



Leids Universitair  
Medisch Centrum

# Sarcoma care in the Netherlands

## SPAEN symposium

Hans Gelderblom

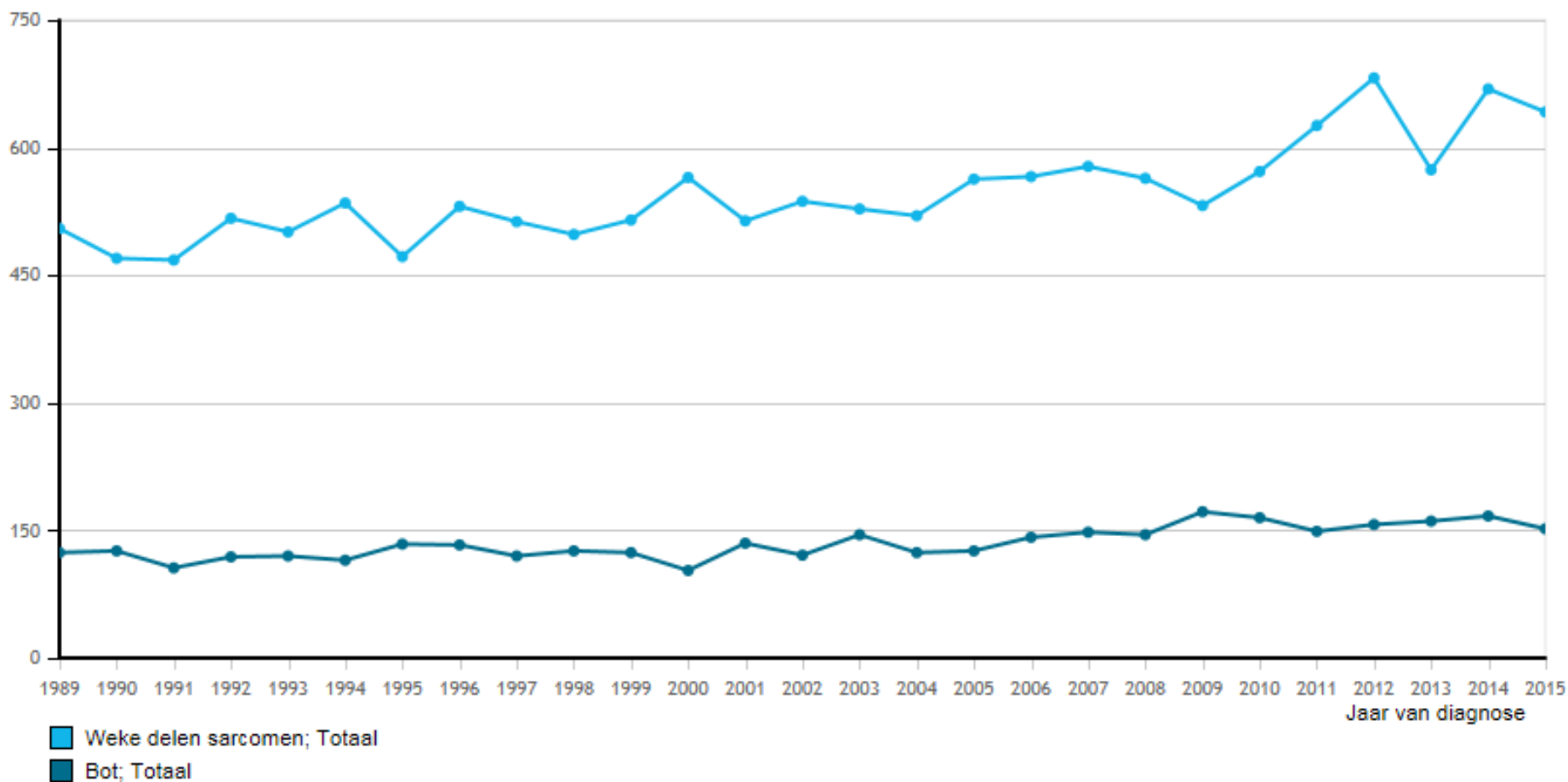
Chair dept of Medical Oncology LUMC

Chair EORTC-Soft Tissue and Bone Sarcoma

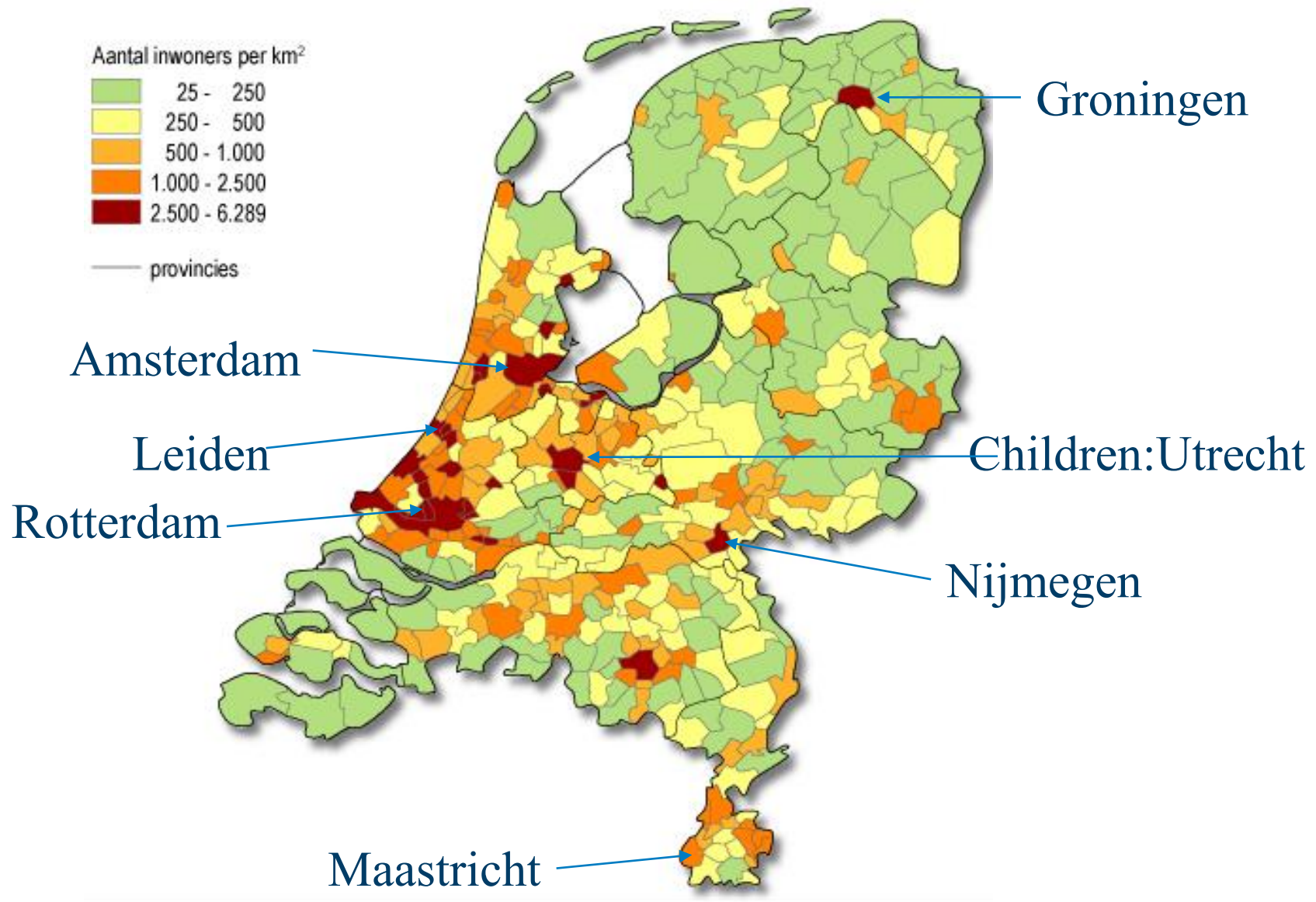
Group



# Sarcoma incidence in the Netherlands (pop 17.7M)



# Sarcoma Centers





Available online at [www.sciencedirect.com](http://www.sciencedirect.com)



EJSO 35 (2009) 1326–1332

**EJSO**  
the Journal of Cancer Surgery

[www.ejso.com](http://www.ejso.com)

## Improved diagnosis and treatment of soft tissue sarcoma patients after implementation of national guidelines: A population-based study

M.L.E.A. Jansen-Landheer <sup>a,\*</sup>, P. Krijnen <sup>a</sup>, M.J. Oostindiër <sup>a</sup>,  
W.M. Kloosterman-Boele <sup>a</sup>, E.M. Noordijk <sup>b</sup>, M.A. Nooij <sup>b</sup>, W.H. Steup <sup>c</sup>,  
A.H.M. Taminiau <sup>b</sup>, R. Vree <sup>d</sup>, P.C.W. Hogendoorn <sup>b</sup>,  
R.A.E.M. Tollenaar <sup>b</sup>, H. Gelderblom <sup>b</sup>

Regional study comparing 1998/99 and 2006  
Optimal treatment from 74% to 87,5%



ORIGINAL ARTICLE – BONE AND SOFT TISSUE SARCOMAS

# Adherence to Guidelines for Adult (Non-GIST) Soft Tissue Sarcoma in the Netherlands: A Plea for Dedicated Sarcoma Centers

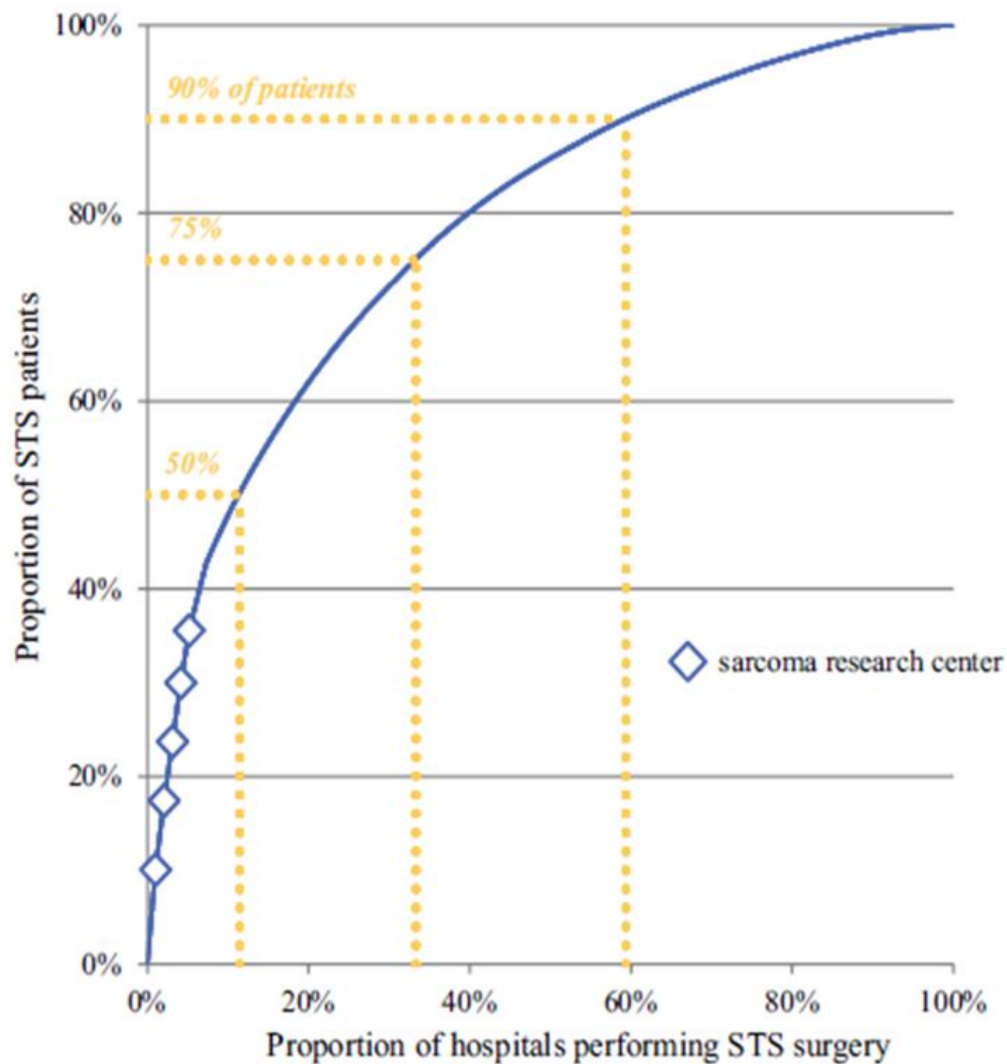
Harald J. Hoekstra, MD, PhD<sup>1</sup>, Rick L. M. Haas, MD, PhD<sup>2</sup>, Cornelis Verhoef, MD, PhD<sup>3</sup>, Albert J. H. Suurmeijer, MD, PhD<sup>4</sup>, Carla S. P. van Rijswijk, MD, PhD<sup>5</sup>, Ben G. H. Bongers, MD<sup>1</sup>, Winette T. van der Graaf, MD, PhD<sup>6</sup>, and Vincent K. Y. Ho, MSc, PhD<sup>7</sup>

- Netherlands Cancer Registry since 1989
- Primary treatment data
- $\geq 18$  Y
- Large volume > 10 resections
- Sarcoma research center (EORTC-STBSG)
- Academic vrs general

# STS in Netherlands 2006-2011

- 3317 STS
- Localised disease 85,6%
- Metastatic disease 14,4%
- 2698 resections (81%) of which 6,4% metastatic
- 393 R1 resections (14,6%)

# Surgery only in 1/3 of expert centers



# No significant improvement over time...

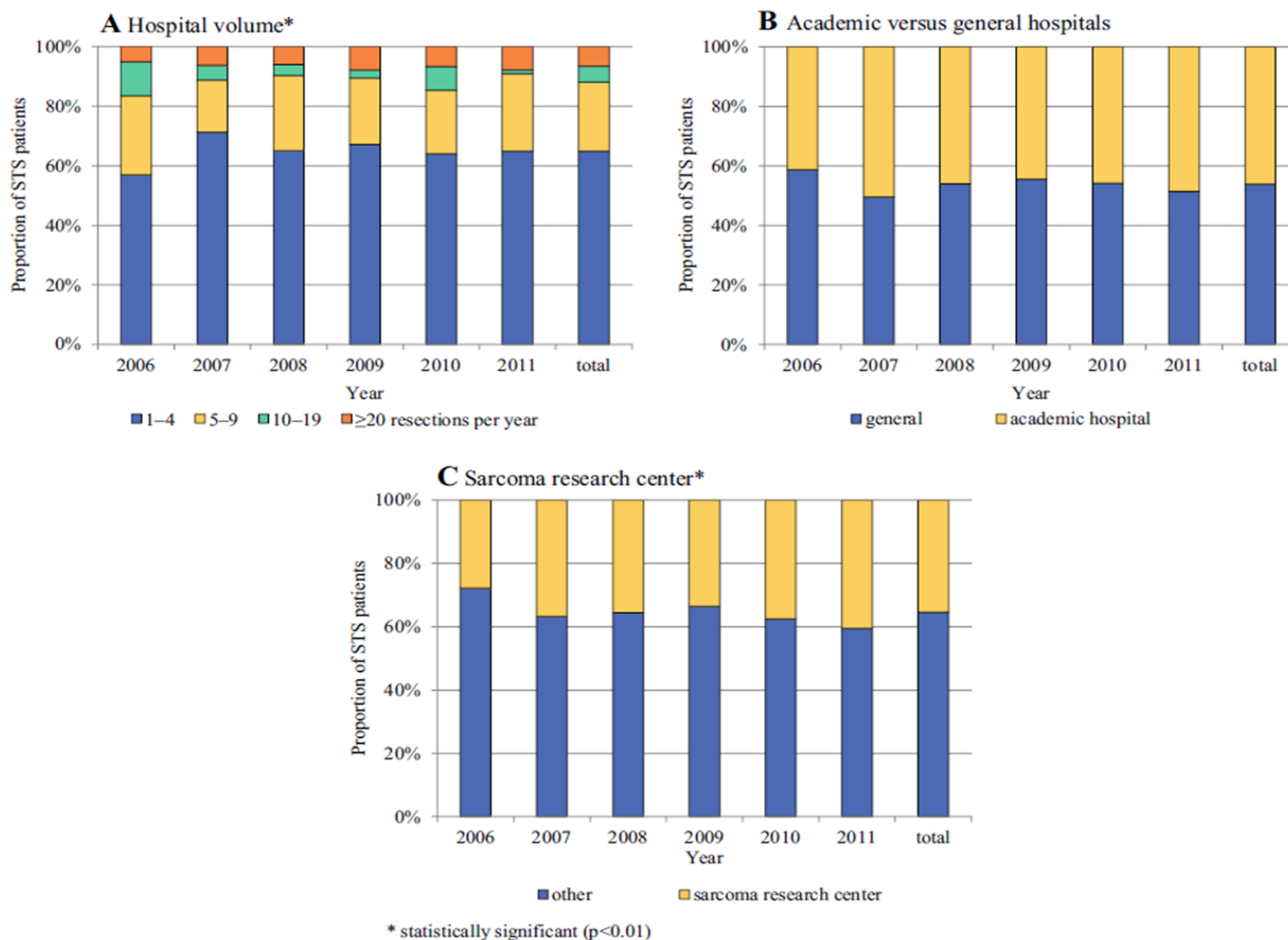


FIG. 2 Trends over time according to hospital volume and hospital type with respect to STS surgery



# Bone tumours

4 Centers

Leiden, Groningen, Nijmegen, AMC

Netherlands Bone Tumour Committee since 1953 in Leiden  
multidisciplinary meeting

>33.000 cases

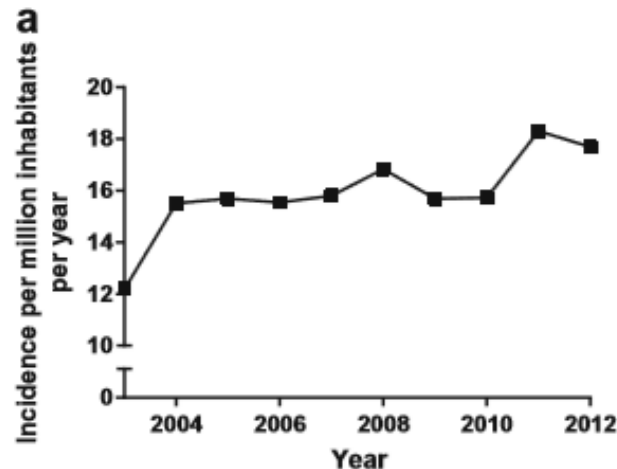
1500 year

Pathology and radiology archived



## The incidence, mutational status, risk classification and referral pattern of gastro-intestinal stromal tumours in the Netherlands: a nationwide pathology registry (PALGA) study

Arie J. Verschoor<sup>1</sup> • J. V. M. G. Bovée<sup>2</sup> • L. I. H. Overbeek<sup>3</sup> • The PALGA group<sup>3</sup> • P. C. W. Hogendoorn<sup>2</sup> • H. Gelderblom<sup>1</sup>

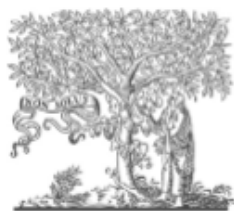


Only 41.2% of patients had a revision of pathology within 3 months and only 29.4% of patients had mutational analysis performed

In high risk patients, mutational analysis was performed in only 67.1%

# GIST registry (since January 2009, data -Sept 2016)

European Journal of Cancer 86 (2017) 318–325



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ScienceDirect

journal homepage: [www.ejcancer.com](http://www.ejcancer.com)

Original Research

Elderly patients with gastrointestinal stromal tumour (GIST) receive less treatment irrespective of performance score or comorbidity – A retrospective multicentre study in a large cohort of GIST patients

Sheima Farag<sup>a</sup>, Frits van Coevorden<sup>b</sup>, Esther Sneekes<sup>a</sup>,  
Dirk J. Grunhagen<sup>c</sup>, Anna K.L. Reyners<sup>d</sup>, Pieter A. Boonstra<sup>d</sup>,  
Winette T. van der Graaf<sup>e,f</sup>, Hans J. Gelderblom<sup>g</sup>, Neeltje Steeghs<sup>a,\*</sup>

## Less treatment in elderly

Treatment <sup>a</sup>	Elderly <i>N</i> = 107	Non-elderly <i>N</i> = 500	<i>p</i> -Value <sup>b</sup>
Systemic treatment with imatinib	53 (49.5%)	270 (54.0%)	0.40
Neo-adjuvant	32 (29.9%)	163 (32.6%)	0.59
Adjuvant <sup>c</sup>	6 (37.5%)	52 (65.8%)	0.03
Palliative	18 (16.8%)	51 (10.2%)	0.05
Surgery	61 (57.0%)	420 (84.0%)	<0.001

Treatment <sup>a</sup>	Elderly <i>N</i> = 36	Non-elderly <i>N</i> = 162	<i>p</i> -Value <sup>b</sup>
Systemic treatment	31 (86.1%)	150 (92.6%)	0.21
Imatinib	31 (86.1%)	147 (90.7%)	0.40
Sunitinib	10 (27.8%)	54 (33.3%)	0.52
Regorafenib	1 (2.8%)	17 (10.5%)	0.15
Metastasectomy	3 (5.9%)	23 (8.3%)	0.55



# Sarcoma research centers (ERN) in the Netherlands

- Dutch studies e.g.
  - ctDNA project In GIST
  - Pharmacogenetic studies in GIST
  - GIST registry
  - Therapeutic Drug Monitoring
  - QoL studies
  - AYA network
  - Collaboration with Sarcoma.nl
  - etc
- Participation and access to studies is good
- International collaborations



# Current guidelines

Bone in 4 centers

STS (incl GIST)

1. At least 10 surgeries per year and weekly tumourboard
2. Dedicated radiologist, quick access to scans etc
3. Dedicated pathologist
4. In contact with reference sarcoma center
5. Weekly sarcoma tumour board with representative of ref center
6. The decision what systemic treatment and where after discussion with reference center

# Conclusion for the Netherlands

Bone tumours well centralised

GIST reasonably well centralised

STS need to be better centralised

More centralisation or networking?

