AI-04661 Act 1 2 3 in Medicine with Artificial Intelligence

Where is the Act1,2,3 in the field of Medicine and Medical Technology? Is Medicine still in Act 0? Explain and deep dive.

Yes—but with an important correction to our earlier framework:

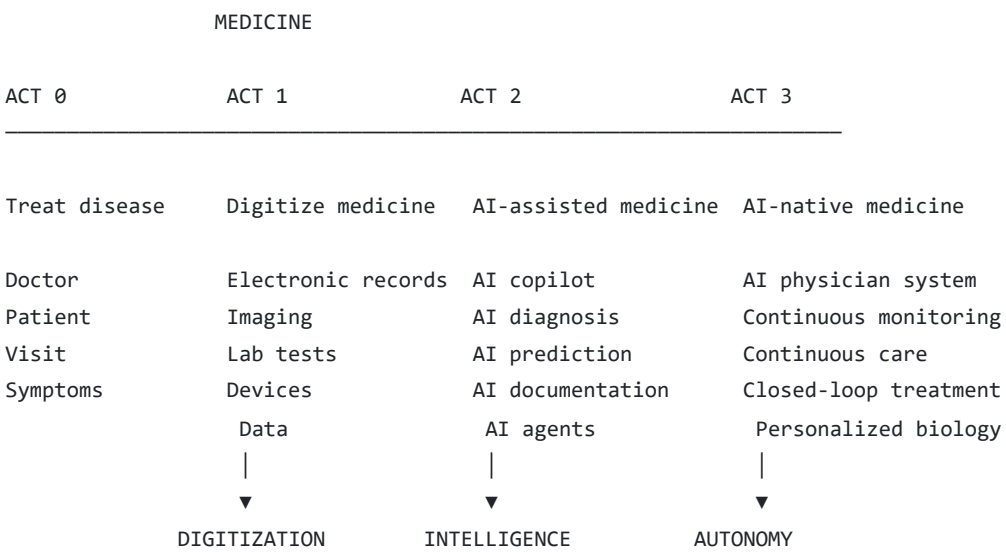
> **Medicine is not entirely in Act 0. Medical technology is already in Act 1 and parts of Act 2. But the *medical system as a whole* is arguably still in Act 0/early Act 1 when viewed through the AI lens.**

And that distinction is enormous.

In fact, I think **AI + medicine could be one of the most important Act-3 stories of your lifetime**, but it will probably move **slower than software AI** because biology, clinical evidence, regulation, liability, reimbursement, and human trust are much harder constraints.

The Medical AI Playbook

I'd map it like this:



We are currently crossing from Act 1 into Act 2.

But different parts of medicine are at completely different stages.

First: What do I mean by "Act 0"?

Act 0 isn't:

> "Medicine has no technology."

Obviously it does.

Modern medicine has extraordinary technology.

MRI, CT, PET, genomics, robotic surgery, pacemakers, insulin pumps, dialysis, stents, minimally invasive surgery, etc.

What I mean is:

> **Medicine's fundamental operating model was designed before AI.**

The basic workflow is still:

Patient feels something

↓

Patient schedules appointment

↓

Doctor asks questions

↓

Doctor examines patient

↓

Tests ordered

↓

Results return

↓

Doctor interprets information

↓

Diagnosis

↓

Treatment

↓

Patient comes back

↓

Repeat

That's an extraordinarily human-centric, episodic system.

It works—but it is not yet an **AI-native system**.

Compare that with the Internet

Before the Internet:

> Go to bank → talk to teller → conduct transaction.

After Internet banking:

> Open app → conduct transaction.

But Act 3 is:

> **The system knows what you need and handles much of it automatically.**

Medicine is still much closer to:

> **"Go see the doctor."**

That's why I think your "Act 0" instinct is actually quite insightful.

But medical technology itself is already in Act 1

Look at radiology.

AI isn't hypothetical there.

The FDA's current AI-enabled-device database contains authorized systems across radiology, cardiovascular medicine, neurology, ultrasound, radiation therapy and other fields. Recent 2026 authorizations include AI-assisted CT, MRI, ECG, ultrasound, surgical navigation and radiology systems. (**U.S. Food and Drug Administration**)

So:

Radiology

Act 1 → Act 2

Digital pathology

Act 1 → Act 2

Wearable monitoring

Act 1 → Act 2

Drug discovery

Act 1

Clinical medicine

Act 0 → Act 1

Autonomous medicine

Act 0

That's a much more accurate map.

Let's break Medicine into 7 different AI revolutions

This is where it gets really interesting.

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1. 💀 Medical imaging

ACT 1 — AI sees

AI detects:

- tumors
- fractures
- hemorrhage

- pulmonary embolism
- retinal disease
- cardiac abnormalities

This is already real.

The FDA's authorized-device list contains a large and growing number of AI-enabled radiology systems. (U.S. Food and Drug Administration)

ACT 2 — AI interprets

Instead of:

> "Here's a scan."

AI starts producing:

> "Here are the abnormalities, their probability, their location, their severity and what should be reviewed first."

The radiologist becomes:

> **human + AI**

rather than human alone.

ACT 3 — AI manages the diagnostic pathway

This is much bigger.

Patient:

> "I'm having chest pain."

AI system:

history

→ **vitals**

→ **ECG**

→ **labs**

→ **imaging**

→ **risk calculation**

→ **differential diagnosis**

→ **recommended next action**

The physician becomes the final authority overseeing an increasingly intelligent diagnostic system.

That's Act 3.

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2. 🧬 Genomics

This is another fascinating area.

Act 0

Sequence DNA.

Act 1

Interpret DNA.

Act 2

Predict disease risk.

Act 3

Potentially:

> **design prevention/treatment around the individual's biology.**

Instead of:

> "You have disease X, therefore here's treatment Y."

Eventually:

> "Your biology predicts pathway Z is becoming abnormal, and intervention A has the highest expected benefit."

That's **predictive medicine** rather than reactive medicine.

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3. 💊 Drug discovery

This is where I would be much more cautious.

The technology is impressive.

AI can help with:

- target identification
- molecular generation
- protein modeling
- virtual screening
- lead optimization
- toxicity prediction
- drug repurposing

AI-designed therapeutics have reached human trials, and several AI-driven discovery platforms have produced candidates that progressed into clinical development. (PubMed)

But here's the reality check:

A 2026 *Nature Reviews Drug Discovery* assessment concluded that **clinically relevant impact remains disappointingly limited so far**, with major problems in translation from computational models to real-world biological outcomes. (PubMed)

That is an extremely important distinction.

AI can design a molecule.

But:

molecule

↓

animal

↓

human

↓

clinical trial

↓

FDA

↓

manufacturing

↓

real-world patient

is a gigantic pipeline.

So pharma is currently:

Act 1

AI helps scientists search biological space.

Not yet:

Act 3

AI autonomously discovers cures.

That distinction could save an investor from believing a lot of marketing hype.

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4. 🩺 Clinical medicine

This is where I think the biggest Act-3 opportunity exists.

Today:

Doctor = intelligence layer

AI = tool.

Future:

AI = intelligence layer

Doctor = **supervisory / judgment / relationship layer**

That is a profound shift.

Today's doctor

The physician spends enormous amounts of time doing:

- documentation
- chart review

- searching medical literature
- ordering tests
- interpreting data
- filling forms
- communicating
- coordinating care

AI can increasingly absorb much of the information-processing burden.

FDA explicitly identifies AI applications including diagnosis, prognosis, risk assessment, early disease detection and identification of patterns in human physiology and disease progression. (U.S. Food and Drug Administration)

Act 2 medicine

Imagine a doctor seeing:

> 20 patients.

AI prepares each chart.

It knows:

- previous diagnoses
- medications
- labs
- imaging
- trends
- prior visits
- relevant literature

It says:

> **"Here are the five things you need to know before seeing this patient."**

That's already becoming possible.

Act 3 medicine

Now flip the relationship.

Instead of:

> Patient → doctor → healthcare system

you get:

> **Patient → continuous AI health system → doctor when needed**

That's a radically different architecture.

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5. ⌚ Continuous medicine

This may be the most important transformation.

Traditional medicine:

```
Patient
   ↓
Symptoms
   ↓
Doctor
   ↓
Test
   ↓
Diagnosis
   ↓
Treatment
```

Act 3:

```
BODY
 ↓
Continuous sensors
 ↓
AI
 ↓
Detect deviation
 ↓
Predict risk
 ↓
Intervene
 ↓
Measure response
 ↓
AI learns
 ↓
Adjust
 ↓
Repeat
```

That's a **closed-loop healthcare system**.

And the first pieces already exist.

The FDA maintains a category of authorized sensor-based digital-health devices including wearables, rings, patches, bands and continuous/spot monitoring devices used outside traditional clinical settings. (**U.S. Food and Drug Administration**)

This is where Apple Watch-type technology becomes much more interesting

Today:

> "Your heart rate is 72."

Act 3:

> "Your physiological pattern has changed significantly from your baseline over the past 72 hours; combined with your other signals, your probability of condition X has increased. Here's what should happen next."

That's not merely a better smartwatch.

That's:

an early-warning medical system.

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6. 🧪 The laboratory becomes intelligent

This could be enormous.

Imagine:

AI hypothesis

↓

robot performs experiment

↓

instrument measures result

↓

AI analyzes result

↓

AI generates next experiment

↓

robot executes

↓

repeat

That's an **AI scientist loop**.

The important development isn't just AI.

It's:

> **AI + robotics + laboratory automation + sensors.**

Now the AI can interact with physical reality.

That's exactly analogous to our broader Act 3 thesis:

Think → Act → Observe → Learn

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7. 🦾 Surgery and physical medicine

We're already seeing robotic surgery.

But today's robotic surgery is mostly:

> **human surgeon + sophisticated machine.**

Act 2:

> AI assists surgeon.

Act 3:

> AI performs increasingly standardized components of procedures under human supervision.

The progression might look like:

robotic instrument

↓

robotic assistance

↓

AI-guided procedure

↓

semi-autonomous procedure

↓

highly autonomous procedure with human oversight

The last two steps are much further away than the first three.

So where exactly is Medicine today?

I'd give you this map:

Electronic health records	**Act 1/2**
Medical imaging AI	**Act 2**
Medical field	**Current Act**
Wearable monitoring	**Act 1/2**
Clinical decision support	**Act 1/2**
AI diagnostics	**Act 1/2**
Robotic surgery	**Act 1/2**
Genomic interpretation	**Act 1/2**
AI drug discovery	**Act 1**
AI clinical trials	**Act 1**
AI personalized medicine	**Act 1**
Autonomous clinical agents	**Act 1**
Continuous AI medicine	**Act 1**
Closed-loop treatment	**Act 0/1**
Autonomous surgery	**Act 0/1**
AI-designed + AI-validated drugs	**Act 1**

AI-native healthcare system	**Act 0**
Fully autonomous medicine	**Act 0**

That's why saying **"medicine is in Act 0"** is simultaneously wrong and surprisingly insightful.

The **components are advancing rapidly**.

The **system hasn't been redesigned yet**.

The really big Act 3

Here's what I think could eventually happen.

Medicine moves from:

episodic → continuous

Today:

> "Something is wrong. Let's investigate."

Tomorrow:

> **"Your system is drifting from your healthy baseline. Let's intervene before symptoms appear."**

That is a gigantic change.

Think about diabetes

Traditional model:

symptoms

→ doctor

→ glucose test

→ diagnosis

→ medication

→ periodic follow-up

Act 2:

CGM

→ continuous glucose

→ AI analysis

→ alerts

→ physician oversight

Act 3:

continuous glucose

diet

exercise

sleep

medication

physiology

↓

AI continuously optimizes treatment within medically approved constraints.

That's a **closed-loop biological control system**.

We already have early versions of this concept in areas such as automated insulin delivery.

Act 3 would extend the philosophy across much more of medicine.

The ultimate Act 3 architecture

Imagine a person wearing:

watch

ring

CGM

blood-pressure sensor

sleep sensor

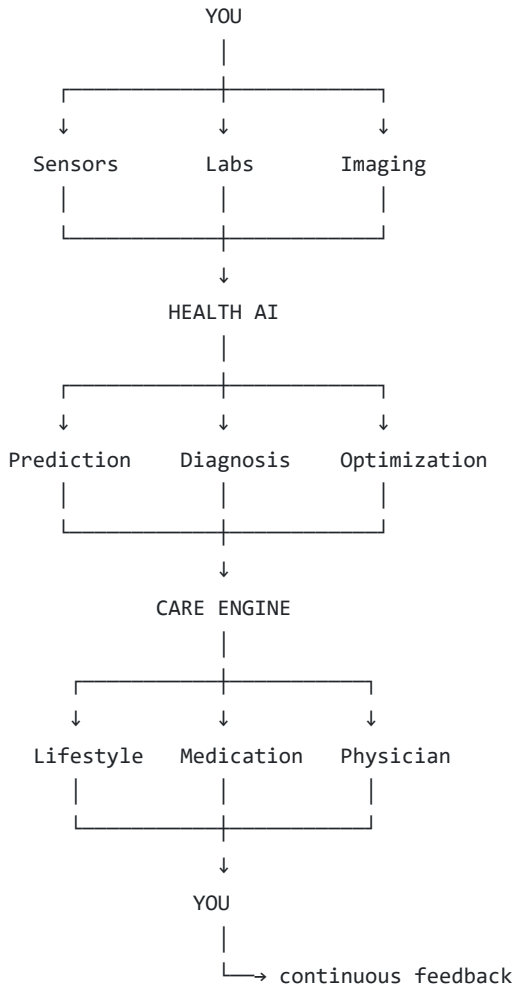
periodic lab testing

genomic profile

medical history

All feeding a secure health AI.

Then:



That is what I mean by:

AI-native medicine.

Why medicine will probably be slower than software

This is critical.

Software:

> If AI makes a mistake, you regenerate the answer.

Medicine:

> If AI makes a mistake, someone can die.

Therefore medicine has enormous friction:

1. Biology

Humans aren't predictable machines.

2. Evidence

You need clinical validation.

3. Regulation

FDA approval/clearance matters for many products.

4. Liability

Who is responsible?

5. Trust

Will patients accept AI decisions?

6. Integration

AI needs access to messy clinical data.

7. Reimbursement

Who pays?

8. Workflow

Doctors don't want another screen.

9. Privacy

Medical data is extraordinarily sensitive.

10. Distribution

Hospitals change slowly.

That's why Nature Medicine researchers have argued that autonomous AI agents require regulatory frameworks capable of handling **adaptive oversight**, rather than simply applying static medical-device paradigms. (**Nature**)

And interestingly, **the FDA is actively working on exactly this problem right now**. On August 18, 2026, it issued a discussion paper specifically seeking input on regulation of generative-AI-enabled medical devices, including risk assessment, premarket evaluation and postmarket monitoring. (**U.S. Food and Drug Administration**)

That's a pretty good signal that we're transitioning into the next phase.

Here's the historical analogy I like most

Remember our electricity discussion?

Medicine today is like a factory in 1900 that has electricity but hasn't completely redesigned itself around electricity.

The hospital has:

computers

AI

robots

digital imaging

wearables

genomics

cloud

but the fundamental workflow remains:

> **human clinician → episodic visit → decision → treatment.**

The Act 3 revolution happens when the entire workflow is redesigned.

And this creates a fascinating 3-act medical timeline

1900–2000

ACT 0

Scientific medicine

Understand:

- bacteria
- viruses
- anatomy
- physiology
- pharmaceuticals
- surgery

2000–2020

ACT 1

Digitize medicine

- EHR
- digital imaging
- genomics
- telemedicine
- digital records
- connected devices

2020–2030

ACT 2

Add intelligence

- AI diagnostics
- AI documentation
- AI imaging
- predictive analytics
- AI drug discovery
- AI clinical trials

- AI agents

We are here.

2030–2045+

ACT 3

Redesign medicine

- continuous health monitoring
- predictive medicine
- personalized treatment
- AI clinical teams
- autonomous workflows
- robotic medicine
- closed-loop therapies
- AI-driven scientific discovery

And then there's an even bigger possibility

Medicine shifts from "treat disease" to "manage biological trajectory."

This could be the true Act 3.

Today:

> **You develop disease → we treat disease.**

Act 3:

> **We continuously estimate your probability of developing disease → intervene earlier.**

That's a fundamentally different medical philosophy.

From diagnosis to prediction

The progression becomes:

Act 0

Disease

↓

Act 1

Detect disease

↓

Act 2

Predict disease

↓

Act 3

Prevent disease

That is enormous.

And eventually:

Act 3.5

Repair biological damage.

That's where regenerative medicine, gene therapy, cell therapy, tissue engineering, personalized therapeutics and AI-assisted drug discovery potentially converge.

But I would put a **large question mark** next to this.

We're nowhere near being able to reliably engineer human aging as an engineering problem.

The "AI Doctor" is actually the wrong mental model

I wouldn't imagine:

> **Robot Doctor replaces physician.**

That's too simplistic.

I'd imagine:

AI Medical Operating System

The system coordinates:

patient

↕️

sensors

↕️

labs

↕️

imaging

↕️

AI

↕️

physicians

↕️

pharmacy

↕️

devices

↕️

hospital

The doctor becomes one component of a much larger intelligence system.

And this is where your cloud-engineering interest becomes surprisingly relevant

Medicine's Act 3 will require enormous infrastructure.

Think about the architecture:

Wearables

↓

IoT

↓

Cloud

↓

Data lake

↓

AI models

↓

Agent orchestration

↓

Clinical decision system

↓

EHR

↓

medical devices

↓

human clinicians

That's essentially:

Cloud engineering + AI + cybersecurity + medicine.

And healthcare may ultimately become one of the largest real-world applications of cloud/AI engineering.

There's a second investment implication

The medical AI winners may not simply be:

> "AI companies."

The infrastructure stack could include:

Layer 1 — Compute

GPUs / accelerators

Layer 2 — Cloud

Compute + storage + networking

Layer 3 — Data

EHR + imaging + genomics + laboratory data

Layer 4 — AI

Models + agents

Layer 5 — Medical technology

Imaging + monitoring + robotics

Layer 6 — Therapeutics

Drugs + gene therapy + cell therapy

Layer 7 — Care delivery

Hospitals + clinics + physicians

Layer 8 — Patient

The economic value may ultimately move increasingly upward toward **Layers 5–8**, where AI produces measurable clinical outcomes.

The big warning for investors

Don't confuse:

> **AI capability**

with:

> **medical outcome.**

The 2026 drug-discovery literature is a perfect example.

AI can produce spectacular computational results while clinical translation remains difficult. A recent *Nature Reviews Drug Discovery* review explicitly says the field needs to shift from model validation toward demonstrating improvement in actual decision-making and clinical outcomes. (PubMed)

That's a fantastic investment filter:

> **Don't ask whether the AI is impressive. Ask whether patient outcomes improve.**

My Medicine Act 3 scorecard

I'd watch these milestones:

AI reads imaging	🟢 Already
AI writes clinical notes	🟢 Already
Milestone	**Meaning**
AI detects disease	🟢 Already
AI predicts risk	🟢 Emerging
AI recommends treatment	🟡 Emerging
AI coordinates care	🟡 Early
AI agents execute clinical workflows	🟡 Early
Continuous health AI	🟡 Early
Personalized treatment optimization	🟡 Early
AI-designed drugs reach approval	🟡 Emerging
AI + robotic laboratory	🟡 Emerging
AI-guided autonomous procedures	🟠 Early
Closed-loop multi-disease management	🟠 Early
Autonomous clinical system	🔴 Future
Biological aging becomes engineerable	🔴 Highly speculative

And this brings us back to your age-60 question

This is actually **extremely relevant to you**.

You're entering your 60s at almost exactly the point when:

> **medicine is transitioning from episodic care toward continuous, data-rich, AI-assisted care.**

You don't need to predict which medical breakthrough will win.

Your future-proof strategy is to become an **early adopter of evidence-based medical technology** while remaining skeptical of hype.

Think:

Today

Annual physical

-

labs

-

doctor

Emerging

wearables

- continuous metrics
- better imaging
- AI interpretation

Future

personal health data

- AI
- predictive risk
- personalized intervention
- human clinician

Mature Act 3

Continuous biological management

That is the version of Act 3 I would take seriously.

Not:

> "AI will make doctors obsolete."

But:

> **"The amount of medically useful intelligence surrounding an individual could become orders of magnitude greater than it is today."**

And that may be one of the most consequential changes of your 60s, 70s and 80s.

The one-sentence answer to your original question

Is Medicine still in Act 0?

The medical profession: partly.

Medical technology: definitely not.

AI-native medicine: yes—almost entirely.

We're in a fascinating transition:

> **Medicine has digitized the patient, is now adding intelligence to the data, and has not yet redesigned the medical system around that intelligence.**

That redesign is Medicine's Act 3.

And unlike some of our more speculative AI scenarios, **the first pieces of this Act 3 are already visible in FDA-authorized devices, AI-assisted diagnostics, continuous monitoring, clinical AI and AI-driven drug development.** (U.S. Food and Drug Administration)

The really big question for the next 10–20 years isn't whether AI will enter medicine.

It already has.

It's:

> **When does medicine stop using AI as a tool and start being designed around AI from the ground up?**

That's the medical Act 3.

List 22 guidelines/tips to prepare a new (fresh 2 months in the clinic) Internal Medicine/Primary Care Physician practicing in Citrus County Florida for Act 2,3 in Medical Practice with AI.

Yes. For a **new Internal Medicine / Primary Care physician only two months into practice in Citrus County**, I would not tell them to become an AI engineer.

I would train them to become an **AI-augmented physician**—someone who understands enough AI, data, workflow, cybersecurity, and clinical validation to use increasingly capable tools **without surrendering clinical judgment**.

That distinction matters. The AMA now explicitly frames healthcare AI as *augmented intelligence*, emphasizing physician oversight, transparency, safety, workflow integration, and ongoing monitoring. Its 2026 AI evaluation guide recommends evaluating tools across clinical use case, validation data, risks, effectiveness, and workflow integration. (American Medical Association)

And the timing is excellent: FDA issued final Clinical Decision Support guidance in January 2026, while its digital-health guidance now specifically addresses AI-enabled devices and lifecycle management. (U.S. Food and Drug Administration)

The Physician's AI Act 2 → Act 3 Playbook

I'd give this physician **22 rules**.

ACT 2 — Become an AI-augmented physician

1. 🩺 Master medicine first; AI second

For the first year, the priority remains:

> **Become an excellent primary-care physician.**

AI should amplify clinical competence—not compensate for weak fundamentals.

The hierarchy should be:

Clinical knowledge → clinical judgment → AI assistance → final physician decision

Never reverse it.

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2. 🤖 Learn the difference between AI assistance and AI authority

Create three mental categories:

GREEN — AI assists

- summarize chart
- draft note
- generate patient instructions
- organize differential
- find literature

YELLOW — AI informs

- risk assessment
- diagnostic suggestions
- medication considerations
- preventive-care recommendations

RED — AI cannot independently decide

- diagnosis
- treatment
- emergency disposition
- medication changes
- patient-specific high-risk decisions

The physician remains accountable.

FDA's 2026 CDS guidance specifically emphasizes that appropriate decision-support software should allow the clinician to independently review the basis for recommendations rather than simply relying on the output. (U.S. Food and Drug Administration)

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3. 📝 Make documentation your first AI project

This is probably the **highest-return starting point**.

AI can help with:

visit transcription → SOAP note → assessment → patient instructions → after-visit summary

But establish a rule:

> **AI drafts. Physician signs.**

Never allow a generated note to become part of the permanent medical record without reviewing it.

Watch especially for:

- hallucinated symptoms
- invented negative findings
- incorrect medications
- incorrect dates
- wrong laterality
- inappropriate diagnoses

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4. 🧠 Build an "AI second opinion" habit

Don't ask AI:

> "What's the diagnosis?"

Instead:

> "Given this presentation, what important diagnoses or red flags might I be missing?"

That's a much better use.

Use AI as a **cognitive forcing function**.

For example:

> "I'm considering pneumonia, CHF and PE. What findings would make each more or less likely, and what dangerous alternative diagnoses should I not miss?"

That strengthens the physician's reasoning rather than replacing it.

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5. 🔎 Learn to interrogate AI rather than trust AI

A physician should become very good at asking:

> **"Why?"**

Then:

> **"What's your evidence?"**

Then:

> **"What assumptions are you making?"**

Then:

> **"What would make this recommendation wrong?"**

Then:

> **"What evidence contradicts it?"**

This is **AI clinical literacy**.

The AMA specifically emphasizes hallucinations, bias, transparency, privacy, liability and the need for explainable AI. (American Medical Association)

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6. 📚 Build a personal evidence-verification workflow

Never let a general-purpose chatbot become the final medical reference.

Develop a hierarchy:

Clinical guidelines

↓

FDA

↓

major medical societies

↓

peer-reviewed literature

↓

institutional protocols

↓

AI synthesis

The AI can help you navigate the evidence.

It should not become the evidence.

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7. 🧪 Learn "AI hallucination medicine"

This is a new clinical skill.

AI can produce:

> **a beautifully written, completely wrong answer.**

That's more dangerous than an obviously wrong answer.

Learn to recognize:

- fabricated citations
- invented studies
- incorrect dosing
- nonexistent guidelines
- plausible but false contraindications
- overconfident conclusions

The better AI becomes at sounding authoritative, the more important this skill becomes.

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8. 🔐 Treat patient data as radioactive

Never casually paste identifiable PHI into a consumer AI chatbot.

Before using any AI system with patient information, determine:

- Is it approved by the practice?
- Is there an appropriate vendor agreement?
- How is data stored?
- Is it used for model training?
- Who can access it?
- How long is it retained?
- Can the data be deleted?
- What happens after a breach?

The AMA explicitly identifies privacy and cybersecurity as core AI concerns. (American Medical Association)

"The AI is HIPAA compliant" is not enough.

Understand the actual workflow.

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9. 🛡️ Become the clinic's AI cybersecurity person

This is where a physician with technical interest can become unusually valuable.

Understand:

MFA

passkeys

least privilege

phishing

ransomware

device security

backup

vendor access

audit logs

API security

AI will increase the attack surface of medical practices.

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10. ☁️ Learn enough cloud technology to understand the machine

You don't need to become a cloud architect.

But learn:

API

→ database

→ cloud

→ identity

→ encryption

→ container

→ logging

→ backup

→ AI model

→ agent

That knowledge will make the physician much better at evaluating vendors.

And because you already have a cloud-engineering orientation, this is one area where a technically inclined physician can become a **bridge between medicine and IT**.

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11. 📊 Become data-literate

Primary care is ultimately a giant longitudinal data problem.

Learn to understand:

- trends
- baselines
- distributions
- sensitivity
- specificity
- PPV
- NPV
- likelihood ratios
- calibration
- false positives
- false negatives
- confidence intervals

And especially:

correlation ≠ causation

AI will generate correlations faster than humans can evaluate them.

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12. 🎯 Learn the difference between prediction and causation

This will become incredibly important.

AI might predict:

> "Patient has a 23% probability of hospitalization."

That doesn't mean:

> "Do X and hospitalization will decrease."

Prediction ≠ intervention.

A physician needs to understand that distinction.

ACT 2 → ACT 3

The next 11 guidelines are where the physician begins preparing for **AI-native medicine**.

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13. 📡 Start thinking in longitudinal patient trajectories

Traditional primary care:

> "What is wrong with the patient today?"

AI-native primary care:

> **"How is this patient's health trajectory changing?"**

Instead of looking at one BP:

BP today

think:

BP trend over 5 years

Add:

- weight
- A1c
- LDL
- eGFR
- activity
- medications
- hospitalization
- sleep
- wearable data

The future of medicine is increasingly:

> **trajectory rather than snapshot.**

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14. ⌚ Learn remote patient monitoring

Citrus County is particularly interesting for this.

A primary-care practice doesn't necessarily have to wait for a patient to drive into the clinic.

Think:

home BP

weight

glucose

pulse oximetry

ECG

wearables

↓

AI monitoring

↓

exception detection

↓

clinical review

The physician shouldn't monitor every data point.

AI should identify:

> **"Something changed."**

Florida's 2026 health-innovation statute explicitly encourages early-detection technology, remote communication, at-home monitoring and technologies that improve outcomes and reduce unnecessary emergency-room use. (Florida Senate)

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15. 👵 Design for an aging primary-care population

This is particularly relevant to a Citrus County primary-care physician.

The future isn't merely:

> more patients.

It's:

> **more longitudinally complex patients.**

AI can help organize:

- polypharmacy
- fall risk
- cognitive decline
- diabetes
- cardiovascular disease
- CKD
- COPD
- preventive care
- vaccinations
- cancer screening
- social determinants
- hospitalization risk

But the physician should remain the **integrator**.

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16. 💊 Build an AI-assisted medication safety workflow

Imagine an AI system reviewing:

medications

-

kidney function

-

age

-

drug interactions

-

duplicate therapies

-

recent hospitalization

-

new prescriptions

and producing:

> **"Here are the five medication issues that deserve your attention."**

That's a perfect Act-2 application.

But:

> **AI flags. Physician decides.**

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17. 🧬 Learn personalized medicine before it becomes mainstream

The physician should understand where medicine is going:

genomics

proteomics

metabolomics

imaging

wearables

EHR

AI

Eventually:

> **one patient → one continuously updated risk model.**

Don't need to become a geneticist.

Just understand the architecture.

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18. 👩‍💻 Become an AI workflow designer

This may ultimately be more valuable than knowing how to write prompts.

Ask:

> **"Where does AI remove friction from this clinic?"**

For example:

Before visit

AI:

- gathers history
- summarizes chart
- identifies overdue screening
- prepares questions

During visit

AI:

- transcribes
- identifies issues
- captures orders

After visit

AI:

- drafts instructions
- summarizes medications
- prepares follow-up
- identifies pending results

That's an **AI-enabled clinical workflow**.

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19. 🧑‍🤝‍🧑 Learn to work with an AI clinical team

Act 3 won't necessarily mean:

> AI replaces physician.

More likely:

> **physician + AI agents + nurses + medical assistants + specialists + remote monitoring**

become one coordinated system.

The physician's role shifts toward:

judgment + exception handling + relationships + responsibility

rather than:

information retrieval + documentation + repetitive administration

That is a much better future for physicians.

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20. ⚖️ Understand AI liability before using autonomous tools

This is non-negotiable.

Ask the vendor:

> "If your AI makes a recommendation and I follow it, who is responsible?"

Also ask:

- What validation population was used?
- How does performance vary by demographics?
- How is drift detected?
- How are updates controlled?
- Can I see the model/version?
- Is there an audit trail?
- Can the recommendation be explained?
- What happens when the model fails?

The AMA is explicitly advocating for policies addressing AI oversight, disclosure, physician liability, privacy and automated decision-making. (American Medical Association)

And FDA's AI-device guidance now addresses lifecycle management and controlled updates to AI-enabled devices. (U.S. Food and Drug Administration)

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21. 🧪 Don't be impressed by an AI demo—demand evidence

Before adopting an AI tool, ask five questions.

1. What problem does it solve?

2. What evidence shows that it works?

3. In what patient population?

4. What happens when it is wrong?

5. Does it actually improve workflow or outcomes?

This mirrors the AMA's five-domain evaluation framework: use case/user, validation data, risks, effectiveness, and workflow integration/monitoring. (American Medical Association)

A beautiful demo isn't clinical evidence.

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22. 🚀 Become the physician who understands where medicine is going

This is the ultimate guideline.

Don't try to predict the exact AI technology.

Instead, track these transitions:

Today

EHR

↓

Act 2

AI-assisted EHR

↓

Act 2.5

AI agents

↓

Act 3

Continuous AI health management

↓

Act 3+

Predictive + personalized + partially autonomous medicine

The physician who understands this transition **five years before everyone else** will have a major advantage.

The 5-year roadmap I'd give this physician

🟢 2026–2027

"AI-Augmented Physician"

Master:

- AI documentation
- chart summarization
- evidence retrieval
- clinical reasoning assistance
- cybersecurity
- privacy
- AI verification

Goal: save time without increasing clinical risk.

🔵 2027–2029

"AI-Enabled Practice"

Introduce:

- remote monitoring
- AI triage assistance
- population-risk identification
- medication surveillance
- preventive-care automation
- AI patient communication

Goal: manage more patients without simply working more hours.

🟣 2029–2032

"AI-Native Primary Care"

The architecture changes:

patient

→ continuous data

→ AI

→ exception detection

→ physician

→ intervention

→ feedback

Goal: manage health trajectories instead of episodic visits.

🔴 2032+

"Human + Machine Clinical Team"

The physician increasingly becomes:

clinical strategist

risk manager

relationship specialist

exception handler

ethical decision-maker

AI supervisor

rather than simply:

> **the person who reads every chart and types every note.**

One thing I would tell a new physician especially

Do not become the physician who says:

> "I don't trust AI."

And don't become the physician who says:

> "AI is always right."

Become the physician who says:

> **"Show me the evidence, show me the limitations, show me where it can fail, and then show me how it improves patient care."**

That is the physician who will thrive through Act 2 and Act 3.

The AMA's own data illustrates how quickly this transition is happening: nearly two-thirds of physicians reported using healthcare AI in 2024, a 78% increase from 2023. (American Medical Association)

And Florida itself is moving toward technology-enabled healthcare delivery, including early detection, remote monitoring, workforce augmentation and technology integration. (Florida Senate)

The most important 22-word version

If I had to put the entire playbook on a badge for this physician:

> **Master medicine. Embrace AI. Protect PHI. Verify everything. Automate paperwork. Monitor continuously. Think longitudinally. Stay human. Own the final decision.**

And one final point: because this is a **Florida physician**, AI governance should be treated as a moving compliance issue rather than something learned once. Florida's statutes and proposed legislation are evolving, and the AMA/FDA frameworks are evolving at the same time. So before deploying a particular AI product in the clinic, the physician should have the practice's

compliance/legal/IT leadership verify the current requirements rather than relying on a generic AI checklist. (**American Medical Association**)

22 AI Future-Proof Guidelines for a New Internal Medicine / Primary Care Physician

1. **Master Medicine First; AI Second**
2. **Use AI as an Assistant, Never as the Final Authority**
3. **Make AI-Assisted Documentation Your First AI Skill**
4. **Use AI as a Clinical Second Opinion**
5. **Learn to Interrogate AI, Not Simply Trust It**
6. **Build an Evidence-Verification Workflow**
7. **Learn to Recognize AI Hallucinations**
8. **Protect Patient PHI as a Critical Asset**
9. **Make Cybersecurity Part of Clinical Practice**
10. **Understand Cloud, APIs, Data, and AI Infrastructure**
11. **Become Data-Literate**
12. **Understand Prediction vs. Causation**
13. **Think in Longitudinal Patient Trajectories**
14. **Master Remote Patient Monitoring**
15. **Design Care for an Aging Population**
16. **Use AI for Medication Safety and Polypharmacy**
17. **Prepare for Personalized and Precision Medicine**
18. **Become an AI Clinical Workflow Designer**
19. **Learn to Lead Human + AI Clinical Teams**
20. **Understand AI Liability, Governance, and Regulation**
21. **Demand Clinical Evidence Before Adopting AI**
22. **Become the Physician Who Understands Where Medicine Is Going**