

HELIX ANESTHESIA ACADEMY

The 6 AI Tools Already in Your OR

— and what they actually do

A clinician-first field guide by **Anastasia Jackson, DNAP, CRNA**
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START HERE

AI didn't ask your permission. It's already here.

You don't need to code, and you don't need to fear it. You need to know what these tools actually do, where the evidence is solid, and where to stay skeptical. This guide walks through six categories of AI you're encountering — or soon will — in plain clinical language. **No hype, no vendor spin.**

1

Predictive hemodynamics

WHAT IT DOES

Machine-learning models analyze the arterial waveform and other inputs to flag a rising risk of hypotension — often minutes before the pressure actually drops, giving you a window to act.

THE CATCH

It outputs a risk score, not a diagnosis. Reported lead times and accuracy vary, and the score tells you risk is rising, not what to do about it. The clinical decision is still yours.

YOUR TAKEAWAY

Treat the alert as a prompt to look, not an order to act. Know what drives the score so you can tell a real signal from noise.

2

Depth-of-anesthesia & closed-loop delivery

WHAT IT DOES

Processed-EEG monitors use algorithms to estimate anesthetic depth, and closed-loop or semi-automated systems can adjust delivery toward a target — reducing some of the manual titration load.

THE CATCH

These systems assist; they don't replace vigilance. Artifact, individual variability, and edge cases still demand a clinician who knows when the number is lying.

YOUR TAKEAWAY

Automation handles the routine. Your job is the exception — and recognizing when you're in one.

3

Smart alarms & alarm management

WHAT IT DOES

Algorithms aim to cut alarm fatigue — suppressing artifact-driven false alarms and prioritizing the ones that matter, so the noise floor drops and real events stand out.

THE CATCH

A smarter filter is still a filter. Anything that decides which alarms you hear can, in rare cases, suppress one you needed. Understand the logic before you trust the quiet.

YOUR TAKEAWAY

Fewer alarms is good only if the right ones still get through. Ask how the system decides what to silence.

4

Risk prediction & clinical decision support

WHAT IT DOES

Preoperative and perioperative models estimate risk — difficult airway, postoperative nausea, complications, mortality — to help triage attention and planning.

THE CATCH

A model validated on one population can be wrong on yours (dataset shift). And some of these are regulated medical devices while others are exempt decision support — the distinction changes how much scrutiny they faced.

YOUR TAKEAWAY

Ask "validated on whom?" before you trust a risk number. The population it learned from determines whether it applies to your patient.

5

AI-assisted ultrasound

WHAT IT DOES

Emerging tools overlay structure recognition on ultrasound — helping identify vessels, nerves, and landmarks for access and regional technique.

THE CATCH

It's an aid to your eyes, not a substitute for them. Guidance quality depends on image quality, and confirmation remains your responsibility.

YOUR TAKEAWAY

Useful as a second set of eyes — never as the only set. Your scanning skill still leads.

6

Generative AI & documentation

WHAT IT DOES

Large language models and AI scribes draft notes, summarize records, and answer questions — promising to claw back time spent on documentation.

THE CATCH

They can fabricate confident, wrong information, and pasting patient data into a general consumer tool risks a HIPAA breach. Useful for drafting and study; dangerous for unverified clinical facts or PHI.

YOUR TAKEAWAY

Great for drafting you then verify. Never put PHI into a tool that isn't covered, and never trust a clinical fact you didn't confirm.

THE 3 QUESTIONS THAT WORK ON ANY TOOL

How to judge any AI you meet

1. Validated on whom?

A model trained on one hospital's patients can fall apart on yours. Ask about the population it learned from before you trust it on yours.

2. Is it FDA-cleared — and does that even mean what I think?

Clearance means a tool met a regulatory bar, not that it's accurate in your patients. Some tools are regulated devices; some decision support is exempt; wellness apps had little scrutiny at all. Clearance is the first filter, never the last.

3. Outcomes, or just accuracy?

Is there real clinical-outcome evidence, or only retrospective accuracy on old data? A strong score on paper isn't the same as helping patients at the bedside.



This is just the surface.

You now know more about AI in anesthesia than most clinicians using these tools today. But the part that matters most — your liability when an algorithm is in the loop, and how to document an AI-assisted decision — is exactly what no one is teaching.

That's what I'm building a full, AANA Class A–accredited course around. Stay on the list and you'll be the first to know when it opens.

Until then — stay sharp.

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