Datecan (Bellera et al Ann Oncol 2015)
- Patients reviewed in NETSARC from Jan 2010 to Dec 2014.
- Out of the 9,646 non metastatic pts aged  $\geq 15$ , with a first diagnosis of soft tissue and visceral sarcoma obtained between Jan 2010 and Dec 2014, 3514 (36%) and 6132 (64%) were operated within vs outside of one of the 26 NETSARC reference center.

# Present question (ESMO 2017)

- Does primary surgery the patient within a NetSARC center impacts survival?



# Results (1): Primary surgery in a Netsarc center

- Between 2010 and 2014, the proportion of pts operated in Netsarc center was 37,1% ranging from 34,5% to 40,0% (no trend for a change).

## Results (2): *Clinical presentation for patients operated in NETSARC centers*

- Larger tumors: median size 104 vs 88mm  $p<0.0001$
- More deep seated: 83,8% vs 75,9%  $p<0.0001$
- Higher grade: G2/3 51,1% vs 47,7%  $p<0.0001$

Also: younger age, more male patients, less visceral sarcomas

## Results (4)

### *Surgery in a Netsarc Center*

- **Primary surgery** performed before vs after presentation to a Netsarc MDT:  
R0, R1, R2, and R (unk or NE) surgery in:
  - 49.9%, 28.6%, **6.3%**, 14.6% (NETSARC site) vs
  - 25,3%, 32.4%, **21,0%**, 21.3% (outside a NETSARC site) ( **$p < 0.0001$** ).
- 760 (**21.2%**) pts had **secondary resection** after primary surgery performed outside NetSarc site vs 221 (**6.3%**) inside NetSARC centers ( **$p < 0.0001$** ).
  - Unknown in 508 [14,2%] vs 288 [8,2%] patients in non NETSARC/vs NETSARC centers)
- **Final surgery:**  
R0, R1, R2, and R (unk or NE) surgery in:
  - 55.3%, 25.3%, **4.2%**, 15.3% (NETSARC site) vs
  - 42,8%, 24,3%, **11,6%**, 21.3% (outside a NETSARC site) ( **$p < 0.0001$** ).

# Multivariate analysis for LRFS

Parameter	HR	p value
Grade 3	1,761	,000
Grade 2	1,330	,000
Size	1,002	,000
<b>Surgery in NetSARC center</b>	<b>,669</b>	<b>,000</b>
Gender	,878	0,01
Depth	0,881	,07

# Multivariate analysis for RFS

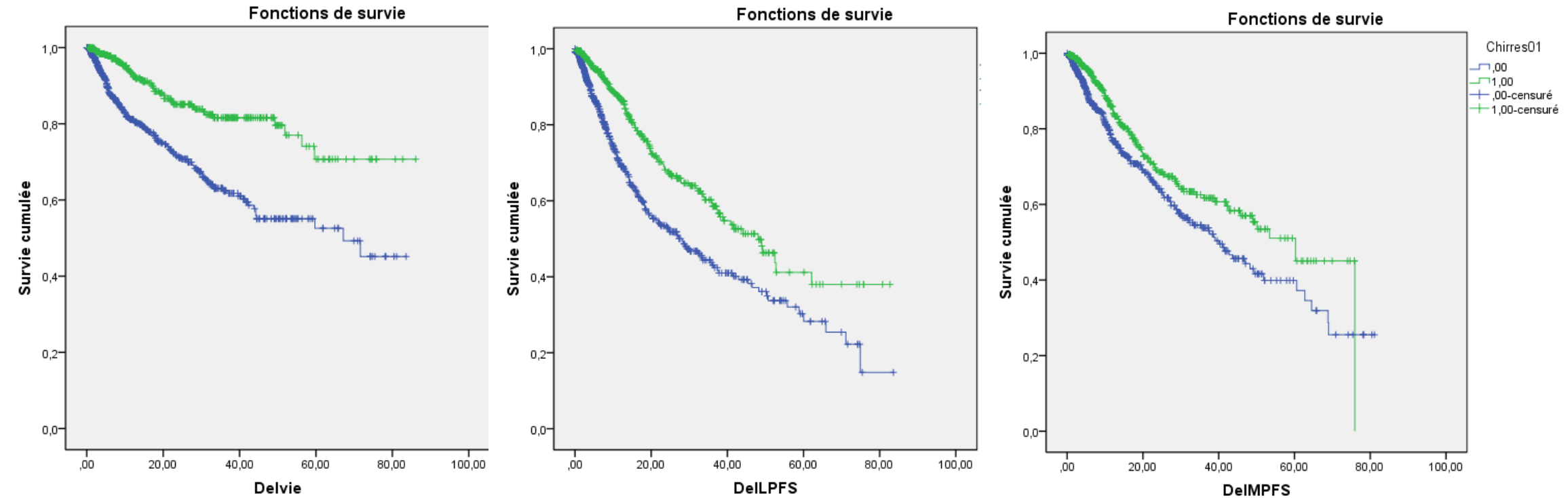
Parameter	HR	p value
Grade 3	2,336	,000
Grade 2	1,426	,000
Size	1,002	,000
Internal trunk	1,125	0,006
Grade 1	0,751	,000
<b>Surgery in NetSARC center</b>	<b>0,622</b>	<b>,000</b>



# Multivariate analysis for OS

Parameter	HR	p value
Grade 3	1,768	,000
Depth	1,605	,000
Size	1,003	,000
<b>Surgery in NetSARC center</b>	<b>,622</b>	<b>,000</b>
Internal trunk	1,246	0,01
Gender	,863	0,06
Grade 1	0,329	,000

# Retroperitoneal sarcomas



# Limitations

- Not a clinical trial
- Large data set/complex follow-up
- Short median follow-up
- But.. Prospective and nationwide

# Conclusions (1)

- Sarcoma patients operated in a reference center have
  - Worse prognostic factors
  - a significantly higher rate of management according to CPGs,
  - Higher rates of R0 surgery (lower of R2/R.unk)
  - less re-operations
  - better LRFS, RFS and OS in multivariate analysis.
- Management of sarcoma patients in reference centers improves patient outcome.

# Conclusions (2)

- Consistent with guidelines
- Already organized in several european countries
- Cost-effective
- To be organized in EU
  - Budget & human resources
- EURACAN

# Thank you

- Patients
- NETSARC participants
- French NCI (INCA)
- ARC (grants)
- LYRIC (grant INCA DGOS 4664)
- Ligue contre le cancer & Comités dept
- Ligue de l'Ain
- Patient advocacy groups (Infosarcome, SPAEN, DAM's)
- EURACAN!