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

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

“Well, we’re ready for the males’ 100-meter freestyle, and I think we can rest assured that most of these athletes will select the dog paddle.”
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
- **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)
Surgery for STS

Technique vs. Biology
Surgery for STS

What is the intent?

- Extremity (and Trunk)
- Curative
- Retroperitoneal
- Palliative (to address a symptom)

Pt understanding: risks of surgery, risks to sarcoma
Surgery for STS

What is the intent?

- Extremity (and Trunk)
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Pt understanding: risks of surgery, risks to sarcoma
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

- Function preservation

Negative margins? **YES**

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


Surgery for STS

What is the intent?

- Extremity (and Trunk)
  - Curative

- Retroperitoneal
  = "back of the abdomen"
  - Palliative (to address a symptom)

Pt understanding: risks of surgery, risks to sarcoma
Retroperitoneal Sarcoma
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)


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

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

Tseng et al., J Surg Oncol 2017
Surgery for STS

What is the intent?

Surgery

- Extremity (and Trunk)
- Retroperitoneal

Curative

Palliative
(to address a symptom)

Recurrence (Metastatic?)

Pt understanding:
- risks of surgery
- risks to sarcoma

NOT Hospice!
(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**

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**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

Gotzl et al, Health Qual Life Outcomes 2019
Quality of Life after Surgery – Extremity STS

...”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?)

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

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

**Multidisciplinary Discussion**

(Oncology) Fellowship Training

Dedication to Sarcoma

Cases / year:

Specialist (MD*)
- 20\(^a\)
- 30-40\(^b\)

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

Society Participation:
- CTOS
- MSTS

Research

Publications

\(^a\) Sarcoma Alliance
\(^b\) ECCO (Andristch et al., Critical Rev Oncol / Hematol 2017)
\(^c\) Sarcoma Foundation of America
\(^d\) Bagaria et al., Sarcoma 2018
\(^e\) Keung et al., Cancer 2019
\(^f\) Villano et al., J Amer Coll Surg 2020
Other Considerations... (3)

As the *patient:*

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

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**I Am a Strong Believer of Giving Patients with Cancer Hope**

April 19, 2021
William Tseng, MD

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.