

Thyroid Cytopathology Survey

This survey aims to capture the current state of diagnostic activity in thyroid cytopathology at a national level. To obtain informative data, please indicate the INSTITUTION and CONTACT PERSON.

Results will be presented at the next SIAPEC congress.

1. Email *
2. INSTITUTION: *
3. CONTACT PERSON (include email address): *
4. Which classification system is used in your routine? *
(Select all applicable options.)
 - a. Bethesda System
 - b. SIAPEC-AIT
 - c. British Thyroid Association
 - d. None, descriptive diagnosis
 - Other:
5. If multiple classification systems are used, are they applied simultaneously in the same report or alternatively?
 - Simultaneously
 - Alternatively
6. Paste a typical report from your routine.
7. Operators performing thyroid FNAs *
(Select all applicable options.)
 - Interventional cytopathologist
 - Interventional radiologist
 - Endocrinologist
 - Other:
8. Indicate the percentage of thyroids where more than one nodule is aspirated (average percentage value).
9. Number of samples usually taken per nodule
 - 1

- 2
- 3
- 3

10. If known, indicate the most frequently used GAUGE.

11. Which sampling technique do you use most frequently?

- Capillarity (Zajdela)
- Aspiration

12. Preoperative thyroid sample preparation methods *
(Select all applicable options.)

- Direct smear
- Thin layer
- Cell block
- Needle biopsy

13. Stains used *
(Select all applicable options.)

- May Grünwald-Giemsa (MGG)/DiffQuik
- Papanicolaou
- Hematoxylin/Eosin (H/E)
- Other:

14. Indicate the volume of thyroid aspiration cytology activity in 2022 *

15. Indicate the volume of thyroid aspiration cytology activity in 2021

16. Indicate the volume of thyroid aspiration cytology activity in 2020

17. Indicate the volume of thyroid aspiration cytology activity in 2019

18. Indicate the volume of thyroid aspiration cytology activity in 2018

19. Number of inadequate diagnoses (TIR1/BETHESDA 1/Thy1) (year 2022) *

20. In cases reported as inadequate (year 2022)

Number of inadequates from aspirates performed by the interventional
cytopathologist

21. In cases reported as inadequate (year 2022)

Number of inadequates on slides prepared by another specialist

22. Number of benign diagnoses (TIR2/BETHESDA II/Thy2) (year 2022) *
23. Number of indeterminate/low-grade atypia diagnoses (TIR3A/BETHESDA III/Thy3a) (year 2022)
24. Number of follicular lesion/high-grade atypia diagnoses (TIR3B/BETHESDA IV/Thy3f) (year 2022)
25. Number of suspicious diagnoses (TIR4/BETHESDA V/Thy4) (year 2022) *
26. Number of positive diagnoses (TIR5/BETHESDA VI/Thy5) (year 2022) *
27. If known, indicate the risk of malignancy (ROM) for each diagnostic category.
28. If cell block is performed, indicate the scenarios in which the material is used and the ancillary stains usually employed.
29. Are molecular tests performed on thyroid cytology? *
- Yes (Proceed to question 30.)
 - No (Proceed to question 46.)

THE FOLLOWING QUESTIONS ARE ADDRESSED TO CENTERS PERFORMING MOLECULAR TESTS (IN-HOUSE OR OUTSOURCED)

30. Indicate the number of cases where preoperative material was subjected to molecular analysis (year 2022).
31. Indicate the genes tested for molecular analysis on cytological material *
32. What molecular technology is used in your center? *
33. Indicate on what material the molecular test is performed *
- Dedicated sample
 - Scraping from smear
 - Cell block sections
 - Other:
34. Indicate if the molecular test is performed *
- At the request of the endocrinologist/attending physician
 - Reflex in case of indeterminate cytological diagnosis or other
35. In the case of TIR3A/BETHESDA III
- Perform the reflex test at the first diagnosis of TIR3A/BETHESDA III
 - Only if a second diagnosis of TIR3A/BETHESDA III is obtained upon repeat aspiration

- Only at the request of the endocrinologist/attending physician

Molecular tests on inadequate (TIR1/BETHESDA I/Thy1)

36. Do you perform molecular tests on inadequate (TIR1/BETHESDA I/Thy1)?

- Yes
- No (Proceed to question 38.)

37. If the test is performed, explain the reason.

Molecular tests on benign (TIR2/BETHESDA II/Thy2)

38. Do you perform molecular tests on benign (TIR2/BETHESDA II/Thy2)?

- Yes
- No (Proceed to question 40.)

39. If the test is performed, explain the reason.

Molecular tests on follicular lesions (TIR3B/BETHESDA IV/Thy3f)

40. Do you perform molecular tests on follicular lesions (TIR3B/BETHESDA IV/Thy3f)?

- Yes
- No (Proceed to question 42.)

41. If the test is performed, explain the reason.

Molecular tests on suspicious cases (TIR4/BETHESDA V/Thy4)

42. Do you perform molecular tests on suspicious cases (TIR4/BETHESDA V/Thy4)?

- Yes
- No (Proceed to question 44.)

43. If the test is performed, explain the reason.

Molecular tests on positive (malignant) cases (TIR5/BETHESDA VI/Thy5)

44. Do you perform molecular tests on positive (malignant) cases (TIR5/BETHESDA VI/Thy5)?

- Yes
- No (Proceed to question 46.)

45. If the test is performed, explain the reason.

46. FINAL COMMENTS AND SUGGESTIONS (open-ended)

Survey II round

Thyroid Cytopathology Survey 2nd Round

1. Email *
2. Center name (use the same name as in the 1st Round of the Survey)
3. Type of center
 - University
 - Hospital
 - Private
 - Other:
4. Is pre-screening of slides performed?
 - No
 - Yes
5. If yes, who performs the pre-screening?
 - Biologist
 - Biomedical laboratory technician
 - Resident
 - Other:
6. Is ROSE (Rapid On-Site Evaluation) performed?
 - Yes
 - No
7. If yes, who performs the ROSE?
 - Biologist
 - Laboratory technician
 - Resident
 - Non-pathologist specialist performing the sampling (e.g., endocrinologist, radiologist, etc.)
8. The personnel reporting the FNAs consists of:
 - Dedicated pathologists
 - Pathologists also involved in histopathology

- Biologists

9. Number of personnel dedicated to reading and reporting thyroid FNAs

10. Turnaround time (TAT) (in days) for reporting thyroid FNAs (from acceptance to final report signature)

11. Is the cytopathologist involved in a multidisciplinary tumor board?

- Yes
- No

12. Do centers that do not perform molecular tests on indeterminate cases send samples externally for such tests?

- Yes
- No

13. Are quality controls performed periodically?

- Yes
- No

14. If yes, which ones?

- Cyto-histological correlations
- Review of a percentage of cases
- Monitoring indeterminate cases (e.g., % Tir3A/total)
- Other:

For those performing molecular tests:

If molecular tests are not performed, skip this section.

15. Panel used

- Commercial
- Custom (in-house test)

16. Indicate the name of the commercial panel or reference publication for custom panel

17. Total FNAs tested in 2022

18. Total inadequate FNAs for molecular biology in 2022

19. Indicate mutated TIR3A 2022/total tested TIR3A 2022 (e.g., 10 mutated / 40 tested)

20. Indicate the number of BRAFV600E mutations found in tested TIR3A

21. Indicate the number of non-BRAFV600E mutations (e.g., BRAFK601E) found in tested TIR3A
22. Indicate the number of N-H-KRAS mutations found in tested TIR3A
23. Indicate the number of RET/PTC1 fusions found in tested TIR3A
24. Indicate the number of RET/PTC3 fusions found in tested TIR3A
25. Indicate the number of PAX8/PPARg fusions found in tested TIR3A
26. Indicate the number of pTERT mutations found in tested TIR3A
27. Indicate the number and type of other mutations found in tested TIR3A (e.g., DICER1: n=2)
28. Indicate mutated TIR3B 2022/total tested TIR3B 2022
29. Indicate the number of BRAFV600E mutations found in tested TIR3B
30. Indicate the number of non-BRAFV600E mutations (e.g., BRAFK601E) found in tested TIR3B
31. Indicate the number of N-H-KRAS mutations found in tested TIR3B
32. Indicate the number of RET/PTC1 fusions found in tested TIR3B
33. Indicate the number of RET/PTC3 fusions found in tested TIR3B
34. Indicate the number of PAX8/PPARg fusions found in tested TIR3B
35. Indicate the number of pTERT mutations found in tested TIR3B
36. Indicate the number of other mutations found in tested TIR3B
37. Indicate mutated TIR4+5 / total tested TIR4+5 2022
38. Indicate the number of BRAFV600E mutations found in tested TIR4+5
39. Indicate the number of non-BRAFV600E mutations (e.g., BRAFK601E) found in tested TIR4+5
40. Indicate the number of N-H-KRAS mutations found in tested TIR4+5
41. Indicate the number of RET/PTC1 fusions found in tested TIR4+5
42. Indicate the number of RET/PTC3 fusions found in tested TIR4+5
43. Indicate the number of PAX8/PPARg fusions found in tested TIR4+5
44. Indicate the number of pTERT mutations found in tested TIR4+5
45. Indicate the number of other mutations found in tested TIR4+5
46. How is molecular biology on thyroid FNA reported?

- Addendum to the morphological cytological diagnosis
- Integrated into the morphological cytological diagnosis
- Separate report

47. Turnaround time (TAT) (in days) for reporting thyroid FNAs with molecular biology

48. How is the reimbursement of molecular tests managed?

For those performing thyroid core biopsies:

If biopsies are not performed, skip this section.

49. Discuss the use of core biopsy in the thyroid, indicating whether it is performed alternatively or sequentially to FNAB and the reporting methods.

Additional considerations (open-ended response)

50. Suggestions for activities to implement (training, assistance, reimbursement of services, etc.) to improve thyroid FNA cytopathology at the local or national level.