SOFT TISSUE SARCOMAS POST R1 / R2 RESECTIONS (WHOOPS! LESIONS)

1) Facts

- outcome following unplanned excisions is poorer than following planned oncological surgery
- microscopic tumor is found in some 50% of re-excisions
- presence of microscopic tumor in re-excised specimen is associated with poorer outcome due to metastasis
- assessing residual macro-/microscopic disease after whoops surgery on MRI as well as review of pathology is mandatory before re-excision.
- initial grade, size, scar orientation/positioning, contamination of compartments, and tumor biology play important roles to plan re-excision.
- all whoops material has to be re-assessed by a reference sarcoma pathologist.

Treatment strategy has to be individualized and orchestrated

at the interdisciplinary Sarcoma Board !

>> Assessment by sarcoma surgeon regarding re-excision, i.e. salvage surgery, as very next step is crucial because only complete removal of surgical tumor bed is able to render the patient disease free.

>> Assessment by radiation oncologist regarding combined therapy and radiation therapy (RT) sequence (pre salvage surgery, post salvage surgery, definitive RT, palliative RT, no RT) is crucial

2. Salvage therapy

2.1. **Salvage Surgery** (re-operation/2nd surgery)

- First question: re-excision possible?
- general rule: re-surgery is the treatment of choice

2.1.1. Salvage surgery (re-operation/2nd surgery) possible: individualized procedure, in most cases in combination with preoperative RT

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2.1.2. **Reasons not to perform salvage surgery in curative intent**

- no metastases:
  - patient refuses amputation
  - amputation does not render R0 situation
  - reconstruction of soft tissue defects and/or vessels and/or neural structures is not possible or not meaningful (ie tibial trifurcation) because of functional consequences and potential rehab
- with metastases:
  - no local surgery cures a patient, therefore, amputation is used very prohibitively

2.2. **Radiation Therapy (RT)**

2.2.1. RT with curative intent:

→ In combination with salvage surgery (=2nd surgery) as defined above: preoperatively (or postoperatively)

→ Local definitive RT in selected cases if surgery is not indicated/not possible (as defined above) → has to be assessed by a radiation oncologist ('reasonable tumor volumes/reasonable planning target volumes (PTVs)/acceptable expected late effects' ?)

2.2.2. RT with palliative intent:

→ Symptomatic primary or metastases, if no curative RT nor curative salvage surgery possible

3. **Systemic therapy**

3.1. Curative situation (no metastases):

combination chemotherapy following (RT-)surgery (post whoops or post re-excision) may represent an option in case of G3 and/or large sarcomas (>10cm) and needs to be individualized for each patient's situation.

3.2. Palliative situation (metastases, local progress)

is individualized for each patient's situation