

Risk factors of skip metastasis in papillary thyroid carcinoma

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Introduction

- Nodal metastasis secondary to thyroid carcinoma are frequent.
- Skip metastasis are represented by lateral neck metastasis without central nodal metastasis. Their occurrence is not rare but it can easily misdiagnosed pre-operatively.

Objectifs

- We aim to determine risk factors of the occurrence of skip metastasis in papillary thyroid carcinoma (PTC).

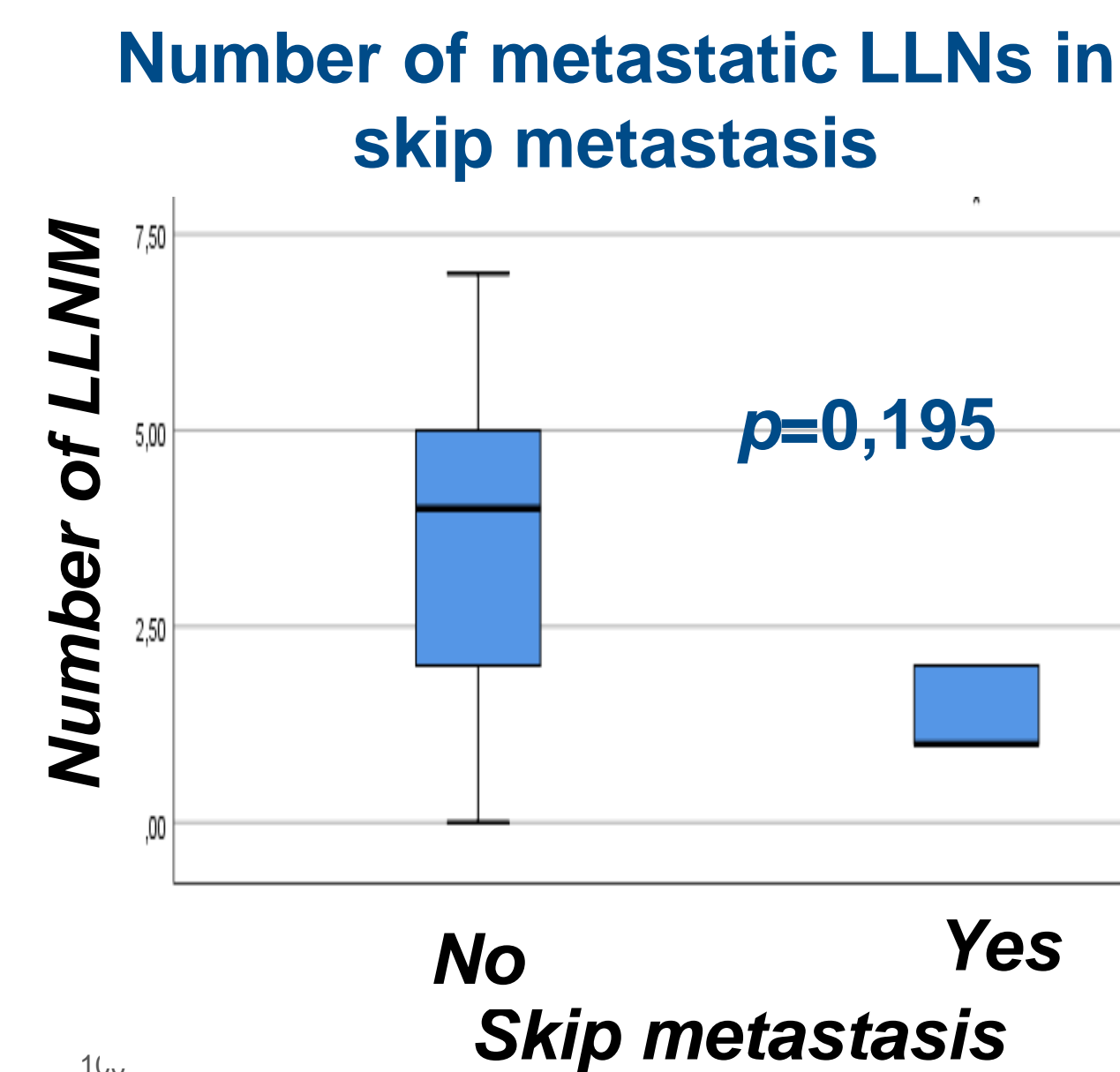
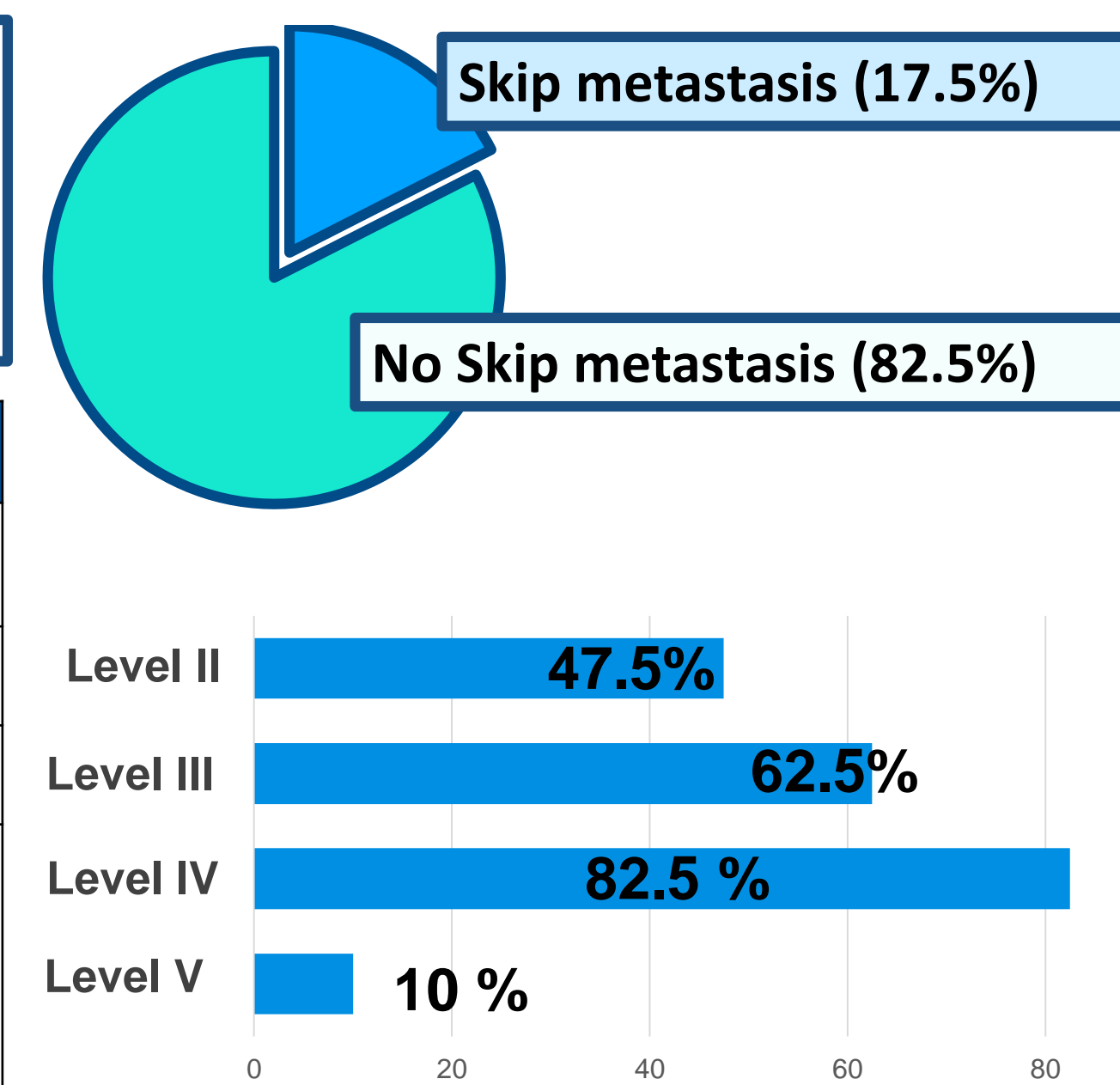
Materials and methods

- Retrospective study
- Between 2016 and 2023.
- Pre-operatively suspicious lateral lymphadenopathies
- Thyroidectomy with central and lateral neck dissection.
- We only retained patients having pN1b staging based on the AJCC staging system.

Results

Total number: 40 patients.
 Mean age: 44.75 years old (±13.88)
 Female to male ratio: 7

| Surgery type | Number /% |
|---------------------------------------|-------------|
| Total thyroidectomy | 40 (100%) |
| Bilateral CND | 40 (100%) |
| Bilateral LND | 25 (62,5 %) |
| Ipsilateral LND → II , III, and IV | 15 (37.5%) |
| → II, III, IV, and V | 11 (27.5%) |
| | 4 (10%) |



Risk factors of skip metastasis

| Factors | p Value |
|----------------------------|---------|
| Age > 45 years old | 0,485 |
| sex | 0,586 |
| Tumor size > 2cm | 0,208 |
| T3T4 staging | 0,272 |
| Isthmus localization | 0,08 |
| Lymphangitis carcinomatosa | 0,657 |
| Thyroiditis | 0,605 |

| Factors | p Value |
|------------------------------|--------------|
| Upper 1/3 tumor localisation | 0,014 |
| Capsular infraction | 0,578 |
| Multifocality | 0,255 |
| Bilateral tumors | 0,388 |
| Perilymphatic extension | 0,638 |
| Vascular invasion | 0,145 |
| Extra-thyroid extension | 0,635 |

Conclusion

- The occurrence of skip lateral lymph node metastasis is common
- It is mainly observed in tumors located at the upper third of the thyroid gland lobe. Such localization was reported to be associated with the risk of skipping the central compartment and a direct metastasis to level II. Conversely, tumors located at the lower 2/3 tend to spread to the CLN then levels III and IV
- Other reported risk factors of skip LLNM are: tumor size, extra-thyroid extension, age > 55 years old, and female sex
- Patients presenting these risk factors need a thorough pre-operative and peri-operative evaluation of the nodal status,

References

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