

Guideline First Look: Surgical Specimen Management

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PODCAST

The updated AORN “Guideline for surgical specimen management”¹ provides recommendations on handling biological tissue samples from collection through pathological analysis and final disposition. The guideline, which was last updated in 2020, was published in AORN eGuidelines+ in August 2026.

The guideline was previously titled “Guideline for specimen management.”² As part of the 2026 update, the title has changed to the “Guideline for surgical specimen management.” This change reflects the refined scope of the document, which provides recommendations associated with managing surgical specimens for pathology.¹ In line with the change in focus, detailed guidance on forensic evidence and explanted medical devices has been removed from the guideline.¹ Readers with specific questions beyond the scope of this guideline should visit the College of American Pathologists website and review applicable regulatory requirements for guidance on out-of-scope topics.

Surgical Specimen Loss

AORN recommends that surgical specimen loss be considered a preventable error and a never event.¹ This recommendation aligns with the consensus document from Joint Commission and National Quality Forum that lists irreplaceable surgical specimen loss as one of 28 preventable and serious reportable events.³

Tammy Hanks, DNP, APRN, PCNS-BC, NEA-BC, EBP-C, CNOR, primary author of the guideline, explained that surgical specimen

loss is a rare, high-impact event.¹ If the surgical specimen is lost, it can lead to a serious harm to the patient.¹ Potential consequences of a lost surgical specimen include compromised diagnosis, staging, or treatment decisions, as well as delayed treatment and the need for additional invasive procedures.¹ “Surgical specimen loss can lead to many negative outcomes,” Hanks, perioperative practice specialist at AORN, said in an interview with *Periop Briefing*. “In light of the potential consequences, we believe that the gravity of a lost surgical specimen is comparable to wrong-site surgery.”

Additional research is needed to show the connection between surgical specimen mishandling



AORN supports the development of standardized processes to mitigate the risk of surgical specimen loss.

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and patient outcomes.¹ To that end, facilities may consider broader internal reporting or public reporting for any specimen loss, regardless of patient harm.³ “In some states, facilities may only be required to report specimen loss when it leads to serious patient harm or death, so we have limited data on specimen loss,” Hanks said. “Better reporting will help us to track and assess the scope of the problem.”

Standardized Processes

Specimen loss arises from system-level vulnerabilities, including communication breakdowns, workflow fragmentation, and lack of standardized processes.¹ Consequently, AORN encourages facilities to categorize surgical specimen loss as the result of system-level error and to implement strategies to counter existing gaps.¹ “Mistakes are not solely the result of individual errors but a larger problem,” Hanks explained. “When surgical specimen mishandling happens, it represents a system-level error that needs to be addressed with policies, procedures, and protocols.”

Facility leaders may consider adopting a specimen tracking system, standardizing containers for specimen transport, or standardizing requisition forms.¹ Other examples include the use of decision-support tools that prompt clinicians to verify surgical specimen collection requirements, use of barcoding from point of collection to laboratory acceptance and accessioning, or establishing a dedicated surgical specimen transport team.¹

As Hanks explained, facilities should also be using internal near miss reports to improve standardized protocols. “Following internal reporting, the data should be used as part of your quality program to improve processes and really drill down and be proactive about it,” she said. “Narrow in on where your issues are and prevent those issues from repeating.”

Team Communication

Strong team communication may help prevent surgical specimen mishandling.¹ AORN

recommends integrating surgical specimen–related information into existing communication tools, including the surgical safety checklist.¹ Structured tools may include checklists, mnemonics, and protocols that decrease communication breakdowns and reduce the risk of mishandling.¹

The guideline also advises teams to minimize distractions, interruptions, and disruptions during specimen hand off, verification, labeling, and debriefing.¹ There is a high risk for an adverse event to occur during these critical phases.⁴ Limiting distractions, interruptions, and disruptions during this period helps to promote a safer environment of care.¹

Specimen Time Out

A significant change to the guideline is a strengthened recommendation to perform a formal, standardized surgical specimen time out immediately before the specimen is transferred from the sterile field.¹ The time out should ensure that all team members account for the specimen and that specimen information is recorded correctly.¹ During the specimen time out, team members should verify, at minimum, the patient identifiers and specimen information (eg, name, markers, laterality).¹

According to Hanks, facilities can customize the surgical specimen timing and verification processes to meet their needs. They should also involve the interdisciplinary team and confirm key surgical specimen information to ensure proper handling and prevent preanalytical errors.

Receipt Tracking

In this update, AORN has strengthened its recommendation for receipt tracking; facilities should implement a verification process to confirm that pathology personnel receive all anticipated specimens.¹ The goal is to promote traceability, whether through manual methods (eg, chain of custody logs) or digital systems (eg, tracking software technology).¹ This auditing should help teams identify and escalate any missing specimens, thereby promoting quicker reconciliation.¹ “Some

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facilities have a robust electronic health record system that can run checks. At some smaller facilities, an administrator, or maybe even the RN circulator, manually performs verification. Either way, you need to verify that the surgical specimens made it to pathology,” Hanks said. “It is part of being proactive.”

Labeling

Although the recommendations regarding labeling have stayed the same, the guideline includes a new conditional recommendation supporting the use of prelabeled containers.¹ This process would allow scrubbed personnel to prepare surgical specimen labels in advance.¹ Team members should recognize that prelabeling can increase the risk of misidentification.¹ As a result, those using prelabeled containers should follow protocols to mitigate the risk of misidentification.¹

“Historically, there was not strong research on prelabeling,” Hanks explained. However, emerging evidence supports selected use of prelabeled containers when safeguards are in place.⁵ “If prelabeling is used, strong team communication and adherence to surgical specimen time outs, verification processes, and other safety checks are essential,” she said.

Finally, the updated guideline includes a strengthened recommendation supporting the use of a point-of-care barcode system for patient identification and specimen labeling.¹ This is in response to high-quality evidence that demonstrates that proper use of point-of-care barcodes may help reduce the risk of patient identification and surgical specimen labeling errors.¹

Conclusion

The updated guideline emphasizes that surgical specimen loss should be considered a never event and provides recommendations to help perioperative teams prevent preanalytical errors. AORN recommends a formal surgical specimen time out along with other standardized processes and verification checks to ensure that surgical specimens are safely handled from collection to disposition.

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References

1. Guideline for surgical specimen management. In: *Guidelines for Perioperative Practice*. AORN Inc; 2026. <https://doi.org/10.6015/s9h4v9>
2. Guideline for specimen management. In: *Guidelines for Perioperative Practice*. AORN Inc; 2020. <https://doi.org/10.6015/x7n6l8>
3. Joint Commission and National Quality Forum. *Aligning Patient Safety Event Reporting: 2025 Updates to Sentinel Events and Serious Reportable Events*. NQF; January 2026. Updated May 2026. Accessed May 27, 2026. <https://digitalassets.jointcommission.org/api/public/content/b4e8988066e74717ae9801edb2bfb9de>
4. Guideline for team communication. In: *Guidelines for Perioperative Practice*. AORN Inc; 2024. <https://doi.org/10.6015/q5c8q6>
5. Akinbobola O, Ray MA, Fehnel C, et al. Institution-level evolution of lung cancer resection quality with implementation of a lymph node specimen collection kit. *J Thorac Oncol*. 2023;18(7):858-868. <https://doi.org/10.1016/j.jtho.2023.03.002>

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