

Donnerstag

28

November 2024

16:00 - 18:00 Uhr

WEBINAR UND VOR ORT

Weichteilknoten – wann ist Vorsicht geboten?

Weichteilknoten sind häufige Befunde, die sowohl bei Ärztinnen und Ärzten als auch bei Patientinnen und Patienten Unsicherheit auslösen können. Die möglichen Ursachen bilden ein breites Spektrum – von harmlosen Veränderungen bis hin zu ernsthaften Erkrankungen. Dieses Symposium richtet sich an medizinische Fachkräfte, um ein besseres Verständnis für den Umgang mit Weichteilknoten und deren Diagnostik zu schaffen.

Ziel dieser Veranstaltung ist es, Ihnen fundiertes Wissen zu dieser Thematik zu vermitteln. So können Sie frühzeitig erkennen, wann eine weitere Abklärung oder Behandlung erforderlich ist. Fachvorträge und Diskussionsrunden bieten die Gelegenheit zum Austausch über aktuelle Erkenntnisse und ermöglichen es Ihnen, gezielt Fragen an Expertinnen und Experten zu stellen. Ausserdem werden Sie den hohen Stellenwert der interdisziplinären und überregionalen Zusammenarbeit bei diesem Thema sowie die Versorgungsforschung kennenlernen.

WEICHTEILKNOTEN - GUT ODER BÖSARTIG ?

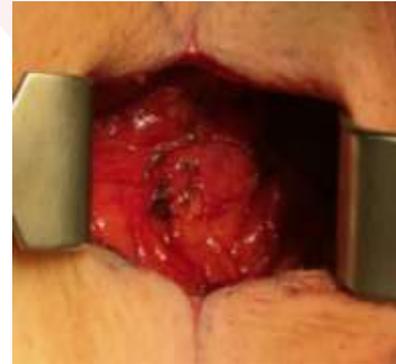
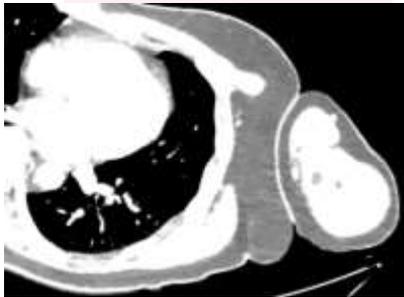
Bruno Fuchs, MD PhD

*Chief Sarcoma Surgery & IPU LUKS / KSW
Health Services & Medical Faculty, University of Lucerne
Chair SwissSarcomaNetwork*

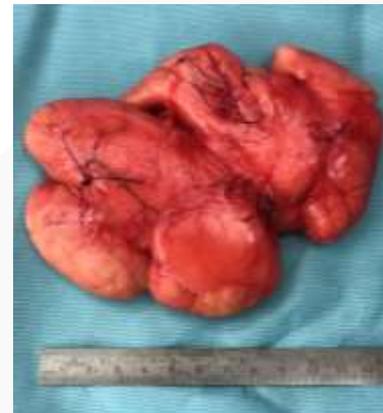
EINFÜHRUNG

Definition von Weichteilknoten

Abnorme Gewebewucherungen im Weichgewebe



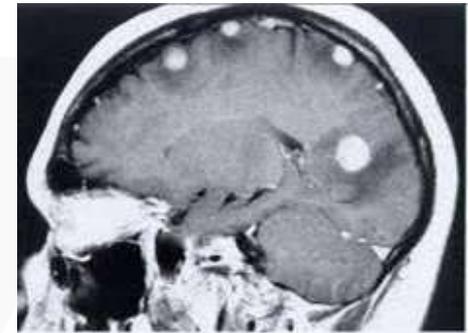
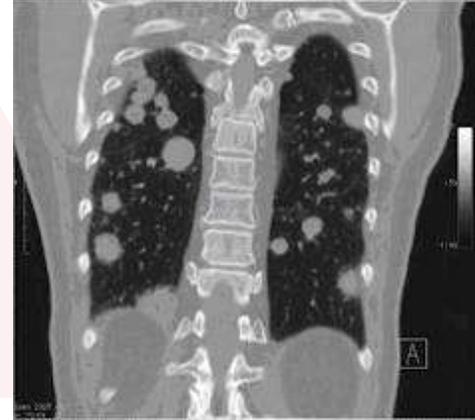
„nehmen wir es mal raus und schauen was es ist...“



EINFÜHRUNG

Definition von Weichteilknoten

- Gutartig
wächst (bleibt) lokal
→ führt (in der Regel) nicht zum Tod
- Bösartig („Krebs“)
hat das Potential, Ableger
(=Metastasen) zu bilden.
→ kann zum Tod führen



EINFÜHRUNG

Definition von Weichteilknoten



EINFÜHRUNG

Definition von Weichteilknoten



EINFÜHRUNG

Definition von Weichteilknoten



the ugly....



EINFÜHRUNG

Bedeutung der Unterscheidung gut- versus bösartig



→ Lipom („Fettgeschwulst“)

HÄUFIGE GUTARTIGE WEICHTEILTUMOREN

Was häufig ist, ist häufig

Lipome: weiche, bewegliche Fettgewebeknoten; häufig asymptomatisch

Fibrome: Bindegewebeknoten; meist klein und symptomlos

Ganglien: Zystische Strukturen, oft an Handgelenken; können Drucksymptome verursachen



Figure 2. List of benign mesenchymal tumors.

Mosku N et al. *Cancers* 14:1559, 2022

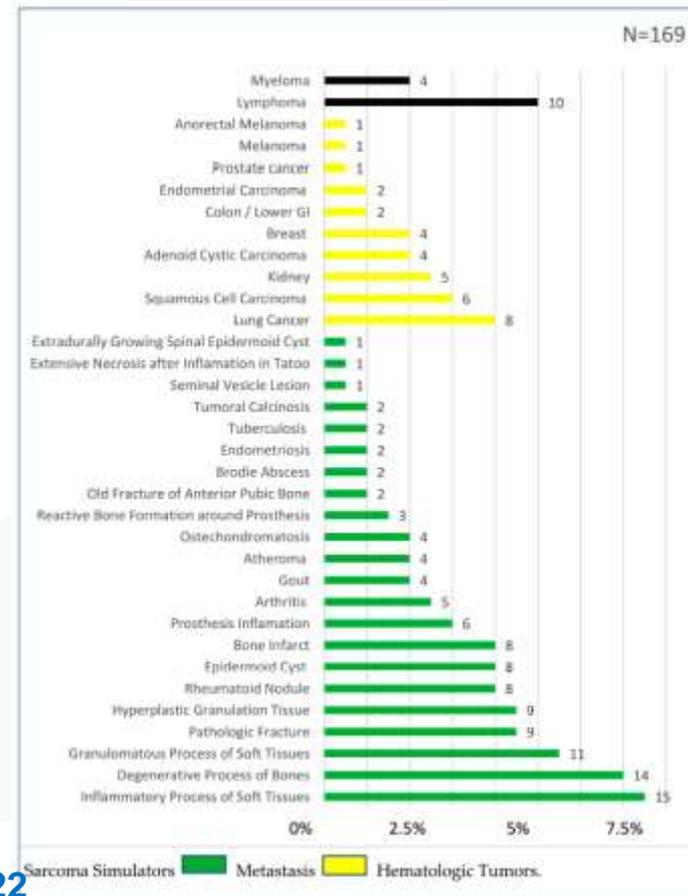


Figure 4. Types of lesions other than mesenchymal tumors.

KLINISCHE SYMPTOME

Abgrenzung

Lipome / gutartiges Fettgeschwulst



- *sind sehr häufig*
- *sind harmlos*
- *OP nicht zwingend*

- **ABER:**
sichere Abgrenzung zu
Krebs-Läsionen möglich ?
→ **NEIN, nicht immer !**

Wie kann ich erkennen, wann ich abklären muss?

DIAGNOSTISCHER ANSATZ BEI WEICHTEILKNOTEN

Hauptpfeiler

Anamnese: Dauer, Wachstumsgeschwindigkeit, Symptome

Klinische Untersuchung:

**Grösse, Konsistenz, Verschiebbarkeit,
Schmerzhaftigkeit**

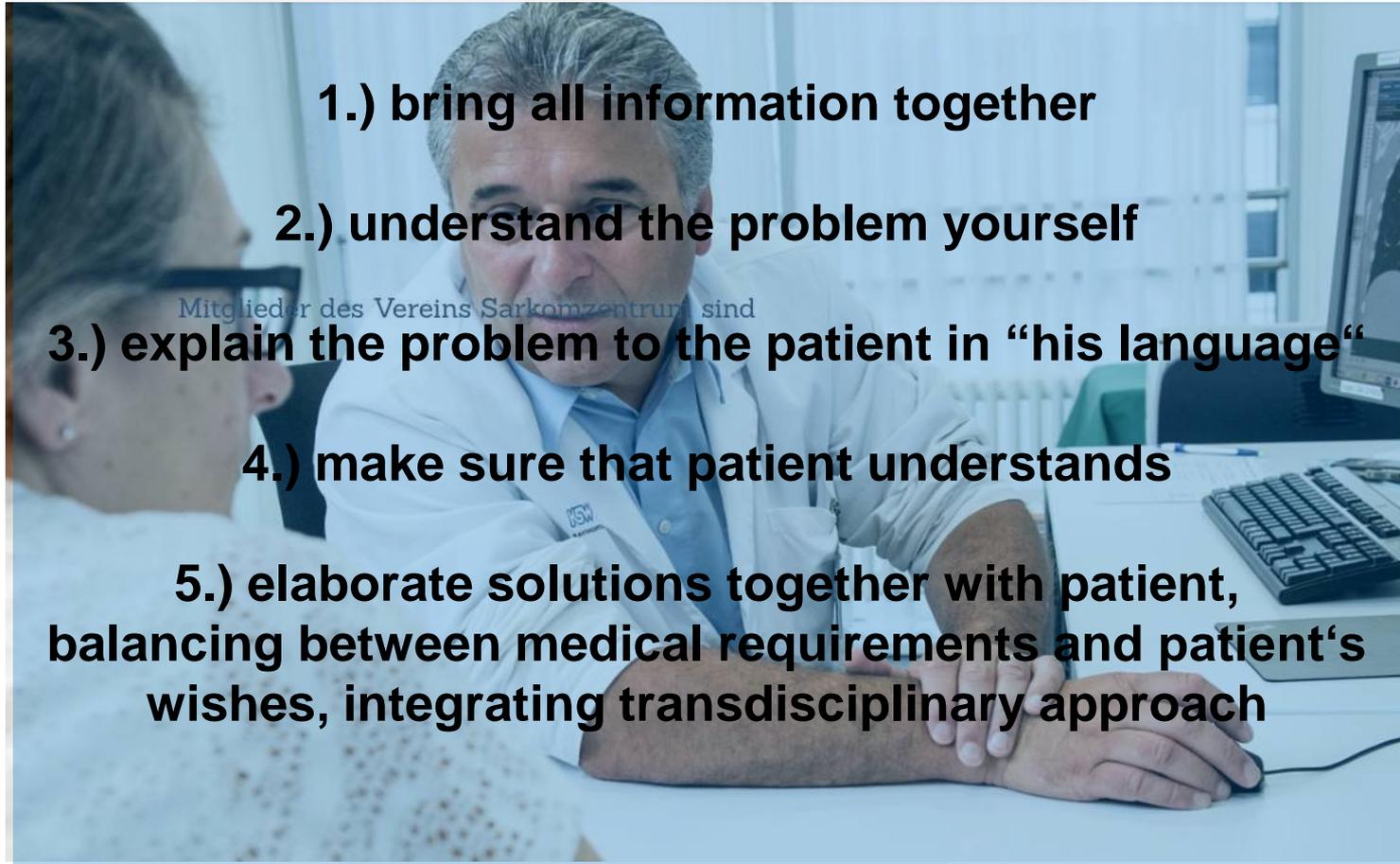
Bildgebung:

**bei Verdacht auf Malignität, MRT zur weiteren
Abklärung**

**Biopsie: indiziert bei unklaren oder suspekten Befunden zur
histologischen Diagnosesicherung**

DIAGNOSTISCHER ANSATZ BEI WEICHTEILKNOTEN

Anamnese



1.) bring all information together

2.) understand the problem yourself

Mitglieder des Vereins Sarkomzentrum sind

3.) explain the problem to the patient in “his language“

4.) make sure that patient understands

5.) elaborate solutions together with patient,
balancing between medical requirements and patient's
wishes, integrating transdisciplinary approach

DIAGNOSTISCHER ANSATZ BEI WEICHTEILKNOTEN

Klinische Untersuchung

- **Klinische Präsentation**
 - Symptome variieren je nach Lage und Größe des Tumors, häufig schmerzlose Schwellung oder Masse.
 - Knochensarkome können Schmerzen, Schwellungen und Frakturen verursachen.



DIAGNOSTISCHER ANSATZ BEI WEICHTEILKNOTEN

Anamnese & Untersuchung



Table 3. More precise breakdown of symptoms per subgroup.

	BS n = 82	Deep and superficial STS n = 356	STS Deep STS n = 296	Superficial STS n = 60	BTB n = 61	Deep and superficial STTB n = 213	STTB Deep STTB n = 172	Superficial STTB n = 41
cardiovascular								
swelling	0 (0.0%)	5 (1.4%)	2 (0.7%)	3 (5.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
lid foot	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.5%)	1 (0.6%)	0 (0.0%)
edema	0 (0.0%)	3 (0.8%)	3 (1.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
matoma	0 (0.0%)	4 (1.1%)	3 (1.0%)	1 (1.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
myoptysis	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
increased resting heart rate	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
all vein markings	1 (1.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
lower leg edema	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
gastrointestinal								
constipation	1 (1.2%)	6 (1.7%)	6 (2.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
decrease in stool frequency	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
diarrhoea	0 (0.0%)	2 (0.6%)	2 (0.7%)	0 (0.0%)	1 (1.6%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
emesis	0 (0.0%)	2 (0.6%)	2 (0.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
frequent bowel movements	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
increase in abdominal girth	0 (0.0%)	7 (2.0%)	7 (2.4%)	0 (0.0%)	0 (0.0%)	1 (0.5%)	1 (0.6%)	0 (0.0%)
loss of appetite	0 (0.0%)	5 (1.4%)	5 (1.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
meteorism	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
nausea	2 (2.4%)	2 (0.6%)	2 (0.7%)	0 (0.0%)	0 (0.0%)	1 (0.5%)	1 (0.6%)	0 (0.0%)
stool irregularities	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
urge to defecate	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
general symptoms								
chills	1 (1.2%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	1 (1.6%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
deterioration in general condition	0 (0.0%)	2 (0.6%)	2 (0.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
difference in log circumference	0 (0.0%)	7 (2.0%)	6 (2.0%)	1 (1.7%)	0 (0.0%)	2 (0.9%)	2 (1.2%)	0 (0.0%)
fatigue	0 (0.0%)	8 (2.3%)	8 (2.7%)	0 (0.0%)	0 (0.0%)	3 (1.4%)	3 (1.7%)	0 (0.0%)
fever	1 (1.2%)	4 (1.1%)	4 (1.4%)	0 (0.0%)	1 (1.6%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
growing deformation	1 (1.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
		67	67			57		
growing swelling	9 (11.0%)	88 (24.7%)	88 (29.7%)	21 (35.0%)	7 (11.5%)	80 (37.6%)	33 (19.2%)	23 (56.1%)
imbalance	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
malaise	0 (0.0%)	4 (1.1%)	4 (1.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
night sweats	2 (2.4%)	6 (1.7%)	6 (2.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	65	131	131		43	68		
pain	79 (95.7%)	138 (38.8%)	138 (46.3%)	7 (11.7%)	70 (114.8%)	78 (36.6%)	39 (22.7%)	10 (24.4%)
subfebrile temperature	1 (1.2%)	2 (0.6%)	1 (0.3%)	1 (1.7%)	0 (0.0%)	1 (0.5%)	1 (0.6%)	0 (0.0%)
sweating	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	25	165	165		21	120		
swelling	30 (36.6%)	210 (59.0%)	210 (70.3%)	45 (75.0%)	34 (55.8%)	160 (75.1%)	69 (40.1%)	40 (97.6%)
swelling/deep vein thrombosis	0 (0.0%)	2 (0.6%)	2 (0.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
swelling: after trauma	1 (1.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
syncope	0 (0.0%)	3 (0.8%)	3 (1.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
weight loss	0 (0.0%)	16 (4.5%)	16 (5.4%)	0 (0.0%)	0 (0.0%)	1 (0.5%)	1 (0.6%)	0 (0.0%)
incidental finding								
incidental finding			42		15		32	
incidental finding after trauma	9 (11.0%)	46 (12.9%)	46 (15.2%)	4 (6.7%)	24 (39.3%)	32 (15.0%)	18 (10.5%)	0 (0.0%)
incidental finding after trauma; pain	3 (3.7%)	2 (0.6%)	2 (0.7%)	0 (0.0%)	8 (13.1%)	3 (1.4%)	3 (1.7%)	0 (0.0%)
incidental finding at control of cancerous disease	1 (1.2%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	4 (6.6%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
incidental finding at control of cancerous disease	2 (2.4%)	26 (7.3%)	23 (7.8%)	3 (5.0%)	3 (4.9%)	7 (3.3%)	7 (4.1%)	0 (0.0%)

* pain reduces PI / DI
prompting early
consultation

* growing swellings,
sensory disturbances and
integumentary symptoms
delay all intervals

DIAGNOSTISCHER ANSATZ BEI WEICHTEILKNOTEN

Bildgebung

→ radiologische Bildgebung als erster Schritt

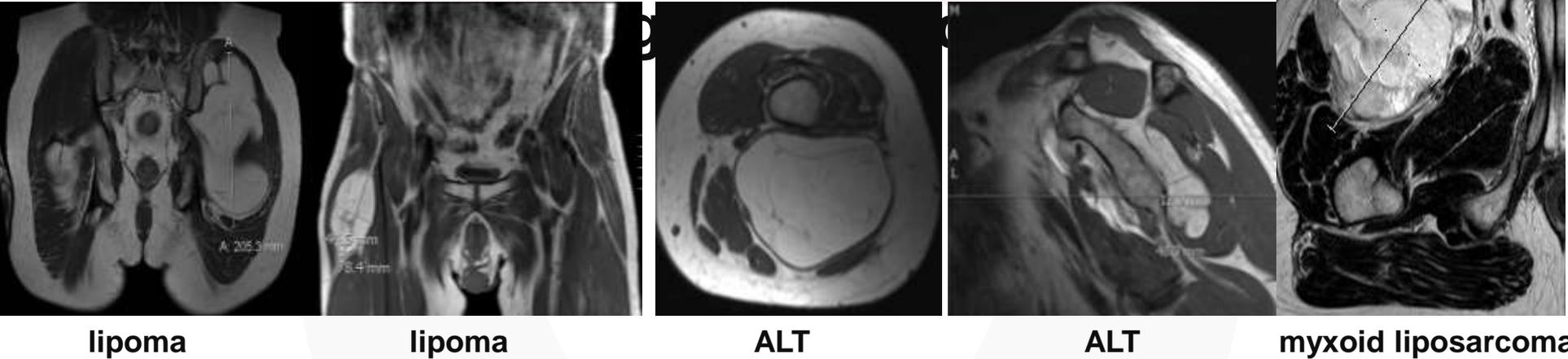
→ Röntgenbild und MRI



DIAGNOSTISCHER ANSATZ BEI WEICHTEILKNOTEN

Bildgebung

„klassisches“ Lipom:



**Jede tief gelegene Masse ist verdächtig auf
Bösartigkeit**

Wann immer eine Unsicherheit besteht: Bildgebung!

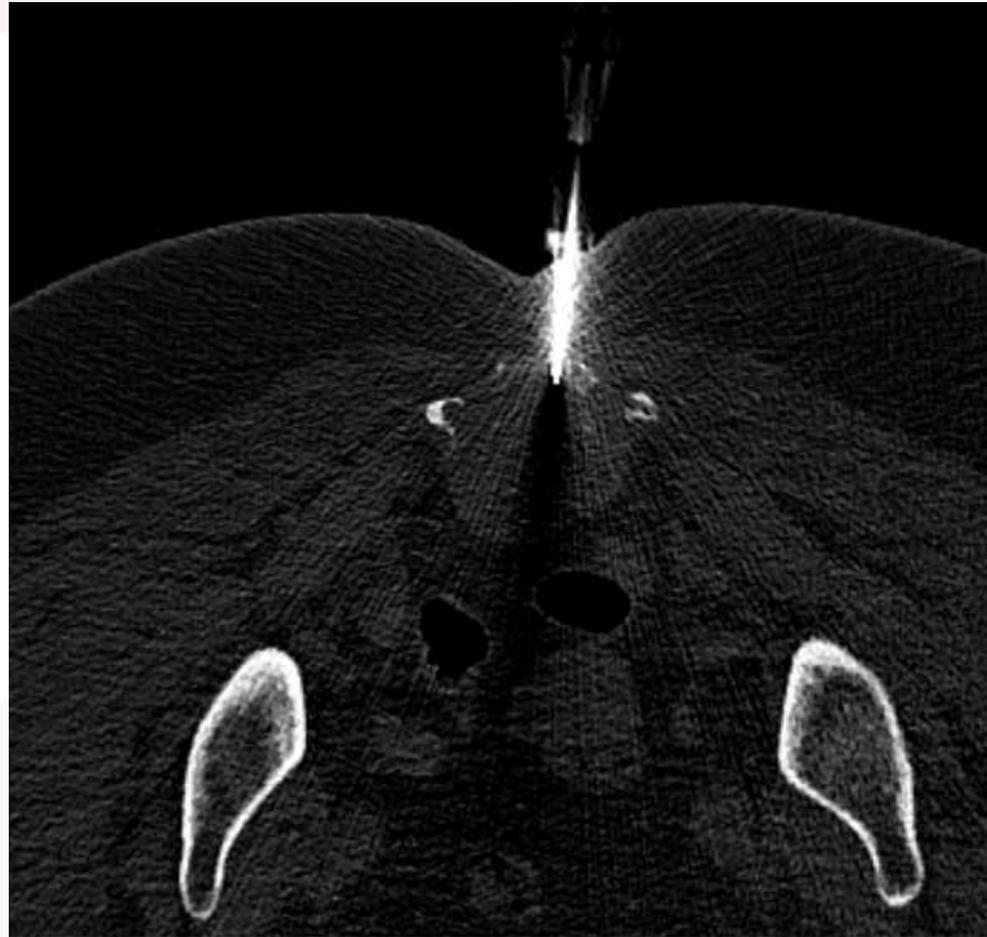
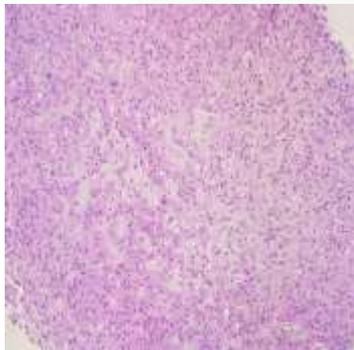
DIAGNOSTISCHER ANSATZ BEI WEICHTEILKNOTEN

Biopsie

- **Diagnostische Methoden**

- Bildgebung (z.B. MRT, CT, PET) zur Lokalisierung und Größenbestimmung.

- Biopsie zur histologischen Bestätigung der Diagnose.



DIAGNOSTISCHER ANSATZ BEI WEICHTEILKNOTEN

Biopsie

Needle biopsy



Core biopsy

Needle diameter

>1mm (18G)

Histology



Fine needle biopsy

Needle diameter

<1mm (24G)

Cytology

Open (surgical) biopsy



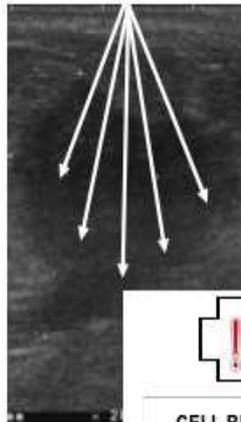
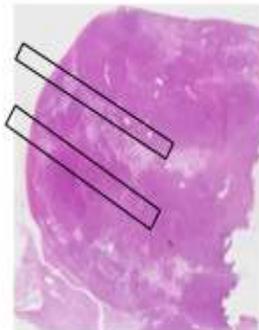
Excisional biopsy

(max 3-5 cm mass)

Incisional biopsy

(>5 cm)

Histology



DIAGNOSTISCHER ANSATZ BEI WEICHTEILKNOTEN

Biopsie

Table 2. Types of biopsies performed; n = 950.

	Types of Biopsies	No./% of Cases	No./% of Confirmed Sarcoma
1	Core Biopsy	409/43%	542/57%
2	Fine Needle Aspiration	130/14%	456/48%
3	Incisional Biopsy with suspicion of sarcoma	110/11%	504/53%
4	Excisional Biopsy with suspicion of sarcoma	90/10%	589/62%
5	Incisional Biopsy without suspicion of sarcoma	136/14%	Not Applicable
6	Excisional Biopsy without suspicion of sarcoma	75/8%	Not Applicable

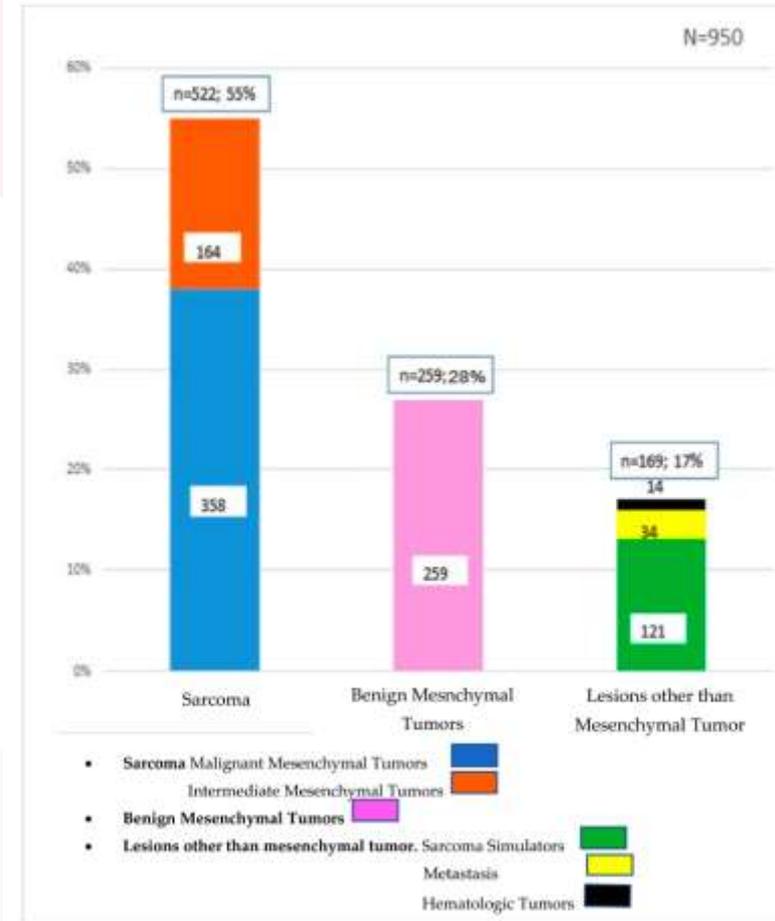


Figure 1. Types of lesions after biopsy.

ratio sarcoma/non-sarcoma: 55%

DIAGNOSTISCHER ANSATZ BEI WEICHTEILKNOTEN

Anamnese & Untersuchung

LUMPS - CAMPAIGN

L = Larger than a golf ball (42mm)

U = Under the fascia

M = More painful

P = Progressing

**S = Should be investigated - refer to
regional Sarcoma - MDT MDU**



MANAGEMENT UND ÜBERWEISUNGSKRITERIEN

In Abhängigkeit der Dignität



www.swiss-sarcoma.net

MINIMAL WORKUP REQUIREMENTS

Introduction

Multidisciplinary patient management is absolutely crucial to optimize the therapy success. It is recommended that biopsy and surgery be performed by the same team/person.

When is a mass suspicious for malignancy (sarcoma)?

Soft tissue: - each subfascial mass (situated underneath the fascia)

- any rapidly growing mass > 3cm and/or symptomatic
- each superficial (epifascially located) mass >3-5cm (depending on localization).
- any superficial mass suspicious for sarcoma (except for "classic" lipoma)

Bone: - any aggressively looking lesion on conventional Xray.

What does an initial (local) imaging include to strengthen my suspicion?

- conventional radiographs of local tumor in 2 projections (mandatory for bone, optional for selected soft tissue lesions)
- MRI w/wo IV Gadolinium

When should a biopsy be planned / performed?

- any mass suspicious for sarcoma
- after completion of local imaging
- after presentation at regional Sarcoma Board (or at least contacting it; Addendum 4)

How is the biopsy organized?

- always in consultation with sarcoma surgeon to determine biopsy tract
- core biopsy (CT- or US-guided): whenever possible
- excisional biopsy only when tumor <2cm and superficial; or: after presentation at a sarcoma board
- fine needle biopsy: only recommended with experienced pathologist. Indications: confirmation of local recurrences and metastases or where a core biopsy risks significant morbidity
- incisional biopsy: usually not indicated as first line approach; after tru-cut failure
- histopathological diagnosis of the soft tissue mass has been confirmed/read by Sarcoma Center reference Pathologists (Addendum 5)

What do I do when sarcoma diagnosis is confirmed?

- send patient to regional Sarcoma Center (all bone sarcomas; Addendum 4); or:
- complete staging (see below)
- make sure that patient management strategy is discussed at regional Sarcoma Board.

How do I need to complete staging?

- chest CT (PET-CT usually not necessary)
- thoraco-abdominal CT for myxoid liposarcoma

Concluding remarks:

It is imperative that referring/family physician be informed about each therapy step/strategy. If there is any doubt regarding management, please always contact your nearest Sarcoma Center.

www.swiss-sarcoma.net

MANAGEMENT UND ÜBERWEISUNGSKRITERIEN

Analyse von Zuweisungsintervallen



Article

Enhancing Healthcare for Sarcoma Patients: Lessons from a Diagnostic Pathway Efficiency Analysis

Maria Elyes ¹, Philip Heesen ², Georg Schelling ¹, Beata Bode-Lesniewska ³, Gabriela Studer ¹ and Bruno Fuchs ^{1,2,4,*} on behalf of the Swiss Sarcoma Network

Cancers **2023**, *15*, 4892. <https://doi.org/10.3390/cancers15194892>



Table 2. Length of patient, diagnostic, primary care, secondary care, tertiary care, and total interval in weeks.

	OVERALL	BONE SARCOMA	p-Value ^a	SOFT-TISSUE SARCOMA			BENIGN BONE TUMOR	BENIGN SOFT-TISSUE TUMOR					
				Deep and Superficial	Deep	Superficial		Deep and Superficial	Deep	Superficial			
	n = 712	n = 82		n = 156	n = 286		n = 41	n = 233	n = 172				
Patient Interval, weeks	60.8 (22.1, 284.8)	7.8 (2.7, 27.5)	0.46	8.8 (2.1, 29.8)	6.3 (2.6, 14.4)	0.08	30.7 (4.2, 130.4)	39.1 (4.3, 52.3)	0.17	21.6 (6.4, 108.6)	29.8 (6.5, 75.1)	0.22	20.9 (9.0, 176.4)
Diagnostic Interval, weeks	44.2 (25.5, 95.5)	7.4 (3.1, 16.2)	0.01	8.7 (2.7, 33.3)	6.9 (3.8, 11.7)	0.22	3.7 (3.4, 9.5)	19.8 (8.8, 78.2)	0.008	6.0 (2.8, 13.4)	6.0 (2.8, 14.4)	0.33	5.8 (3.6, 9.5)
Primary Care Interval, weeks	4.9 (3.0, 18.5)	0.6 (0.1, 8.7)	0.14	0.4 (0.1, 1.4)	0.4 (0.1, 1.2)	0.31	0.0 (0.0, 1.4)	0.8 (0.0, 44.8)	0.56	0.7 (0.0, 3.1)	0.7 (0.0, 4.4)	0.17	0.3 (0.0, 1.8)
Secondary Care Interval, weeks	28.9 (12.1, 87.0)	2.2 (0.9, 8.4)	0.009	4.3 (2.1, 8.3)	3.9 (1.9, 8.1)	0.60	8.1 (4.9, 18.2)	2.6 (1.0, 18.7)	0.47	3.5 (1.8, 7.5)	3.9 (1.7, 9.0)	0.34	2.8 (1.5, 3.8)
Tertiary Care Interval, weeks	14.0 (5.8, 26.3)	2.1 (1.0, 3.7)	0.008	1.5 (0.6, 3.4)	1.6 (0.2, 3.8)	0.88	0.9 (-3.3, 1.5)	3.1 (2.8, 8.1)	0.34	2.8 (1.8, 4.1)	2.6 (1.7, 4.0)	0.36	2.7 (1.5, 3.8)
Total Interval, weeks	219.0 (94.0, 762.2)	22.8 (11.9, 36.7)	0.02	21.5 (10.4, 39.4)	20.9 (10.4, 35.1)	0.07	34.9 (12.5, 108.8)	101.9 (46.1, 236.6)	0.22	48.2 (17.8, 140.3)	45.0 (14.7, 150.4)	0.84	136.1 (28.1, 394.4)

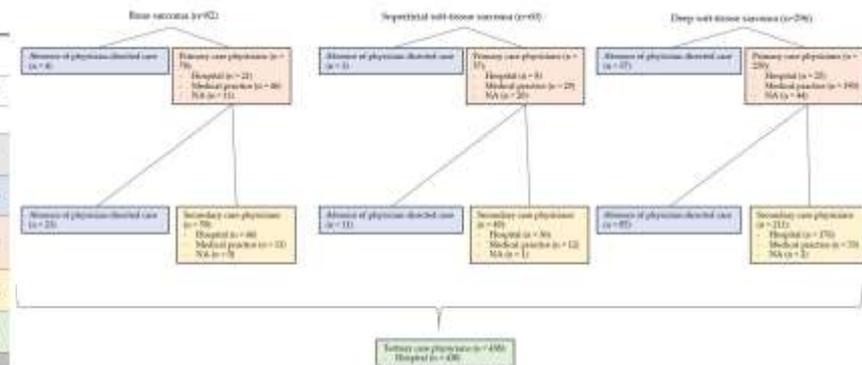


Figure 3. Referral pattern of bone sarcoma, superficial soft-tissue sarcoma, and deep soft-tissue sarcoma.

„Patient-“ and „Secondary Care Interval“ with the greatest potential for optimization



MANAGEMENT UND ÜBERWEISUNGSKRITERIEN

Ungeplante „whoops-“ Operationen

cancers **MDPI**

Article
Planned and Unplanned Sarcoma Resections: Comparative Analysis of Local Recurrence, Metastasis, and Mortality
 Kim N. Nydegger ^{1,2}, Timothy T. A. E. Obergfell ^{1,2}, Philip Heesen ³, Georg Schelling ^{1,2}, Gabriela Studer ^{1,2}, Beata Bode-Lesniewska ^{1,2} and Bruno Fuchs ^{1,2,4,5,7} on behalf of the Swiss Sarcoma Network
Cancers **2024**, *16*, 3408. <https://doi.org/10.3390/cancers16193408>

cancers **MDPI**

Article
Improving Sarcoma Outcomes: Target Trial Emulation to Compare the Impact of Unplanned and Planned Resections on the Outcome
 Timothy T. A. E. Obergfell ^{1,2}, Kim N. Nydegger ^{1,2}, Philip Heesen ³, Georg Schelling ², Beata Bode-Lesniewska ², Gabriela Studer ^{1,2} and Bruno Fuchs ^{1,2,4,5,7} on behalf of the SwissSarcomaNetwork
Cancers **2024**, *16*, 2443. <https://doi.org/10.3390/cancers16132443>

Table 4. Multivariable propensity score weighted Cox regression for LRFS.

Characteristics	HR	95% CI	p-Value
UE	7.49	2.88, 19.49	<0.001
Biological Behavior			
Intermediate	—	—	
Malignant	1.75	0.26, 11.67	0.56
Sarcoma classification			
SST	—	—	
DST	1.44	0.50, 4.16	0.50
Bone	1.06	0.24, 4.70	0.93
Bone (versus DST) *	0.74	0.23, 2.37	0.61
Anatomic region			
Appendicular	—	—	
Axial	1.96	0.80, 4.77	0.14
Largest tumor diameter (mm)	1.00	1.00, 1.01	0.03
Grade			
1	—	—	
2	8.03	1.09, 59.04	0.04
3	8.50	1.21, 59.48	0.03
3 (versus 2) *	1.06	0.56, 1.99	0.86

* After releveling, bone was compared to DST, and grade 3 was compared to grade 2.

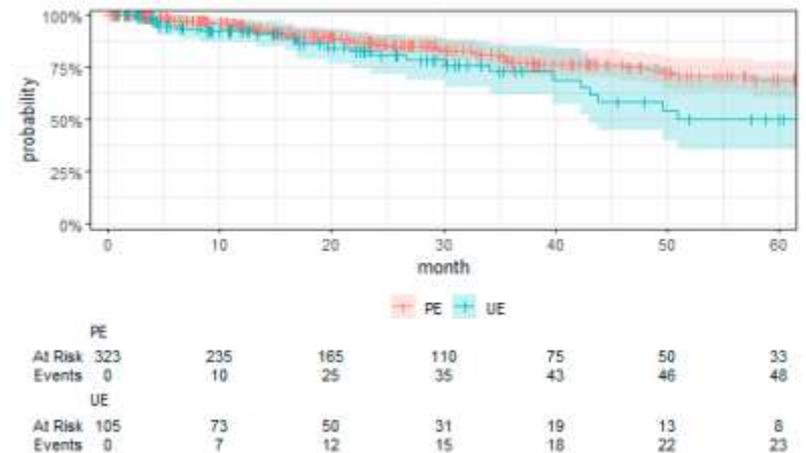


Figure 2. Kaplan–Meier plot of LRFS with the 95% confidence interval.

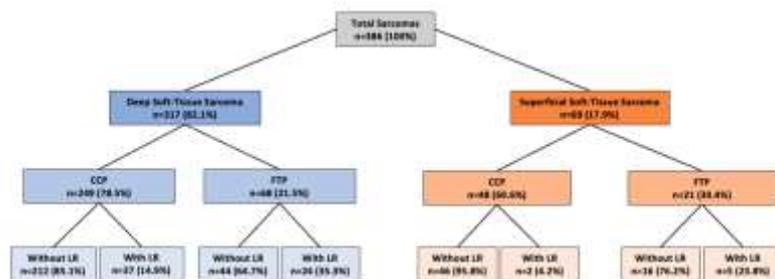
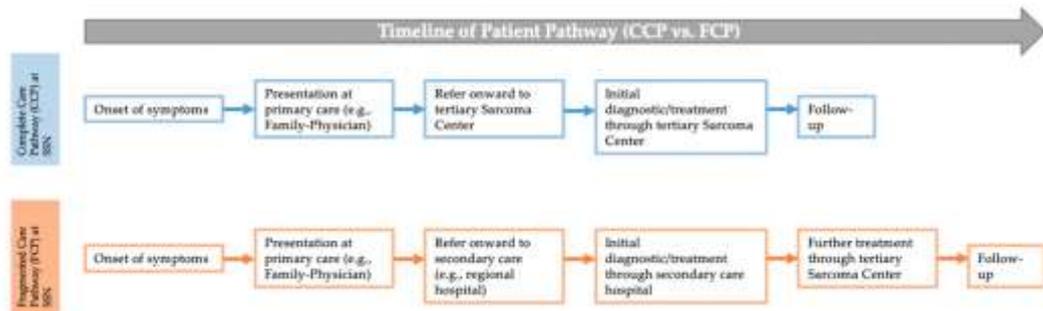
MANAGEMENT UND ÜBERWEISUNGSKRITERIEN

Direkte Zuweisung

Integrated Care in Specialized Networks: Leveraging Early Referrals to Reduce Local Recurrence in Soft Tissue Sarcoma

Markus Schärer ¹, Pascale Hösli ², Philip Heesen ², Georg Schelling ^{3,4}, Timothy Obergfell ⁵, Kim N. Nydegger ⁴, Gabriela Studer ^{3,4}, Beata Bodo-Lesniewska ² and Bruno Fuchs ^{1,3,4,5,6} on behalf of the Swiss Sarcoma Network

Cancers 2024, 16, 3616. <https://doi.org/10.3390/cancers16213616>



Characteristics	Overall (%)	CCP (%)	FCP (%)	p-Value
Resection margin	e	d	a	0.001
R0 wide margin/R0	232 (61.1)	199 (85.8/68.2)	33 (14.2/37.5)	0.0001
Positive resection margins (R1 + R2)	148 (38.9)	93 (62.8/31.3)	55 (37.2/61.8)	0.0001
Chemotherapy part of first treatment	42 (10.9)	33 (78.6/11.1)	9 (21.4/10.1)	0.08
Radiotherapy part of first treatment	159 (41.2)	128 (80.5/43.1)	31 (19.5/34.8)	0.9
Whoops resections	96 (24.8)	51 (53.1/17.2)	45 (46.9/50.6)	<0.0001
Local recurrence n, %	68 (17.6)	39 (57.4/13.1)	29 (43.6/32.6)	<0.0001

MANAGEMENT UND ÜBERWEISUNGSKRITERIEN

In Abhängigkeit der Dignität

Gutartige Knoten:

Beobachtung oder chirurgische Entfernung bei Symptomen oder kosmetischen Bedenken

Verdacht auf Malignität:

Frühzeitige Überweisung an spezialisierte Zentren für weitere Diagnostik und Therapieplanung.

MANAGEMENT UND ÜBERWEISUNGSKRITERIEN

In Abhängigkeit der Dignität

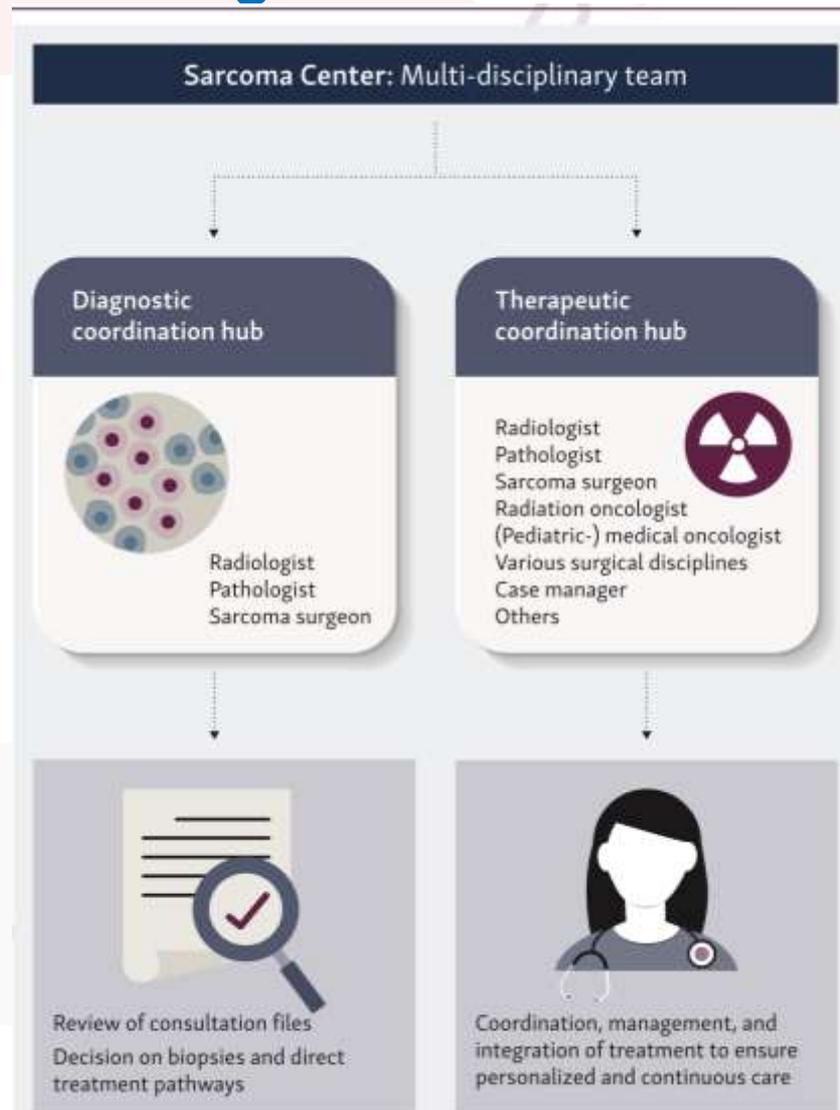


REVIEW

Beyond the sarcoma center: establishing the Sarcoma Hub and Spoke Model network—a Hub and Spoke Model network for global integrated and precision care

B. Fuchs^{1,2*} & A. Gronchi^{3,4*}

¹Sarcoma Center/PU, Department of Orthopaedics and Trauma, LUKS University Hospital, Lucerne; ²Faculty of Health Research & Medicine, University of Lucerne, Lucerne, Switzerland; ³Fondazione IRCCS, Istituto Nazionale dei Tumori, Via Giacomo Venezian, Milano, Italy



MANAGEMENT UND ÜBERWEISUNGSKRITERIEN

In Abhängigkeit der Dignität

ESMO GOOD DESIGN. BETTER MEDICINE. BOLD PRACTICE.

ESMO
OPEN DESIGN FOR HUMAN CANCER CARE

REVIEW

Beyond the sarcoma center: establishing the Sarcoma Hub and Spoke Model network—a Hub and Spoke Model network for global integrated and precision care

B. Fuchs^{1,2*} & A. Gronchi^{2,3,4}

¹Sarcoma Center/IPU, Department of Orthopaedics and Trauma, LUKS University Hospital, Lucerne; ²Faculty of Health Research & Medicine, University of Lucerne, Lucerne, Switzerland; ³Fondazione IRCCS, Istituto Nazionale dei Tumori, Via Giacomo Venezian, Milano, Italy

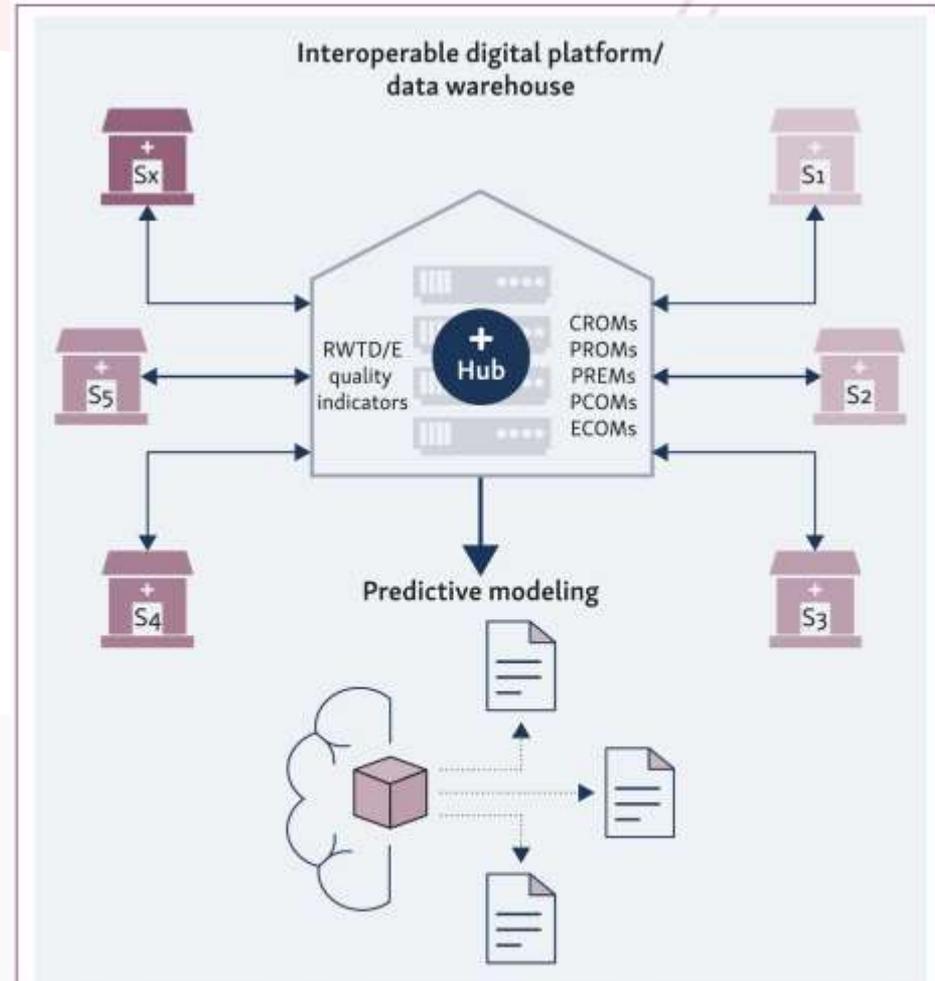


Figure 2. This figure illustrates an interconnected Hub and Spoke Model for sarcoma care, where a central hub coordinates complex case management and predictive modeling, linked to multiple spokes representing regional healthcare centers handling routine diagnostics and treatments. The central interoperable digital platform/data warehouse aggregates and analyzes real-time data from these nodes, integrating routine clinical outcome measures (CROMs), patient-reported outcome measures (PROMs), patient-reported experience measures (PREMs), economic measures (ECOMs), and patient-centric omics measures (PCOMs) to optimize treatment and resource allocation. This setup facilitates multihub collaboration across geographic locations and continents, enhancing the generation of expansive population data to inform quality metrics and establish global sarcoma care standards.

KONKLUSION

Take home messages

Früherkennung und adäquate Überweisung sind entscheidend für die Prognose

Wichtige Rolle des Hausarztes in der initialen Bewertung und im Management von Weichteilknoten

THANK YOU



Sarcoma Academy Webinar



<https://www.youtube.com/@sarcomaacademy>

fuchs@sarcoma.surgery

SARCOMA WORK-UP



Article

Biopsy Ratio of Suspected to Confirmed Sarcoma Diagnosis

Nasian Mosku ^{1,2}, Philip Heesen ², Gabriela Studer ^{1,2}, Beata Bode ², Vito Spataro ², Natalie D. Klass ², Lars Kern ², Mario F. Scaglioni ^{1,2} and Bruno Fuchs ^{1,2,*}

¹ Faculty of Medicine, University of Lucerne, 6000 Lucerne, Switzerland; nmosku45@gmail.com (N.M.); gabriela.studer@luks.ch (G.S.); mario.scaglioni@luks.ch (M.F.S.)

² Swiss Sarcoma Network, 6000 Lucerne, Switzerland; philip.heesen@uzh.ch (P.H.); beata.bode@patho.ch (B.B.); vito.spataro@hin.ch (V.S.); nataliedesiree.klaas@ksgr.ch (N.D.K.); lars.kern@ksw.ch (L.K.)

* Correspondence: fuchs@sarcoma.surgery; Tel: +41-41-229-50-00

n = 950 biopsies

Simple Summary: Determining the biology of mesenchymal tumor, imaging alone is usually not enough, and the final diagnosis is established through tissue analysis. If the indication to perform a biopsy is not established frequently enough, an undesired unplanned resection of a sarcoma may result, and conversely, a patient's discomfort as well as costs may increase. In here, using a real-world data registry of quality, we included the absolute number of a consecutive series of patients, to determine the prevalence of biopsies and its related diagnosis, to establish a reference, which may allow for the definition of a quality indicator for the work-up within a multidisciplinary team.

Table 1. Classification of mesenchymal biopsies.

Suspicion of Sarcoma	Confirmed Sarcoma	Malignant
		Intermediate
	Benign Mesenchymal Tumors	
		Metastasis
	Lesions other than Mesenchymal Tumor	Hematologic Tumors
		Sarcoma Simulators