In an era of precision medicine and rapidly-advancing cancer therapeutics, the role of pathology in the diagnosis and management of cancer is evolving. Starting at the point of cancer diagnosis, pathologists provide expert interpretation and may recommend biomarker testing to guide treatment decisions. Pathologists may also play a role in determining clinical trial eligibility or recommending treatment options, especially for patients who do not respond to the standard of care. Recent advances in targeted therapies, molecular biology, and immuno-oncology necessitate a closer integration of pathology with the multidisciplinary cancer care team.

The Association of Community Cancer Centers (ACCC), along with its partners, the Association for Molecular Pathology (AMP), American Society for Clinical Pathology (ASCP), and College of American Pathologists (CAP) conducted this survey in 2018 to better understand the current landscape of how pathology is integrated with the cancer care team.

**Who took our survey?**

- Lab technician: 37%
- Lab scientist: 16%
- Administrator: 6%
- Advanced practice provider (NP or PA): 2%
- Nurse: 2%
- Physician: 22%
- Other: 15%

Note: Other = navigators, social workers, tumor registrars, research coordinators, genetic counselors

N=659
Which best describes your cancer program?

- Hospital Associate Cancer Program: 23%
- Comprehensive Community Cancer Program or Community Cancer Program: 22%
- Academic Comprehensive Cancer Program: 15%
- Outpatient Oncology Practice: 8%
- NCI-Designated Comprehensive Cancer Center Program: 7%
- Integrated Network Cancer Program: 5%
- NCI-Designated Network Cancer Program: 3%
- Freestanding Cancer Center Program: 3%
- Veterans Affairs Cancer Program: 2%
- Pediatric Cancer Program: 2%
- Other: 10%

N=659

On average, how many new cancers are diagnosed at your program each year?

- Fewer than 100: 16%
- Between 500 and 1000: 19%
- Between 100 and 500: 29%
- Over 1000: 36%

N=318
Do your pathologists focus on the diagnosis of specific types of cancers?

- 39% say their pathologists diagnose all types of cancer.
- 17% responded that almost every pathologist focuses only on specific cancers.
- 18% report some of their pathologists diagnose all types of cancer, and some focus on specific cancer types.

Are pathologists authorized to order cancer biomarker tests?

- No: 6%
- Yes, but only for certain tests: 41%
- Yes, for any type of biomarker test: 52%

What patient health records can your pathologists directly access?

- All outpatient medical oncology records: 38%
- Some outpatient medical oncology records: 26%
- All inpatient hospital records: 62%
- Some inpatient hospital records: 9%
How does your pathology lab perform and interpret the following cancer biomarker tests?

Perform and Interpret Testing In-House

Send Samples Out for Testing and Interpretation

Combined Use of In-House and Outside Lab Testing and Interpretation

Outside Lab Turnaround Time

When tissue samples go to an outside lab for testing, what is the turn around time?

- **Less than 5 business days**: 19%
- **5-10 business days**: 58%
- **More than 10 business days**: 24%
Does your cancer program have dedicated experts in molecular pathology and/or cancer genetics and genomics?

- Doctoral-level professionals have completed training: 46%
- Pathologists have completed subspecialty training: 15%
- A cancer genetics team comprised of members who have completed training: 20%
- Other members of the cancer care team have completed training: 17%
- None of the above: 27%

N=382

Which cancers have “reflex” biomarker testing protocols?

- Breast cancer: 51%
- Lung cancer: 39%
- Colorectal cancer: 41%
- Melanoma: 29%
- Leukemia: 36%

N=383

Uptake of Next Generation Sequencing (NGS) Testing

67% of respondents report use of NGS for solid tumors and/or hematologic malignancies, but are evenly split between occasional NGS testing (34%) and routine NGS ordering for several types of tumors (33%). Another 19% routinely order NGS for one or two tumor types, and 14% report rarely using NGS testing.

N=249

Describe your clinicians’ current use of liquid biopsy (circulating tumor DNA) testing.

- Rarely order ctDNA testing: 53%
- Occasionally order ctDNA testing: 35%
- Routinely order ctDNA testing for a few types of tumors: 12%

N=205
76% of respondents report that pathologists attend more than 75% of tumor boards, either in person or virtually. Only 3% report that pathologists are not attending these meetings.

Which type(s) of tumor boards or case conferences are regularly held at your cancer program?

- One general cancer tumor board: 21%
- Two or three disease-site-specific tumor boards (e.g., breast cancer, lung cancer): 31%
- Four or more disease-site-specific tumor boards: 48%

How often do your pathologists attend hospital cancer committee meetings?

- Do not attend: 6%
- Up to 30% of the meetings: 11%
- 31-50% of the meetings: 11%
- 51-75% of the meetings: 13%
- Over 75% of the meetings: 59%
Our pathologists engage in collaborative discussions with these clinicians prior to making a diagnosis of cancer.

<table>
<thead>
<tr>
<th>Clinician</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Another pathologist</td>
<td>54%</td>
</tr>
<tr>
<td>Physician who performed the biopsy</td>
<td>29%</td>
</tr>
<tr>
<td>Medical oncologist</td>
<td>25%</td>
</tr>
<tr>
<td>Radiologist</td>
<td>22%</td>
</tr>
</tbody>
</table>

Do your pathologists recommend clinical treatment options for patients with cancer?

- Occasionally recommend treatment options during one-on-one discussions with the medical oncologist: 21%
- Frequently recommend treatment options during tumor board discussions: 6%
- Frequently recommend treatment options by having one-on-one discussions with the medical oncologist: 4%
- They do not make treatment recommendations: 46%

Biggest barriers and challenges to the successful integration of pathology into your cancer care team.

Lack of time
ATTITUDES
physical location
COMMUNICATION
REIMBURSEMENT

N=331

N=170
A publication from the ACCC education program, “Understanding the Integration of Pathology with the Cancer Care Team.” Learn more at accc-cancer.org/pathology.

The Association of Community Cancer Centers (ACCC) is the leading education and advocacy organization for the multidisciplinary cancer team. ACCC is a powerful network of 24,000 cancer professionals from 2,100 hospitals and practices nationwide. ACCC is recognized as the premier provider of resources for the entire oncology care team. For more information visit accc-cancer.org or call 301.984.9496. Follow us on Facebook, Twitter, and LinkedIn, and read our blog, ACCCBuzz.

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This survey was promoted through a collaboration between:

![ACCC](image1)
![AMP](image2)
![ASCP](image3)

This education program is made possible through our supporters: