



THE FUTURE OF HEALTH CARE IS HERE

The Journey to 50,000 New Findings Over 5 Months

*A Case Study of How Mercy Partnered with Aidoc to
Turn Years of Investment Into Tangible Impact For
Patients & Clinicians*



What's Being Accomplished Today

In medicine, timing can matter as much as the diagnosis itself. Some of the most consequential moments in a patient's care come down to whether the right clinical insight reaches the right clinician at the right time. That insight might involve a condition already suspected, one that needs to be triaged and acted on urgently. Or it might be an "incidental finding" (something a scan wasn't ordered to look for but that shows up anyway, such as evidence of a brain bleed on a scan for something unrelated). These findings may be entirely outside the reason the patient was scanned that day, yet potentially no less significant.

For the patient, what matters isn't just what was found, but that it was found in time; a condition caught months or years before it would have surfaced on its own could mean the course of a treatment, or a life, changed for the better.

Moments like these happened 50,749 times in just five months at Mercy - each one an incidental finding caught before it could slip through, each one a patient whose path forward looked different because of it. From January through May of 2026, Aidoc, an AI clinical decision support platform designed to prioritize acute findings on medical imaging, worked alongside Mercy's clinicians, flagging these findings without requiring a single new radiologist.¹ That staggering volume is the result of the right technology being layered on top of the right platform, at scale. That scale means the same advanced technology reaches every Mercy patient, everywhere, every time - whether someone is scanned at a flagship hospital or in one of Mercy's large rural communities.

But in order to understand how Mercy and Aidoc got here, it helps to understand the pursuit of better outcomes that made this kind of investment necessary, the years of deliberate groundwork Mercy laid that made it possible, and what that impact looks like in practice today.

Solving the Clinician Crisis

Healthcare faces a structural crisis: a projected national shortage of 141,000 physicians by 2038.² In radiology specifically, one 2024 industry estimate placed the ratio at roughly three open positions for every one available radiologist.³ This shortfall drives severe burnout, with over half of clinicians

reporting debilitating stress from relentless administrative demands.⁴ This toll doesn't just affect staff; it follows them into the exam room, directly impacting the quality and safety of patient care.⁵

Patients are acutely aware of this shift. Today, 85% of consumers prioritize safety and trust when choosing where to seek care.⁶ Simply put, health systems are being asked to do more for more people with fewer clinicians⁷ - and patients notice the difference.

Health systems cannot simply hire their way out of this workforce shortage, though they have tried. Instead, leading health systems are steadily turning towards Artificial Intelligence to bridge the gap between patient needs, clinical capacity, and improved outcomes.^{8,9}

How Mercy approached the crisis

Mercy was experiencing that pressure firsthand. Imaging volumes were growing 12% to 15% annually, while the number of radiologists available to read those studies could not keep pace at the same rate. Radiologists across healthcare are being asked to review more images, identify more conditions, and communicate more urgent findings, often within the same working day and with little additional capacity.

The consequences extend beyond workload. When thousands of scans move through a health system each day, reading them all presents one challenge; ensuring that the most consequential findings reach the right clinician in time - including potentially overlooked incidental findings that were not the original reason for the scan - presents an even more pressing challenge. A routine outpatient imaging study may contain a pulmonary embolism, aneurysm, fracture, or another serious condition that requires attention long before that study would ordinarily rise to the top of the reading list if completed in the usual FIFO (first in/first out) order.

Operationally, that pressure creates a cascade of consequences. Longer reading backlogs can delay diagnoses, slow treatment decisions, and prolong emergency department and hospital stays. At the same time, health systems may rely more heavily on costly external physician coverage, overtime, or additional recruiting just to keep pace. The result is a perfect storm of clinical, operational, and financial concerns: rising demand places greater strain on clinicians while making timely, efficient care increasingly difficult to sustain for patients.

AI is not here to replace clinicians. Rather, it augments their work by serving as a second set of "eyes" and "hands."^{8,9,10} By absorbing routine, burdensome tasks - from scheduling¹¹ to multi-step operational workflows^{12,13} - AI gives clinicians precious time back to focus on patients.¹⁴ Crucially, the human clinician always retains the final say over every care decision.

While most health systems are racing to adopt these tools, deployment alone isn't enough.¹¹ True progress requires a strong foundation of secure data, seamless integration, and rigorous governance. The true distinguisher today is no longer just having AI - it is proving that it safely, ethically, and reliably works for both the clinician and the patient.¹¹

That last point is where Mercy and Aidoc's joint story begins. Scaling AI safely, ethically, and reliably, in a way patients and clinicians can trust, is not something a health system can switch on overnight; it has to be built over time. That ability rested on two differentiators that took years to build and are hard to copy: a deliberately built infrastructure backbone, and the disciplined way Mercy chooses, governs, and scales AI. The first of those differentiators is where the story has to start.

The Long-Standing Foundation Delivers 13 to 50 in 4

Thirteen AI solutions deployed at over 50 hospitals in four months. The Mercy-Aidoc deployment stands as both the fastest complex technology deployment in Mercy's history and the largest enterprise partnership Aidoc had ever undertaken - a record on both sides, achieved together.^{15,16}

This was possible because Mercy did not react to the AI moment; it prepared for it. The plan traces back to Strategy 2025, written in 2019, before the recent AI boom.¹⁵ It set a clear path: run one shared Epic system across the enterprise, bring data back in-house onto a platform Mercy owns, and build data partnerships with peers like Mayo Clinic.^{15,17} As one Mercy leader put it, the strategy laid down years ago was "all about getting ready for AI. We saw it coming."¹⁵

The result is a foundation that few systems can match. Mercy runs one of the largest single Epic instances in the country, feeding an owned data platform with years of patient records.^{15,17} Because patient data spans a wide mix of people across Missouri, Oklahoma, Arkansas, Kansas, Illinois, and the broader

Midwest - it helps AI tools work well for different patients and lowers the risk of bias.¹⁷ This readiness was built patiently over two decades, not rushed to keep up with the market.

This groundwork enabled Mercy's partnership with Aidoc - a clinical AI partner whose software plugs into radiology workflows to analyze medical images, flag findings, and help radiologists prioritize route cases.

When deploying Aidoc, the enterprise did not need to build a new foundation but rather connect with the strong platform already in use. Each layer unlocked something specific:

- **One shared Epic system:** Every Mercy site runs the same system, so an Aidoc finding appears in the same patient record everywhere. That let Aidoc reach every patient at every site right away, at no extra cost, instead of going live one location at a time.¹⁷
- **Connected imaging systems:** Mercy's imaging systems were already linked, so Aidoc could send findings straight into the tools radiologists already use, with one click to open a case. The AI sits inside the radiologist's normal workflow, not in a separate program beside it.¹⁷
- **An owned data platform:** Because Mercy owns and runs its own data platform, Aidoc had clean, well-organized patient data to read from and write back to across the whole system.^{15,17}

Aidoc is a key chapter within the Mercy AI story. A story that is about building a foundation that can support any AI tool, including ambient and generative features built into their instance of Epic that reduce the documentation burden on clinicians.¹⁷ This type of foundation, though, is only as valuable as the operational discipline applied on top of it.

The Operational Differentiators

Mercy's second differentiator may be even harder to build than its infrastructure: the disciplined way it chooses, governs, and scales AI.

First, rapid and safe decisions are a core competency.

Ethics is not just added as policy after the fact; it helps decide which uses of AI are worth pursuing in the first place. Every AI project must meet seven key guiding principles (among them: people, not software, making the final call on

care; patient information is never sold to nor used to train the models of external AI companies, and tools stay safe, transparent, and monitored over time).¹⁷ Each project passes a required review with named owners across teams and is logged in a central AI registry.¹⁷

Second, invest in platforms over point solutions.

Careful vetting is built-in, keeping each department from chasing its own new tools based on "market noise" and piling on cost and complexity - and allowing Mercy to focus AI investment on where it matters most for patients and clinicians.

Third, move from pilots to practice – quickly.

Mercy's intention was to rapidly scale their AI solutions. As an operational principle, it was important to not let Aidoc's solutions stall in pilots. Mercy's leaders share a simple belief: if something will help patients, **not only do they have an obligation to adopt it - it should reach all patients, not just a few.**

Fourth, partner for impact, trust, and scale.

Mercy's focus on a single platform enables them to double down on partnerships. That same discipline gives Mercy a rare agility and speed to scale. Leaders share a simple belief: if something will help patients, not only do they have an obligation to enact it - it should reach all of them, not just a few. Promising tools do not languish in one-off pilots but move toward full scale. When Mercy decides to act, its senior leaders are personally involved, from a CEO who meets regularly with partners to a C-suite that backs the investment and grants its teams clear authority to move. That keeps decisions high-level and fast, and it means they hold once made. That confidence also shapes the kind of partners Mercy pursues having moved deliberately away from a fragmented mix of point vendors, Mercy had the clarity and conviction to commit to Aidoc as a strategic partner and enterprise-wide platform - one that clinicians, operational leaders, and the C-suite aligned on together, and one built to scale alongside Mercy's ambitions rather than cap them.¹⁶

This seniority does not mean decisions are dictated or bogged down in approval cycles. These decisions are made in conjunction with teams, not just handed down from the top: a clinical AI committee of lead physicians ensures that the same people who use these tools helped choose them.¹⁵ In the case of Aidoc, that meant Aidoc's clinical team engaged directly with physician leaders across the ministry - in Missouri, Oklahoma, Arkansas, and beyond -

before any agreement was reached.¹⁵ This not only helps ensure that each tool holds up in real clinical practice - that it fits the workflow, surfaces the right information, and earns the trust of the people using it - but also means that acceptance and adoption grow on their own, rather than being mandated.¹⁵

Aidoc's leadership observed these same strengths from the outside: Mercy is quick to decide and scale, strong at measuring what a tool delivers, and structured in a way that causes staff to adopt it.¹⁵ This mixture of fast, well-aligned decisions and clean measurement drives Mercy's speed to scale: it can roll out AI in measurable steps, check the results, and quickly move to the next area where it can help most. That is how Mercy and Aidoc working together put thirteen AI solutions across over 50 hospitals, reviewing about 2.5 million cases a year.^{15,16} Breadth and scale are proof that Mercy's approach and structure are built to put AI where it matters most, rather than letting it stall.

The next question is whether that approach is delivering where it counts most: at the point of care.

The Positive Impact on Patients & Clinicians

The backstory of Mercy's foundation and operational discipline is only noteworthy if it causes a positive change in the patient and clinician experience.

Aidoc's role is designed to prioritize acute findings for Mercy's clinicians - and the results bear that out. With AI deployment, it is estimated that 41.3% of incidental pulmonary embolism cases annually were discordant, meaning the AI algorithm identified a positive finding where the unaided radiologist's initial interpretation was negative. Following deployment, between January and May 2026, the AI algorithm flagged 50,749 incidental findings, bringing these cases to clinical attention as part of the routine workflow - representing real patients whose conditions were flagged before they had the chance to slip through.¹

Aidoc surfacing these findings outside the original scope of a scan means the cases most in need of a radiologist's attention are flagged for immediate review, rather than waiting their turn in an unordered queue. When a finding is caught at the moment of scan rather than days or weeks later, it can make the difference between a condition being treated early enough and that

condition being discovered after a patient's options and outcomes have been narrowed.

Dr. Daniel Choe, a Mercy radiologist and physician champion of the deployment, describes what this looks like in practice: "We've been able to reduce the turnaround time for someone who needs to be on blood thinners, or someone with a hemorrhage who needs to get to the emergency department. Cases that might have sat on the list for several hours, if not a day, can now be triaged within minutes."¹⁵

Beyond incidental findings, in a field where radiologists review hundreds of cases a day, even the most experienced clinician can benefit from a triage safety net checking every scan independently. Before AI deployment, retrospective assessments indicated AI-positive/radiologist-negative discordance rates of 27% for brain aneurysm cases, 3.5% for brain bleed cases, an estimated 20% for breast cancer cases, 18.8% for vertebral fractures, 15.2% for rib fractures, and 13% for pulmonary embolism.¹ Post-deployment, in each of these cases, the AI flags and brings forward the relevant finding; the diagnosis and care decision belong to the Mercy physician.¹⁷ And the benefits don't end there: finding potentially life-threatening pulmonary emboli can drive timely care activation and an increase in appropriate patient admissions.

For clinicians using these AI tools daily, technology has earned its place in the workflow. Thirteen solutions are currently live at Mercy and are absorbing real demand growth, with Mercy's imaging volume rising 12%-15% year over year and the same teams able to meet that case load.¹

This not only helps patients get their results faster but gives clinicians time back to focus on other high-priority tasks. For the most time-sensitive cases (specifically the top roughly 10% of highest-turnaround-time cases flagged for acute findings), the time from scan to result narrowed from about 19.8 hours to 1.3 hours - surfacing the cases that need a radiologist's eyes first rather than leaving them to sit in a chronological queue.¹ So far in 2026, Mercy's Aidoc deployment has improved prioritization and facilitated care for 5,642 patients, reclaiming an estimated 9,039 hours of radiologist reading time - hours spent on the work that actually requires a physician's judgment rather than on clearing routine cases.¹

The Impact of AI In Practice

A Day In The Life

Consider a recent, real case at Mercy, with the patient's details removed: a 55-year-old woman had a CT scan of her abdomen ordered by her GI specialist to investigate the cause of unexplained weight loss.¹ On that scan was a small blood clot in her lung, a pulmonary embolism, resting at the very top edge of the image in the thin sliver of lung that appears when the abdomen is scanned - the exact sort of detail that can slip past even an experienced eye deep into a day of hundreds of scans.¹⁵ This incidental finding, and what followed, altered the course of her case, and possibly her life, entirely.

Immediately after her scan finished, Aidoc examined the image. Before Aidoc was in place, scans at Mercy - as at most other hospitals and health systems, were read roughly in the order they arrived, and a routine outpatient case like hers could wait a day or longer before it reached a radiologist.¹⁵ Now every scan gets a quiet first look the instant it lands, and nothing sits in line unseen.

The AI discovered the clot and automatically flagged her case in the reading list. Before Aidoc, there was no dependable way to tell which routine cases that contained an AI finding needed attention first; all routine cases looked alike on the list.¹⁵ Now, cases like this - the ones that cannot wait - stand out from the ones that can.

Within minutes, the radiologist had her case open, studying the images himself and weighing the flag against his own reading to make the call.^{1,15} A day later, a dedicated scan confirmed the clot, and she was routed to the emergency department for treatment - a pulmonary embolism caught and addressed in time to change the trajectory of her care for the better.¹

What AI did not do matters every bit as much as what it did.
At no point did it do any of the following:

- It did not diagnose her of its own accord
- It did not choose her treatment plan
- It did not view / look into her patient records as a whole

Instead, it simply noticed a pattern in an image and raised a hand,¹⁵ leaving the clinician with the final say. As Dr. Chris Connor, a neuroradiologist puts it, this is the kind of dynamic where the clinician and the AI tool are "better together."¹⁵

For a patient, that is the heart of it: AI supports clinicians quietly in the background to make care faster and safer¹⁵ while those clinicians still make every decision.

For the staff who carry the work, this AI tool is a relief system, not a rivalry; it takes on the manual burden of watching every case so carefully that nothing slips through, and returning actual clinical judgment to the professionals trained to make it.¹⁵ Clear roles and visible limits are what allows this kind of tool to be one the workforce can keep trusting to support them.

What's Next

While the outcomes of this story are impressive on their own, they also offer a glimpse into the future. The achievements captured represent only a fraction of the potential; as this AI deployment matures, Mercy and Aidoc expect it to ease broader operational pressure points as well, helping to counter the ongoing radiology workforce shortage while gradually shortening patient lengths of stay and reducing delays in care. Clinically, Mercy and Aidoc are also actively co-developing new capabilities together, including tools designed to identify heart disease risk in patients before it becomes a crisis.¹⁵ This relationship reflects how Mercy approaches all of its partnerships: not as a collection of separate tools, but a platform to build on through partnerships.¹⁵

On a separate front, Mercy is also developing a new Digital Experience Engine, designed to ease patients' access to care by helping them find the right appointment, understand their costs upfront, and stay connected to their care plan.¹⁷

Beyond technology development itself, Mercy's governance discipline is what's driving its next milestone: working toward becoming one of the first health systems in the country to achieve Joint Commission certification for responsible AI, based on the strength of governance practices already in place.¹⁵

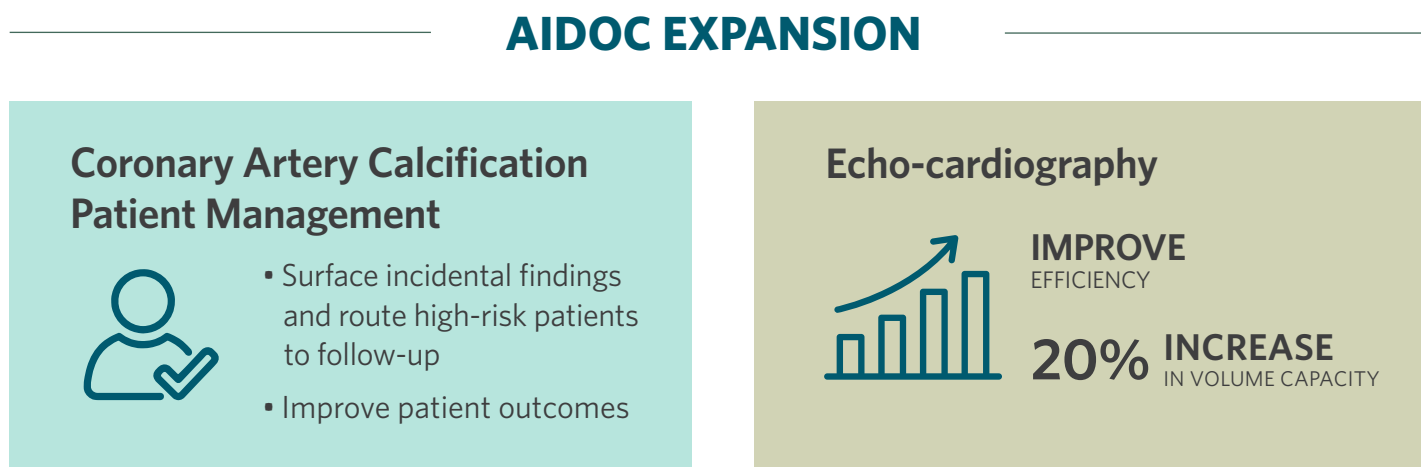
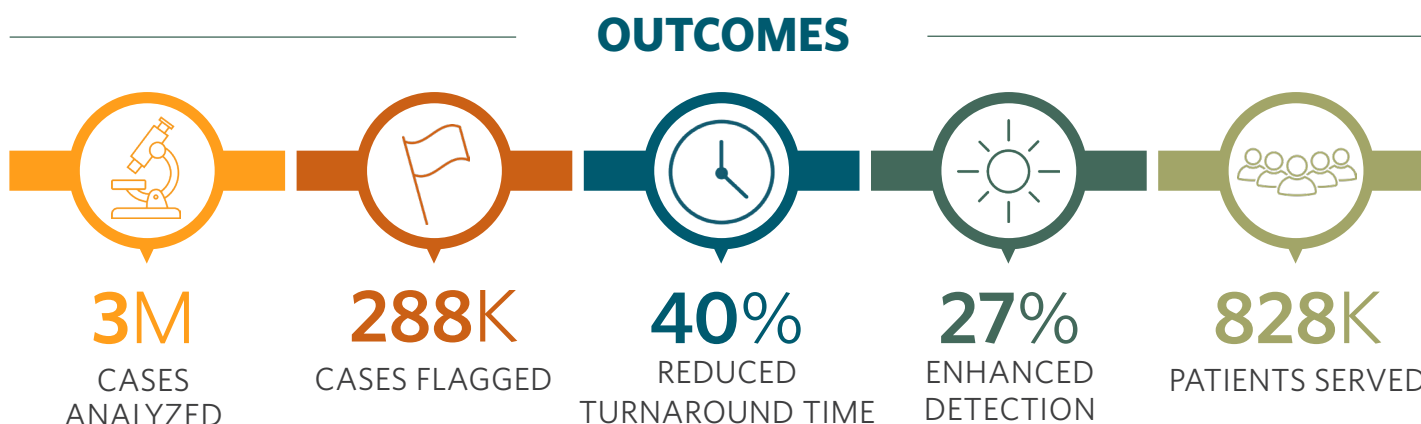
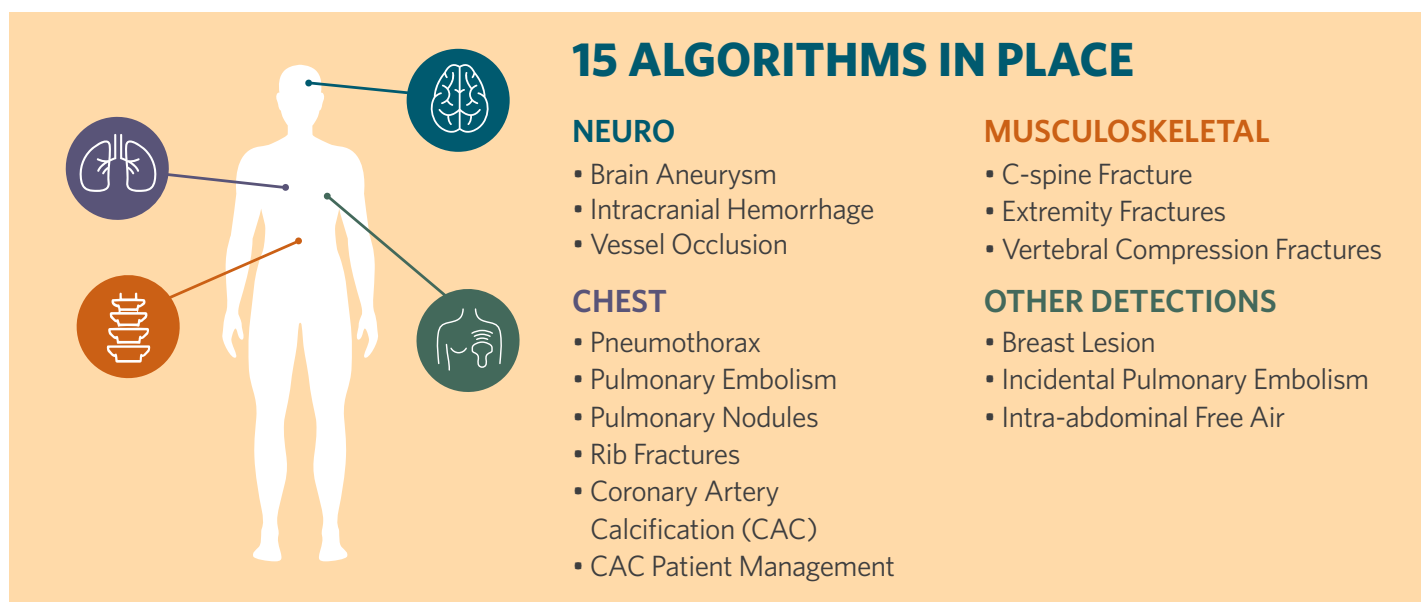
Further out, the goal is to advance AI from supporting individual care decisions toward something with wider reach: predicting health risks, catching problems earlier, and personalizing care at a population scale. With more than three million individuals already in Mercy's predictive care model and over 300 AI solutions running daily, this is not at all a distant ambition - the groundwork is already happening.¹⁷

As AI tools multiply and take on more of the administrative / coordination work that wears clinicians down, Mercy's platform is purpose-built to absorb them without starting from scratch each time, thanks to the foundation described earlier in this story.

The owned data platform, the single Epic system, the governance structure, the leadership that moves fast and stands behind its decisions - those same conditions made the Aidoc deployment possible, and are what makes the next steps described above possible too.

For clinicians, this means a system genuinely investing in making their day-to-day work more sustainable. For patients, it means that what Mercy has delivered here is not a one-time achievement, but part of an ongoing commitment to care. What Mercy and Aidoc have achieved together - the speed, the impact, the scale of adoption - is not only a clear signal of where Mercy intends to go from here, but tangible proof of what enterprise AI deployment can look like when done right. And it is only the beginning.

Using AI-based Technology Increases Efficiency, Advances Diagnostic Detection and **Improves Patient Outcomes**



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