

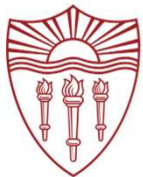
Soft Tissue **Sarcoma** Surgery

William Tseng, MD

Sarcoma Surgical Oncologist

Associate Professor of Surgery,

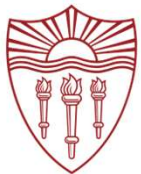
University of Southern California, Keck School of Medicine



William Tseng, MD

Northwestern
UCSF

THE UNIVERSITY OF TEXAS
MD Anderson
~~Cancer Center~~
Making Cancer History®



2014



@Liposarcoma Specialist



@sarcomasurgeon

Disclosures

Financial

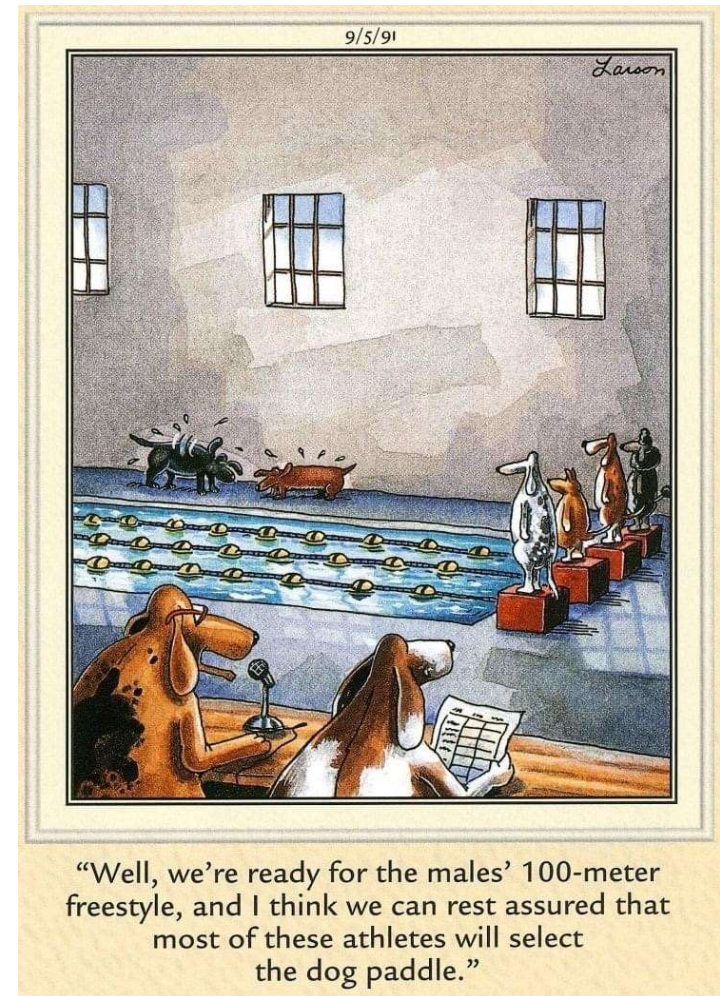
- UptoDate

Other

- **Sarcoma Alliance:** Medical Advisory Board (2018-), Board of Directors (2020-)

This talk:

- **No bone sarcoma**
- **Photos from surgery**



Outline

Soft Tissue Sarcoma (STS)

Surgery

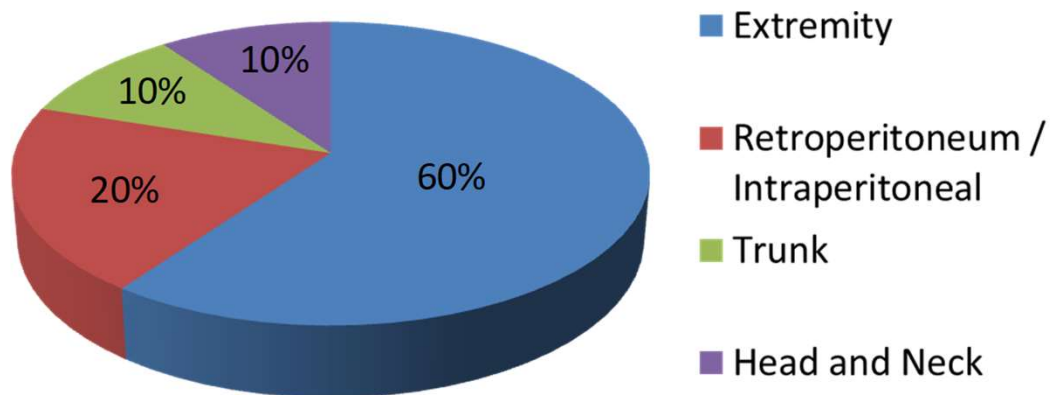
- 1. Extremity / Trunk**
- 2. Retroperitoneal**
- 3. Palliative**

Other Considerations - 3

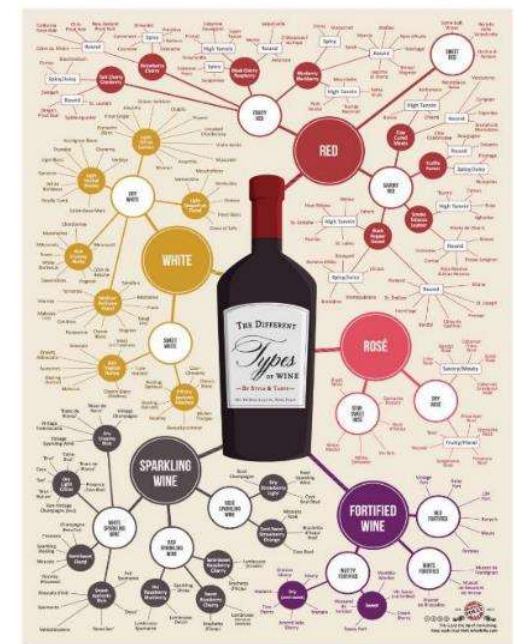
Soft Tissue Sarcoma (STS)

- **Rare: 1%** of all adult cancers
- Can develop **anywhere in the body**

Location



- **Diverse: 50-70 different subtypes**



Treatment is a “Team Effort”



Surgery

Chemotherapy

Radiation therapy



Multidisciplinary Tumor Board

**Surgical,
Medical,
Radiation
Oncology**

**Radiology
Pathology**

***Personalized
Treatment!***

Surgery for STS

- Main form of treatment for **localized** disease (that has not spread)

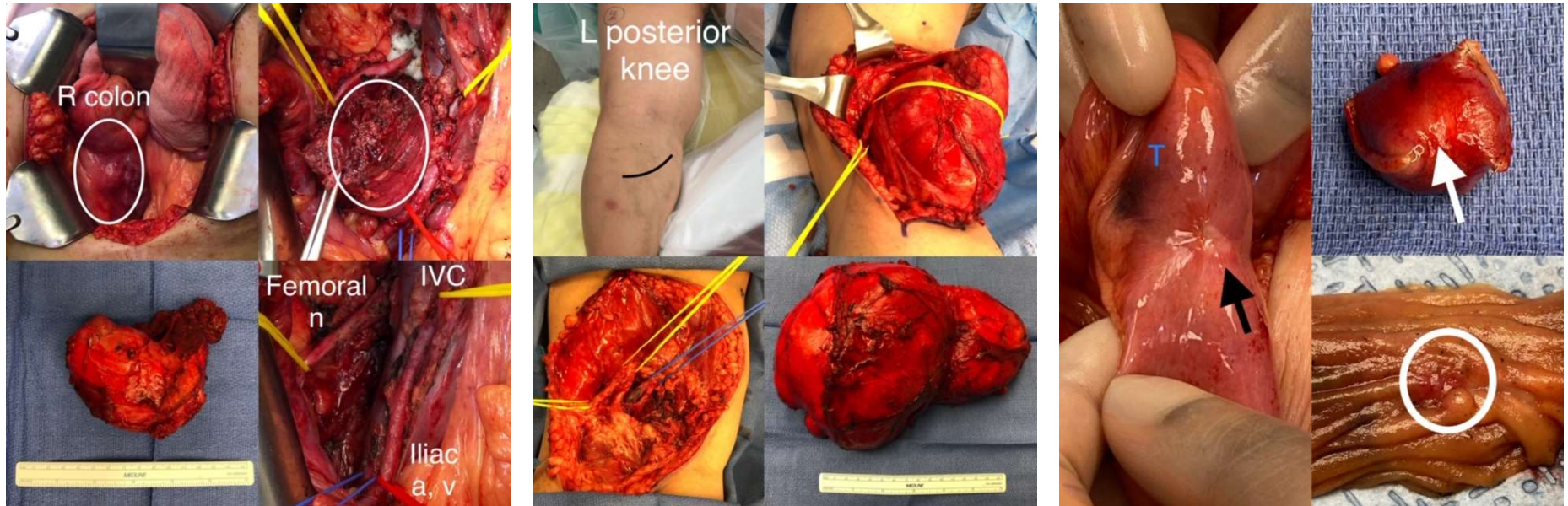


Technique

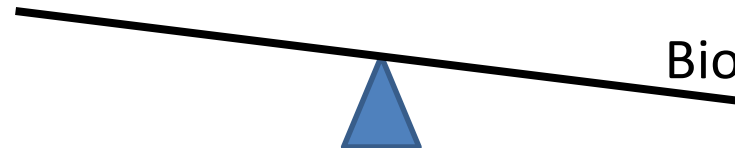
Biology



Surgery for STS



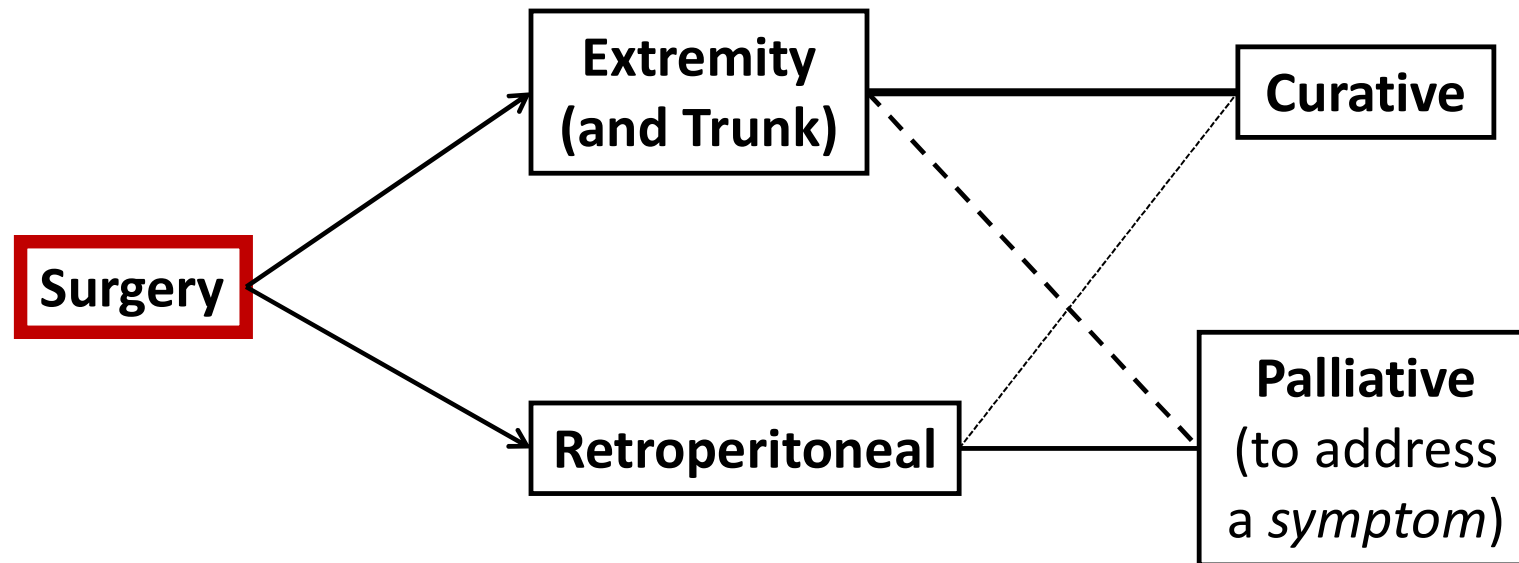
Technique



Biology

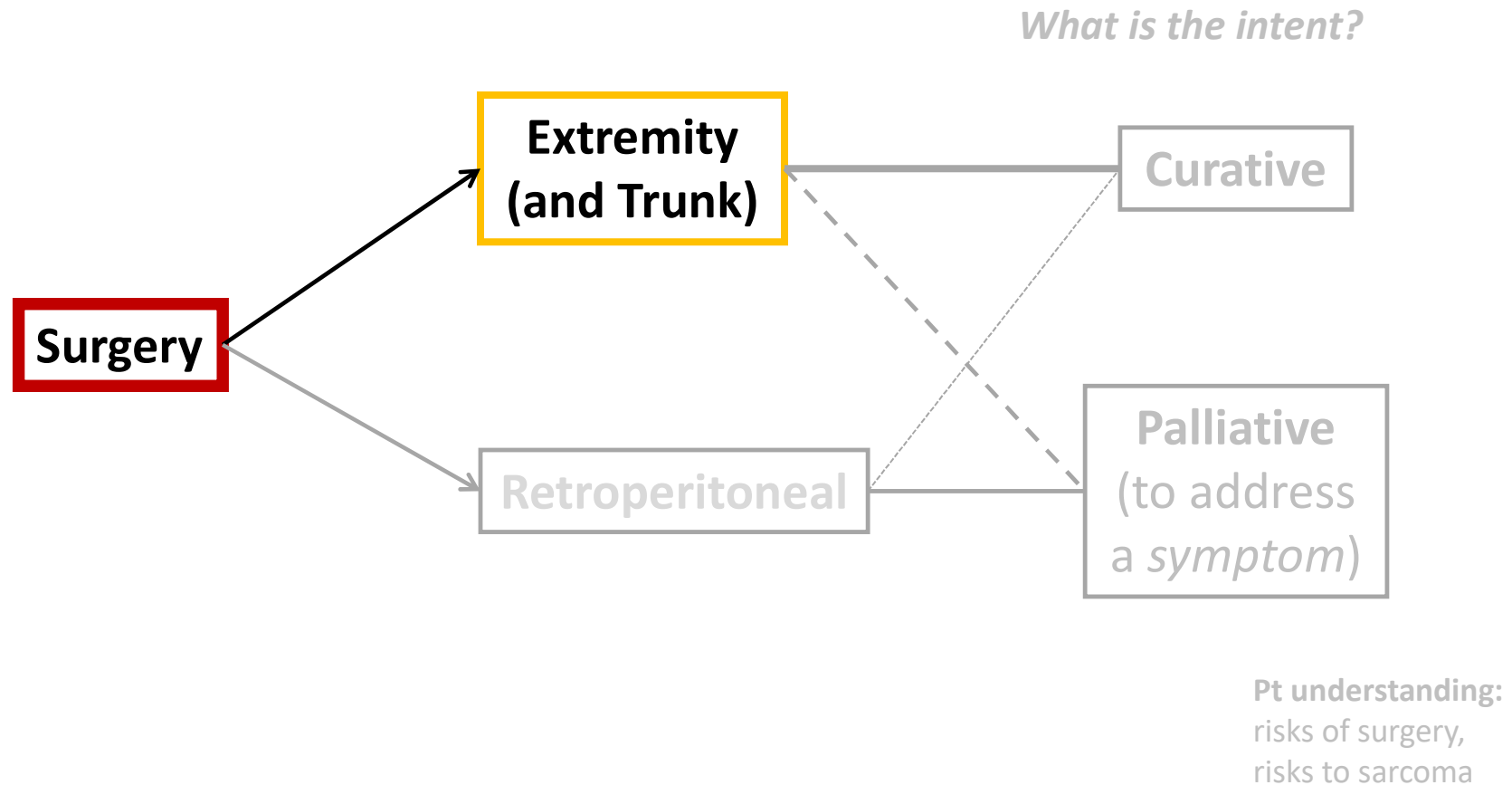
Surgery for STS

What is the intent?



Pt understanding:
risks of surgery,
risks to sarcoma

Surgery for STS



24F writer

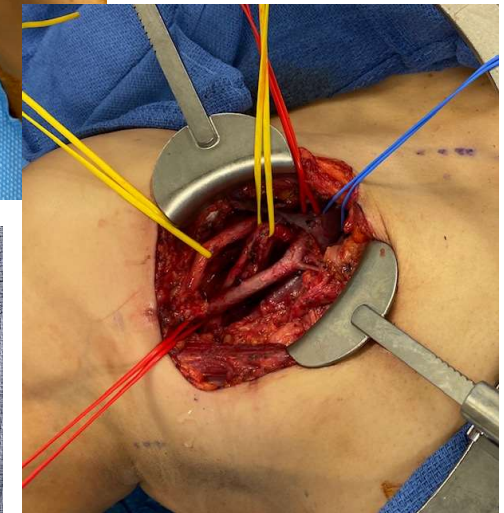
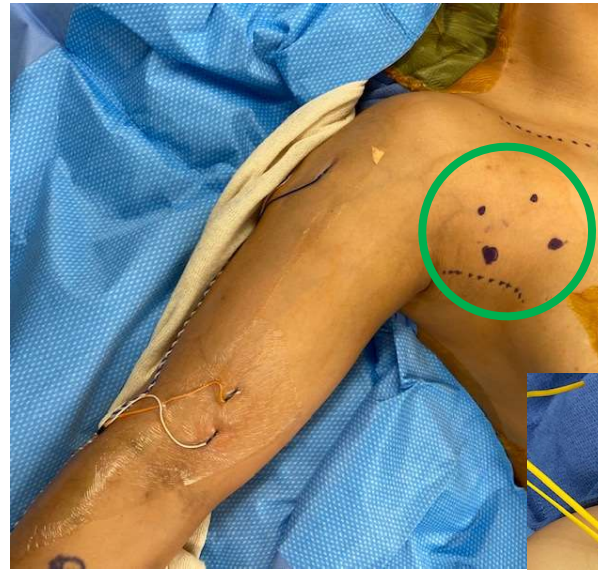
R axillary / chest wall
rhabdomyosarcoma



Orthopedics @ OSH:
Amputation

...**normal** arm/hand
function; no swelling

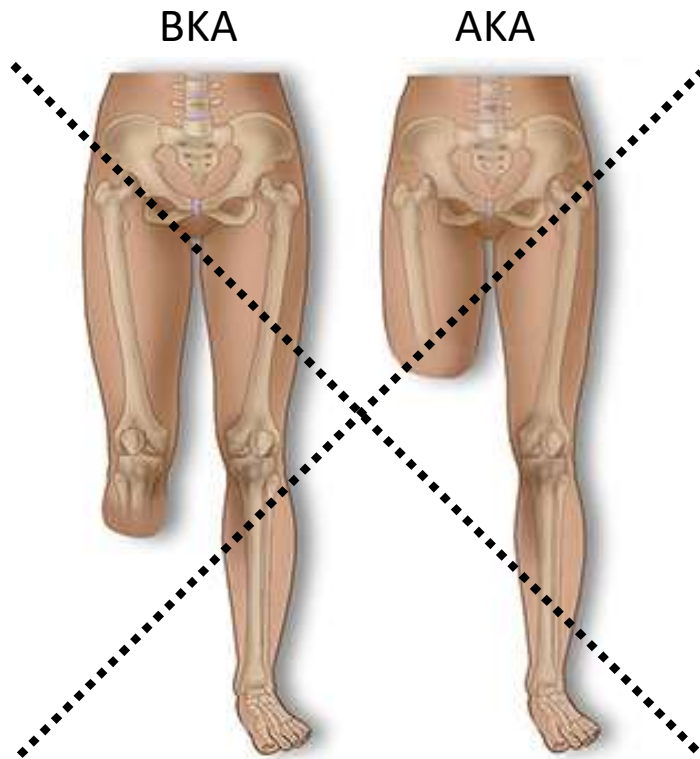
Systemic Therapy
(Neoadjuvant)



Limb Salvage Surgery

- Complete Resection

Systemic Therapy
Radiation Therapy
(Adjuvant)



Limb salvage is standard of care

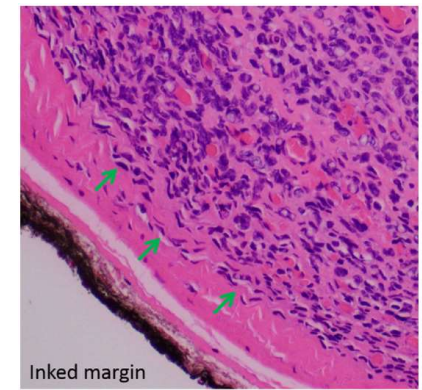
- Optimal cancer operation
+/- **Radiation Therapy**

Rosenberg et al, *Ann Surg* 1982
Pisters et al, *J Clin Oncol* 1996
Yang et al, *J Clin Oncol* 1998

- **Function preservation**

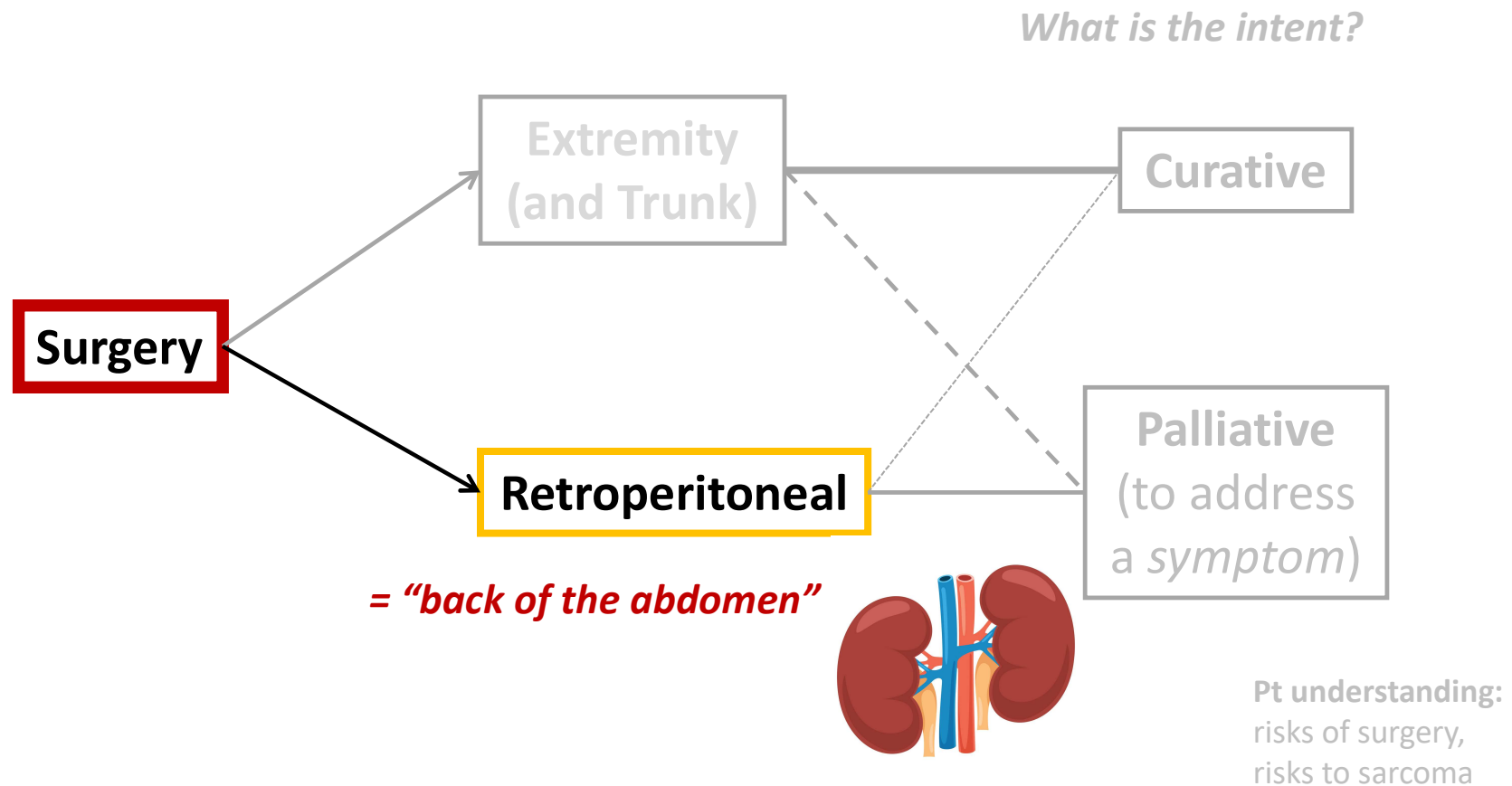
Negative margins? **YES**

- Distance (cm) *depends* on subtype, tissue barriers (e.g. fascia), adjacent critical structures (e.g. vessels, nerves)

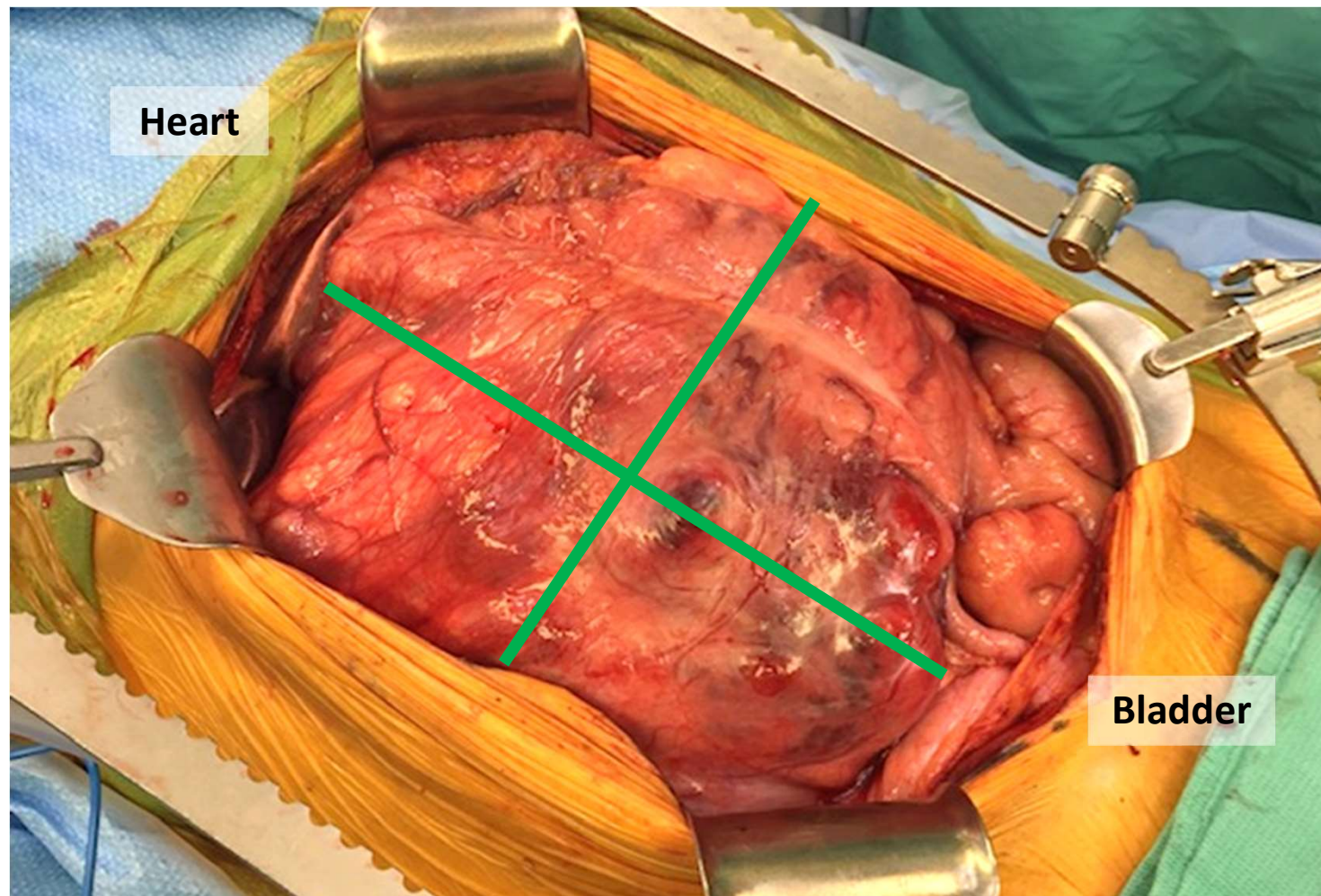


Byerly, Tseng et al, *J Surg Oncol* 2015

Surgery for STS



Retroperitoneal Sarcoma



Margins...?!

Retroperitoneal Sarcoma



Standard Resection

- Complete Tumor Removal
- Adjacent Organs / Structures
– *if involved*



- Open, *not* laparoscopic

Gronchi et al, *Ann Surg Oncol* 2018

Tumor with:

One Kidney (~50% pts)
Partial Colon (~50% pts)

Gronchi et al, *Ann Surg* 2015

Tan et al, *Ann Surg* 2016

Can be *much* more...!

- Multidisciplinary Surgical Team

**Vascular Surgery;
Anesthesia, ICU, etc.**

Retroperitoneal Sarcoma

Fighting a Rare (Giant) Beast By WILLIAM TSENG, M.D.

EDITORIAL

WILEY *Journal of*
SURGICAL ONCOLOGY

Retroperitoneal sarcomas: Big tumors that involve more than just “Getting it Out”

Tseng et al., *J Surg Oncol* 2017

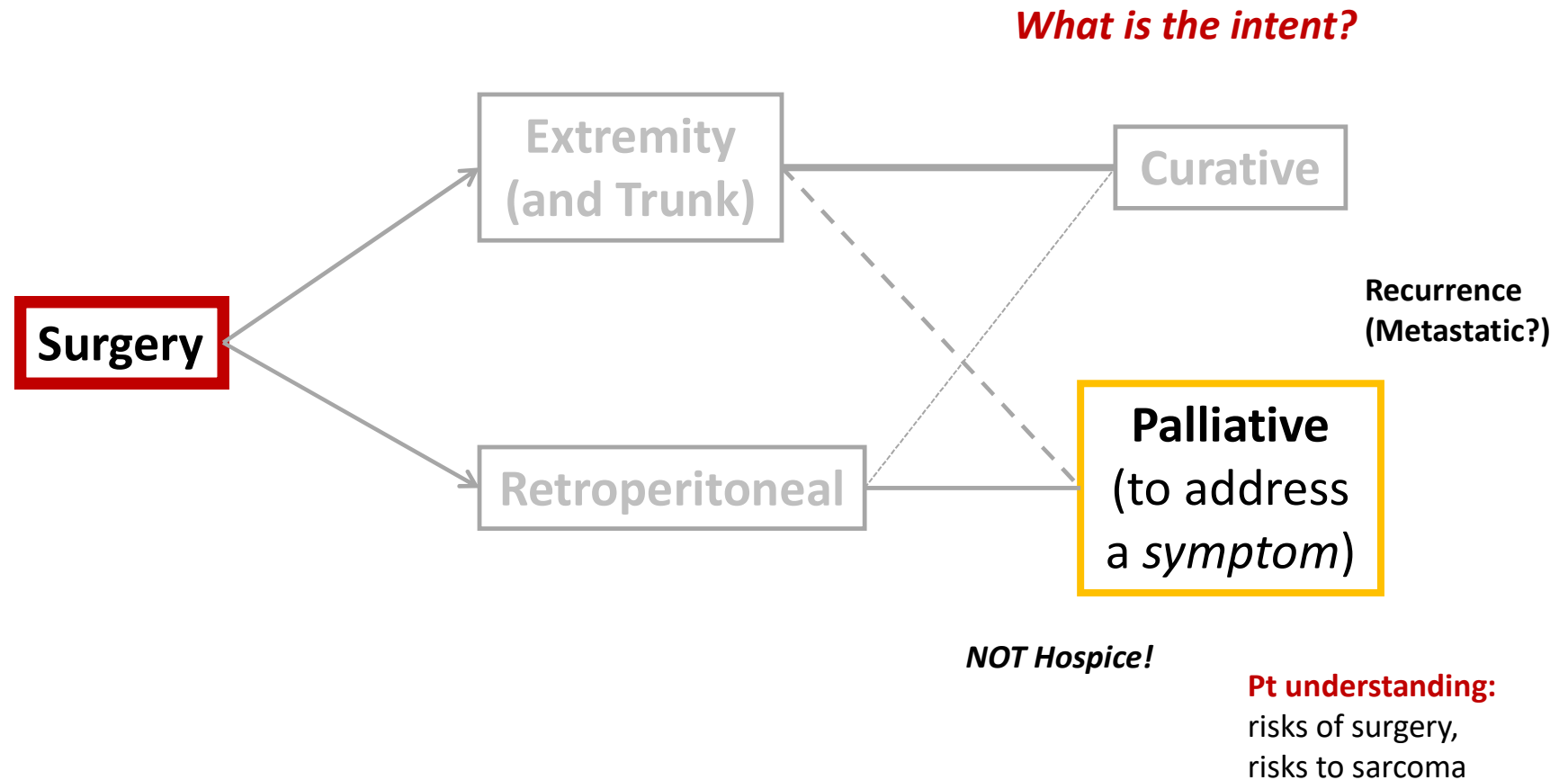
Technique



Biology



Surgery for STS



(Abdominal) Tumor **Debulking**

- What is the **GOAL**? ...and is it **SAFE**?

Considerations:

1) Technical

Blood Loss – Intraop, Postop;
uncontrolled?
Physiology – Sepsis?
Organ Injury – Fistula(e)*

2) Patient

Co-morbidities
Performance Status
Nutrition
Pt understanding

Histologic subtype:
Liposarcoma
(Shibata, JACS 2001)



→ *Durability?*

Is there more...?



Other Considerations... (1)

- **Quality of Life** after Surgery for STS

Quality of Life after Surgery – Extremity STS

*Limb
Salvage*

1

Radiation therapy

Surgery

→ Higher wound complications

2

Surgery

Radiation therapy

→ Fibrosis (= **lower QOL**)

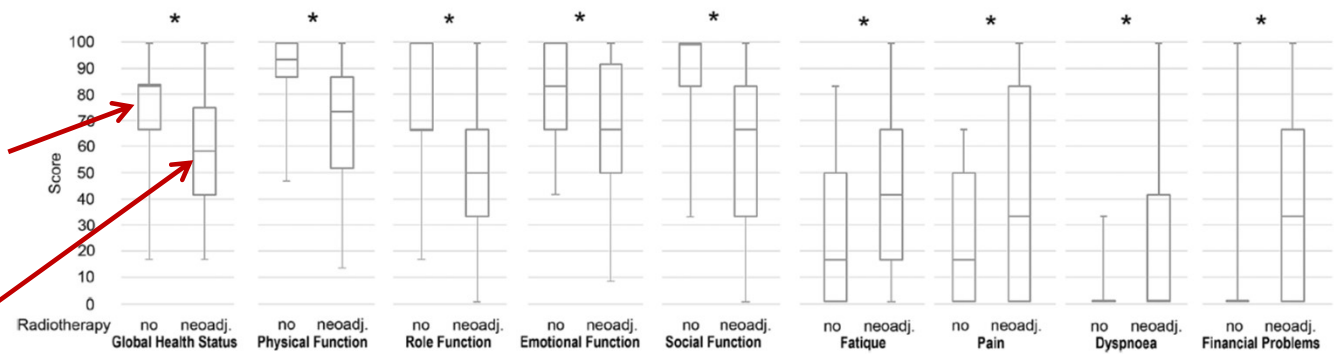
RESEARCH

Patient's quality of life after surgery and radiotherapy for extremity soft tissue sarcoma - a retrospective single-center study over ten years



Surgery alone

Radiation,
then Surgery



Quality of Life after Surgery – Extremity STS



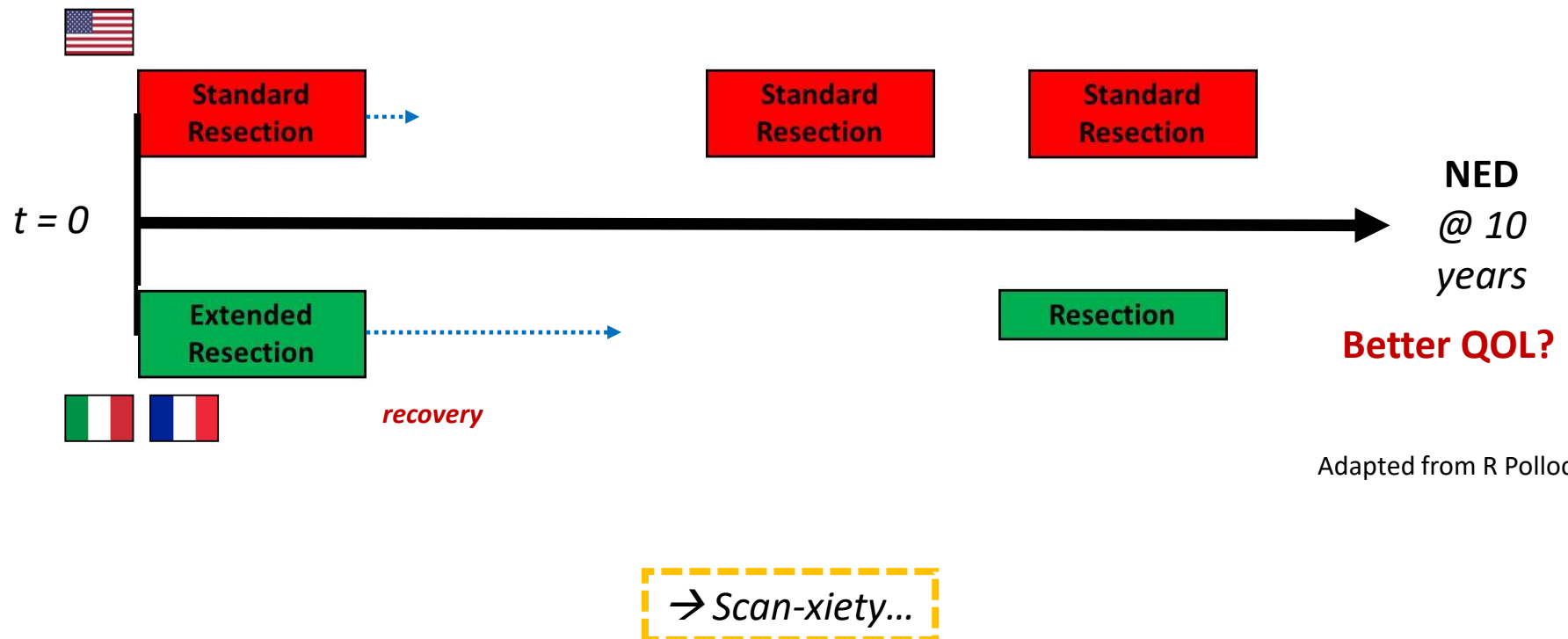
83M w/R arm UPS



...“Sometimes amputation is better”

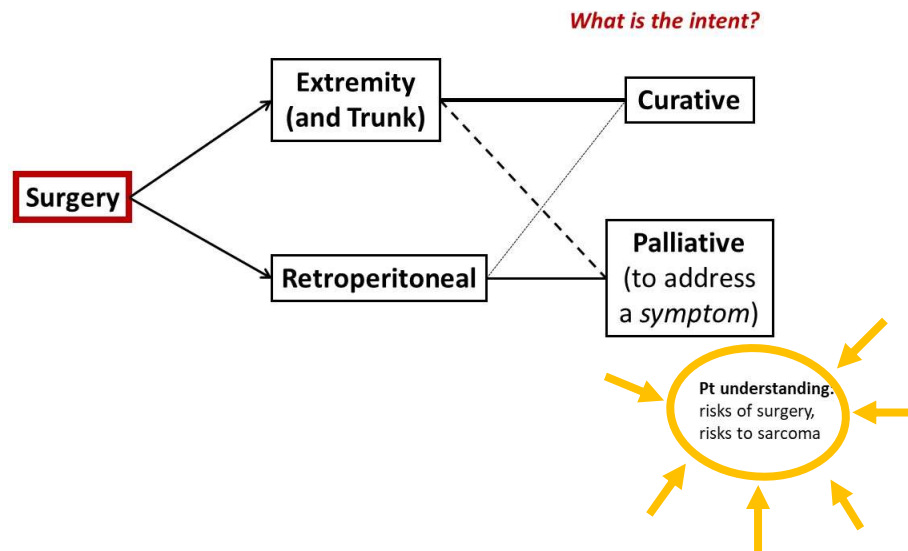
Quality of Life after Surgery – Retroperitoneal STS

- *Really* not well studied ...yet!



Adapted from R Pollock

Other Considerations... (2)



As the *patient*:

- Be prepared
- Ask questions (...2nd visit?)



Go See a Sarcoma Specialist!

Article Contributed By Sarcoma Alliance Medical Advisory Board Members:

William Tseng, MD, Surgical Oncology, University of Southern California, Keck School of Medicine, Los Angeles, CA (pictured above left)

Summer 2018

Are Outcomes Better with a Sarcoma Specialist?

YES !!



N = 35,7840 pts

• 2010-2018

- **Multiple studies...**

Bagaria et al., *Sarcoma* 2018 – non-RP*

Bagaria et al., *Sarcoma* 2018 – RP

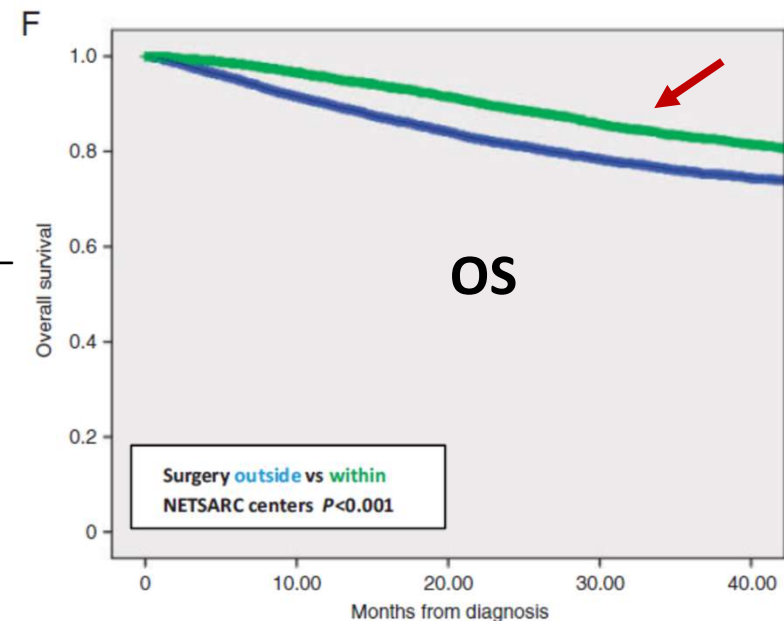
Blay et al., *Ann Oncol* 2019 – all sites

Song et al., *Surg Oncol* 2019 – non-RP

Keung et al., *Cancer* 2019 – RP

Villano et al., *JCO Oncol Pract* and *J Amer Coll Surg* 2020 –

* = extremity / trunk



What defines a Sarcoma Specialist?



- Experience
- Volume
- Contribution



EDITORIAL

Journal of
SURGICAL ONCOLOGY WILEY

**A sommelier to guide wine selection and a specialist
to manage the sarcoma patient: Barriers to referral and
definition of a sarcoma specialist**

Tseng et al., *J Surg Oncol* 2020

What defines a Sarcoma Specialist?



- Experience
- Volume
- Contribution

(Oncology) Fellowship Training

Dedication to Sarcoma

**Multidisciplinary
Discussion**



Society Participation:

- CTOS
- MSTS

Research

Publications

Cases / year:

Specialist (MD*)

- 20^a
- 30-40^b

Center

- >100^{a,b,c}
- RPS: 10-13^{d,e,f}

^aSarcoma Alliance

^bECCO (Andristch et al., *Critical Rev Oncol / Hematol* 2017)

^cSarcoma Foundation of America

^dBagaria et al., *Sarcoma* 2018

^eKeung et al., *Cancer* 2019

^fVillano et al., *J Amer Coll Surg* 2020

Other Considerations... (3)

As the *patient*:

- Be prepared
- Ask questions (...2nd visit?)
- ***Stay strong, stay positive!***



For the patient with a rare cancer, such as sarcoma, finding hope can be especially problematic, writes a cancer surgeon. Making patients hopeful, he writes, about their medical journey is as important as the medical components of treatment.



Thank you!



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