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DIAGNOSTIC STANDARDS

Association of Directors
of Anatomic and Surgical Pathology

Recommended reporting format for thyroid carcinoma

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Carcinoma of the thyroid

Features recommended to be included in the final report:

1. Organ: thyroid
2. Type of specimen (surgical procedure)
3. Tumor type (and subtype, when indicated)
4. Tumor location
5. Tumor largest diameter
6. Presence of encapsulation
7. Presence of capsular invasion
8. Presence of blood vessel invasion
9. Presence of extrathyroid extension
10. Status of surgical margins
11. Presence of tumor multicentricity
12. Significant pathology in the gland away from the carcinoma: adenoma(s), nodular hyperplasia, lymphocytic/Hashimoto's thyroiditis, C cell hyperplasia (the latter for cases of medullary carcinoma)
13. Number, appearance, and location of parathyroid glands, if any
14. Number and status of lymph nodes, if any
15. For metastatic lymph nodes: size of the largest involved node; presence of perinodal (extracapsular) tumor extension

Features optional for the final report:

These features may reflect institutional preferences and/or may be of inconclusive or controversial prognostic significance. The histologic grade can be listed as such (despite the fact that some tumor grading is implicit in the diagnosis of tumor type, i.e., poorly differentiated or undifferentiated), or the features evaluated in a grading system (such as mitotic activity or necrosis) can be listed separately. In other words, use of option 1 in the listing below is an alternative to using options 2 or 3, yet another alternative being not exercising any of these options.

1. Histologic grade
2. Presence and degree of mitotic activity
3. Presence and amount of tumor necrosis
4. Presence of ancillary tumor features, such as: squamous metaplasia, cytoplasmic clear cell change, mutinous features, psammoma bodies, other types of calcification, stromal (desmoplastic or "scirrhous") reaction, and amyloid deposition.

Example of a final report

Thyroid, right lobectomy and isthmusectomy

This is a papillary carcinoma of classical type. The tumor involves the right lobe, measures 3 cm in greatest diameter, and is not encapsulated. There is no extrathyroidal extension or multicentricity, and all surgical margins are negative.

The non-neoplastic thyroid shows Hashimoto's thyroiditis. One normal parathyroid gland is present in an intrathyroidal location. No lymph nodes were submitted.

Carcinoma of thyroid – checklist

1. Organ: thyroid*
2. Type of specimen*
   – Nodulectomy
   – Lobectomy
   – Subtotal thyroidectomy
   – Total thyroidectomy
   – Other
3. Tumor type (and subtype)
   – Papillary carcinoma
   – Classical type

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- – _____ type
- – Follicular carcinoma
- – Minimally invasive
- – Widely invasive
- – Hürthle cell carcinoma
- – Minimally invasive
- – Widely invasive
- – Poorly differentiated carcinoma
- – Insular type
- – _____ type
- – Undifferentiated (anaplastic) carcinoma
- – Without residual well-differentiated component
- – With residual well-differentiated component of _____ type
- – Medullary carcinoma
- – Classical type
- – _____ type
- – Mixed medullary-follicular carcinoma
- – Mixed medullary-papillary carcinoma
- – Other:

4. Tumor location
   - – Right lobe (and isthmus)
   - – Left lobe (and isthmus)
   - – Both lobes (and isthmus)
   - – Isthmus
5. Tumor largest diameter: ____ cm*
6. Encapsulation
   - – Absent
   - – Partial
   - – Complete
7. Capsular invasion
   - – Absent
   - – Present (minimal)
   - – Present (extensive)
8. Lymph vessel invasion
   - – Absent
   - – Present (minimal)
   - – Present (extensive)
9. Blood vessel invasion
   - – Absent
   - – Present (minimal)
   - – Present (extensive)
10. Extrathyroid extension
    - – Absent
    - – Present (gross)
    - – Present (microscopic)
11. Surgical margins*
    - – Negative
    - – Positive
12. Tumor multicentricity*
    - – Absent
    - – Present
13. C-cell hyperplasia (for cases of medullary carcinoma only)
    - – Absent
    - – Present
14. Other pathology
    - – None
    - – Adenoma(s) (specify number, location, and size)
    - – Nodular hyperplasia
    - – Lymphocytic thyroiditis
    - – Hashimoto's thyroiditis
    - – Atrophy
    - – Fibrosis
15. Parathyroid glands*
    - – No
    - – Yes
    - – Number
    - – Location
      - – Normal
      - – Abnormal (specify)
16. Lymph nodes
    - – No
    - – Yes
      - – Number
      - – Location (right, left, central) and level
      - – Negative
      - – Positive
17. Positive (metastatic) lymph nodes
    Size of largest involved node: ____ cm
    Perinodal (extracapsular) extension:
    - – No,
    - – Yes

Notes (*) to checklist

1. Organ: thyroid
   If the thyroid is located ectopically (mediastinal, lingual, in a thyroglossal duct cyst, or in a teratoma), this should be indicated in the report.
2. Type of specimen
   For nodulectomy or lobectomy specimens, the report should indicate whether the specimen is from the right or left side (nodulectomy is rarely if ever done at present, but it is included in the checklist for the sake of completeness). If the lobectomy specimen includes the isthmus (as is often the case), the report should make reference to this fact. For subtotal thyroidectomy specimens, the report should indicate which lobe was completely removed and which lobe was excised only partially.
5. Tumor largest diameter
   Provide a size estimate for tumor bulk if the tumor is multifocal. For cases of papillary microcarcinoma (less than 1 cm in diameter), indicate in the report the exact diameter of the tumor.
11. Surgical margins
    If positive, specify location (capsular or isthmic), number (single or multiple), and extent (minimal/microscopic or extensive) whenever feasible.
12. Tumor multicentricity
    Specify approximate number of foci and whether these foci have the same or a different appearance. If the specimen is from a subtotal or total thyroidectomy, indicate whether the tumor foci involves one lobe or both lobes. In cases of papillary carcinoma, indicate whether psammoma bodies are present else-

where in the gland or not, the former suggesting the presence of tumor multicentricity.

15. Parathyroid glands
    Whenever possible, the location of the gland(s) should be specified: if this gland is intrathyroidal, this fact should be noted.

Features to be included in the gross description:

1. Type of specimen, how it was received (fresh or fixed, intact or previously sectioned, etc.), and how it was identified
2. Overall dimensions and weight
3. Outer shape, color, symmetry, and consistency of entire specimen; presence and appearance of extrathyroid tissues
4. Tumor description: number, location, size, shape, consistency, color, encapsulation, secondary changes (fibrosis, calcification, cystic degeneration, hemorrhage), distance to surgical margins
5. Appearance of thyroid gland away from tumor; presence of tumor multicentricity
6. Number and appearance of parathyroid gland(s), if any
7. Lymph node dissection, if included:
   - Type: extended radical, radical, modified radical, selective
   - Presence of sternomastoid muscle/submandibular and/or parotid gland/jugular vein
   - Presence of a palpable mass, and whether solitary or matted
   - Size and location of gross tumor invasion of soft tissues, muscle, and jugular vein adjacent to involved lymph nodes
   - Dimensions and appearance of sternomastoid muscle, major salivary glands, and internal jugular vein
   - Size of lymph nodal masses (masses greater than 3 cm in diameter are to be regarded as confluent nodes or as extension into soft tissues)

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