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Recurrent and Metastatic Disease- who is a Candidate for Surgery?

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„Take-Home-Messages“

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Recurrence and metastases: Interdisciplinary management

→ Questions:

- #1: Who needs reoperative thyroid surgery in incidental cancer cases?
- #2: Who will get recurrence/metastases?
- #3: Is there a correlation to the primary operative procedure?
- #4: Is surgery considered appropriately or too rarely??



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Background: Operation for „suspected Malignancy“ - Problems in intraoperative decision-making

- High rate of suspected malignancy
- Low rate of proven malignancy
- Limits in Frozen Section, esp.in follicular lesions!
contralateral residue might persist!

→ „completing thyroidectomy“, i.e. secondary operation, avoidable or mandatory or always indicated??



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„Non-radical primary resection“

- High rate of postoperative proof of malignancy
- High rate of primarily radical First-Step-Operations for benign indication (hyperfunctioning/technical), but **with** parenchymal residue and **without** lymph node dissection
- Where is the Cut-Off for primary Radio-Iodine-Ablation ?



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„Non-radical primary resection“

„Who is a candidate for surgery?“

(completing procedures)

- TSH > 40mU, Pos. Uptake in Tc
- Tc-uptake < 3%
- Tg 25-30
- Sonographic inhomogeneous tissue or nodes
- Sonographic lymph nodes



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Minimal-invasive follicular Cancer: Rationale for an age-dependent limited radicality

- High rates of „subclinical“ suspicious lesions
- High rates of postoperative cancer-diagnoses (limits of frozen section)
- High rates of primary radical operations (due to functional or technical reasons) but without Lym
- Completing Operation (incl. Lymph nodes) **ALWAYS indicated or Over-treatment?**





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„Non-radical primary resection“

who is a candidate for surgery after primarily non-radical resection ?

- High rate of postoperative proof of malignancy
- High rate of primarily radical First-Step-Operations for benign indication (hyperfunctioning/technical), but with parenchymal residue and without lymph node dissection
- Primary Radio-Iodine-Ablation without re-operation
- Any case of suspected or proven recurrence (Tg, Sonography) in those cases should lead to re-operation rather than Radio-Iodine

FDG-PET/CT for papillary and follicular metastases



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- FDG-PET/CT for estimation of prognosis after maximal doses of ^{131}I Iodine (>1Curie), independent of Thyreoglobulin level
- **FDG-PET/CT for localisation of new metastases for planning surgical or radiologic (^{131}I or Rx) intervention**
- **Consequence of PET/CT findings : 8/21 surgical ; 7/21 wait and see; 4/21 RtX**
(Freudenberg;EurJNucl Med.Mol Imaging (2008) 35:950)



FDG-PET/CT for papillary and follicular metastases

- Metastases from highly differentiated papillary and follicular thyroid cancer are mostly iodine-positive and can be treated selectively and effectively with ^{131}I .
- **Metastases from poorly differentiated thyroid cancers resp. after repeated ^{131}I -Therapies have rarely iodine uptake and may lose iodine uptake capacity**
- These metastases show either no or increased FDG-uptake.
- **Indication for FDG-PET/CT-Diagnostic as treatment control and estimation of prognosis.**
→ Evaluation as Candidates for Surgery



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Who is a candidate for Surgery? Conclusion

Persisting Tissue; High Tumor Scores:

- Rather Surgical cure than adjuvant Radio-Iodine

Locoregional recurrence:

- Any morphological evidence of tissue should be removed

Metastases: Solitary Mets :

- Surgery should be considered early!

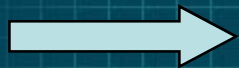
Orthopedic Surgery in all tumor states!



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Who is a candidate for Surgery? Conclusion

Indication between nuclear medicine and endocrine surgery/orthopedic



Tumor Boards!

- No benefit in lab.data
(TG, Calcitonin)
- Vital function
- Local tumor control
- Increase in survival?