Solving radiologist burnout through innovation

How Northern Light Medical Management has increased radiologist capacity, reduced burnout, and fostered more stable work-life balance through technology support

Background

Founded in 2023, Northern Light Medical Management is a privately owned, hospital-based, fully vertically integrated diagnostic and interventional radiology practice. With radiology practices and hospitals in multiple states, Northern Light currently performs more than 1.5 million imaging studies per year and is on track to surpass 2 million studies by the end of 2025.

This growth is in large part because of Northern Light's reputation for being able to perform rapid deployments and tightly integrated technology integrations for hospitals in need, so that imaging caseloads can be sent easily from the hospital to Northern Light's credentialed reading physicians. Most health systems are integrated within 90 to 120 days – in some cases as little as 60 days. In one instance, Northern Light took on a health system with just 24 hours notice. Once fully integrated, Northern Light provides hospitals with a combination of on-site and cloud-based radiology reading coverage, relying on Merge Imaging Suite and its Solution for Teleradiology, as well as a complement of other technology platforms that work together with the Merge Imaging Suite solution.

"We don't do a lot of marketing. Hospitals reach out to us because of the mounting challenges they face with staffing, radiologist burnout, quality, timeliness in interpretations, and costs. They need help, and we can provide that support – not as a vendor, but as a long-term strategic partner."

Patrick Santore Jr.
Founding Partner and Chief Executive Officer,
Northern Light Medical Management

Industry challenges

The headwinds facing Northern Light's clients are the same ones facing imaging organizations across the country: rising costs, inefficient tech stacks, and a severe shortage of radiologists to go around, all of which are making it harder for health systems to achieve the levels of performance they need to support patient care.

Costs

In many of the organizations that Northern Light works with, the average radiologist reads about 24,000 studies a year. But what happens when an organization's caseload requires 30,000 studies annually per radiologist? The practice may hire on a second radiologist to help cover the additional workload – but in that scenario, two full-time radiologists are managing the equivalent workload of 1.25 people, which drives up costs.

Inefficiencies

As the market continues to push toward acquisitions and consolidations, more health systems are increasingly finding themselves with cluttered, multi-layered tech stacks that are making patient care and physicians' jobs more inefficient. Disparate PACS systems absorbed from different practices become data silos themselves, making it harder to reconcile patient data and make images accessible or shareable across the enterprise.

Radiologist shortage

Although radiology is a highly compensated job, it's not an easy one to break into. Many radiology fellowship and residency programs over the last 5-10 years closed and never reopened, making it more difficult for new radiologists to enter the field. Stories of work-life imbalance and burnout are reported to scare away new hires. Finally, many organizations have a philosophy of requiring their radiologists to be on-site five days a week. This mandate makes the radiologist's day-to-day less pleasant, forcing them to report to the hospital every day and spend their time in a dark reading room. It stands out as a negative in an environment where hospitals increasingly rely on teleradiology. Given all these factors, perhaps it's no surprise that the U.S. may be looking at a shortage of as many as 42,000 radiologists by 2033.[1]

The Northern Light founders saw this disconnect and formed the company to provide fully managed radiology services to health systems. One piece of their business model is to provide highly scalable and flexible teleradiology services to hospitals in addition to the on-site coverage they provide.

Northern Light partnered with Merge, adopting Merge Imaging Suite, and deployed the Solution for Teleradiology, to not just bypass these problems, but definitively solve them for their customers.

"When my partners and I formed Northern Light, I really wanted to bring Merge in. In fact, I didn't even consider anyone other than Merge. The solution we're using now is a new and improved version of what I was already familiar with. Not much other thought went into it."

Patrick Santore Jr.
Founding Partner and Chief Executive Officer, Northern Light Medical Management

Teleradiology is the new opportunity

While other radiology practices have suffered with cost pressures, disparate PACS systems, staffing shortages, and burnout, Northern Light has been able to overcome these challenges with its own clients by doing something novel: creating a stable professional environment with a respectful work-life balance. Most radiologists in Northern Light practices work 40 weeks a year. The key: they only work 20 of those weeks on-site. The other 20 is from home – and that's made possible by Northern Light's deployment of the Merge Imaging Suite Solution for Teleradiology.

> "Teleradiology is the new opportunity. It allows one physician to support multiple locations and allows us to sidestep radiologist shortages. As a company, we'll be focusing on and enhancing our teleradiology support, and that's possible for us to do through Merge."

Patrick Santore Jr.
Founding Partner and Chief Executive Officer,
Northern Light Medical Management

This robust support means Northern Light can create a flexible reading environment for radiologists that can easily accommodate their needs. Want to work day shifts on Mondays, Tuesdays, Thursdays? Or pick up fractional radiology work? Or be fully remote? The Merge infrastructure makes all of these options possible, without any negative impact to meeting their clients' requirements.

That flexibility has, in turn, helped with recruiting. In less than two years, Northern Light has created 180 radiologist roles across its practices, who can be deployed either on-site, remotely, or a hybrid of the two depending on their needs and the hospital's. With Merge Imaging Suite, Northern Light is able to provide both 24/7 on-site hospital coverage and 24/7 teleradiology support, without breaking the backs of their physicians.

In addition to increasing radiologist capacity, Northern Light is also credentialing their radiologists so that, for example, a doctor based in Alabama is licensed to read images coming in from Florida, Texas, or Illinois. Because Merge Imaging Suite is built on a cloud native foundation, patient images coming in from disparate sites can be shared and accessed in the cloud, and read via a common worklist, extending teleradiology support to meet the needs of their physicians, wherever they are – figuratively and literally.

Driving down costs and inefficiencies

In addition to increasing radiologist capacity through teleradiology support, Northern Light developed an analytics system to dig into their hospitals' data and identify new opportunities for lowering costs and improving efficiencies. With all of the data about imaging captured in Merge Imaging Suite, Northern Light delivers additional value-add to their client by offering insightful recommendations on how they can better serve their populations.

Fractional radiologists

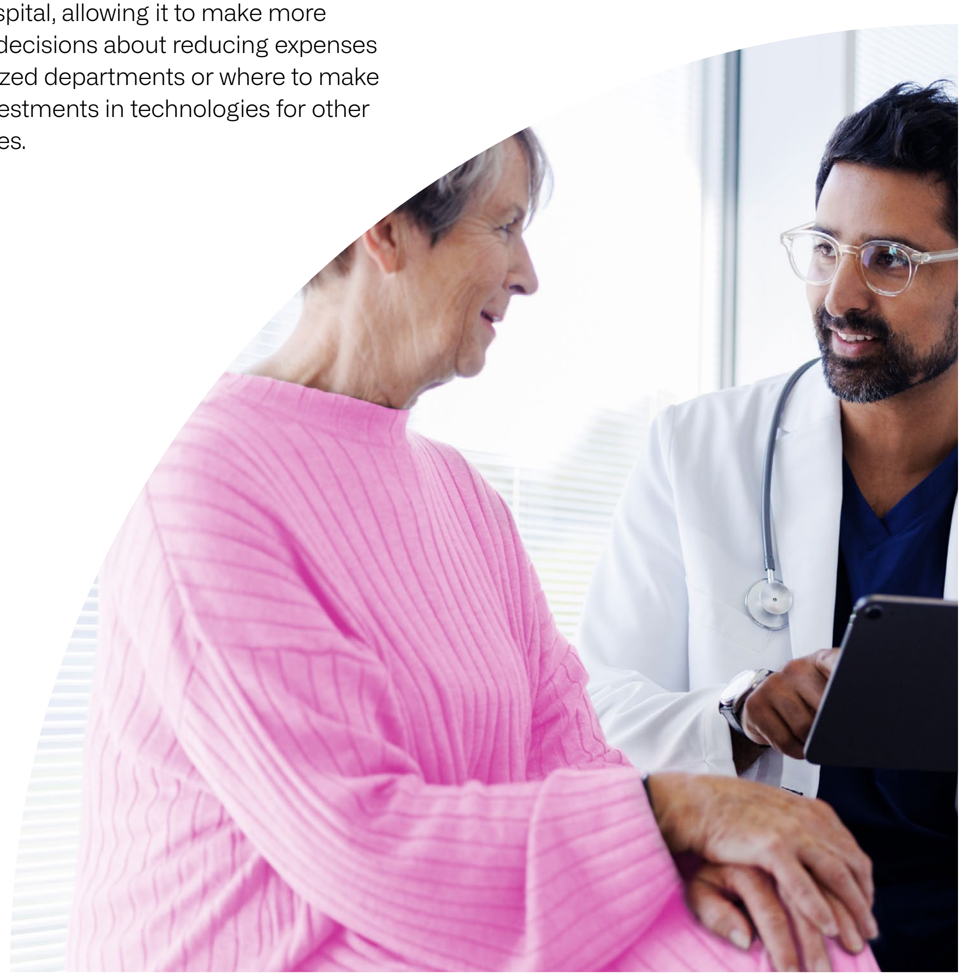
Remember our stat of the average radiologist reading 24,000 images per year? And that when a practice faces study volumes that break down to 30,000 studies per person, they may hire two radiologists to do the work of 1.25? Northern Light is able to eliminate that extra cost with Merge, by feeding those extra 6,000 studies to another radiologist remotely. This "fractional radiology" work is made possible by the Merge teleradiology solution, and has allowed Northern Light's customers to evade the costs of hiring full-time radiologists for what is essentially part-time work.

Consolidating tech stacks

As the industry continues seeing health systems acquire more hospitals, the tech stacks among those health systems are becoming increasingly burdened with disparate PACS systems. Northern Light uses Merge to consolidate their view of the images that are processed in these silos through a common worklist – providing a single source of truth for all studies to be read and exchanged on, helping to further maximize physician efficiency.

Identifying savings across the enterprise

Northern Light extracts data from hospitals to uncover long-term trends – disease prevalence among patients, overutilization in ERs – that may be driving up costs but have flown under the radar, and then share these data back with the hospital. These insights may not necessarily impact radiologists on a day-to-day level, but they do impact the bigger picture for the hospital, allowing it to make more informed decisions about reducing expenses in overutilized departments or where to make capital investments in technologies for other service lines.



Hospital stability through redundancies

One of the biggest benefits for Northern Light's practices is the new layer of redundancies that Merge solutions bring to the table. When a hospital that is not operating in the cloud sees its native PACS go down as a result of a cyberattack or unplanned downtime, then the whole hospital shuts down – which has disastrous effects for everything from patient care, to ambulance diversions, to the hospital's own reputation.

But when a hospital joins Northern Light, it's integrated with Merge. In the event the hospital's native PACS goes down, Merge starts receiving imaging data directly from the modality for uninterrupted reading. And in the rare event that the Merge system becomes temporarily unavailable, the physicians can seamlessly switch back to reading off the hospital's native PACS without any disruption to their work or the patient's care.

"One of our requirements for taking on a customer is that they allow us to fully integrate with their systems. If they don't want us to use Merge and will only accept our physicians to read off their native system, we'll part ways. We can't manage practices of this size only by reading off hospitals' systems. Reading off Merge is essential to how we run our practices."

Patrick Santore Jr.
Founding Partner and Chief Executive Officer,
Northern Light Medical Management

Bringing radiologists out of the dark

One final benefit of using the Merge Imaging Suite Solution for Teleradiology: more engaged physicians!

Radiologists often face the dim reality that their job requires sitting in dark rooms reading images all day. A winning aspect of Northern Light's formula is to not just encourage, but mandate that their radiologists become more forward-facing and engaged within their hospital community – going to tumor boards, participating in grand rounds and medical staff lounges, interacting with peers.

Most imaging organizations can't do this because if their radiologists aren't reading exams all day, then caseload backlogs become insurmountable. With Merge's support, physicians at Northern Light hospitals are able to physically walk away from their workstations because the slack gets picked up by other radiologists reading off the cloud in the meantime. The positive effect on their radiologist's professional satisfaction has not yet been studied, but anecdotes suggest this is a positive for both the on-site radiologist and the hospital they support.

"Merge allows our radiologists to become more engaged members of the medical staff. A multi-disciplinary approach to medicine like this is the gold standard and the key to success these days."

Patrick Santore Jr.
Founding Partner and Chief Executive Officer,
Northern Light Medical Management

Why Northern Light chose Merge

For Patrick Santore Jr., Founding Partner and Chief Executive Officer of Northern Light, the decision to use Merge to provide the teleradiology support Northern Light needed for its customers was a no-brainer rooted in history.

Before founding Northern Light, Patrick held key leadership positions in multiple radiology practices across the Country. It was as the Chief Operating Officer of another radiology practice that was using a Merge solution that his relationship with Merge began. Impressed with the product's workhorse capability, Patrick and his team integrated it into this provider's hospitals to support their teleradiology needs at the time. But after this company was sold, Patrick found himself at practices that either didn't provide teleradiology at all or were using other vendors whose solutions he found cumbersome, user unfriendly, and unwieldy to install or maintain.

So when the opportunity to establish Northern Light came along, in Patrick's mind, its technology partner had to be Merge. Between Merge's unified worklist, zero-footprint viewing capabilities, scalable vendor-neutral archive and the support and quality of delivery, the rest of the team was won over.

"As radiology practice owners, we support a lot of hospitals. The environment is constantly changing. The Merge team has supported our practice during all of these transitions. The team knows imaging and the product is a workhorse. What's most impressive about the Merge team is that they own what is theirs to own. It's easy to communicate with them. When there is a new opportunity to make things better, they raise it proactively. When there are challenges, we stand shoulder to shoulder to resolve them. We have their support and every time the Merge team has come through. Merge is excellent at communicating and operates with integrity. Do we trust the company we are doing business with? The answer is absolutely yes."

Patrick Santore Jr.
Founding Partner and Chief Executive Officer,
Northern Light Medical Management

Northern Light's 5-year plan: Being #1

In just two years since its founding, Northern Light has established a multi-state footprint across the country, added over 180 radiologist positions, and created a work-life environment that stands out amid industry-wide burnout and staffing shortage – all made possible with thoughtful consideration to a successful strategy and business model supported by a technology infrastructure to support it.

With the industry continuing to move toward more consolidations and acquisitions among hospitals, Northern Light Medical Management aims to cultivate its unique position as an independently operated, full-service managed radiology service provider. The Northern Light team has been successful inviting more radiologists into its stable environment. Their pitch to hospitals is an easy one: We don't want to be your outsourced vendor; we're looking to be a long-term strategic partner with you. As expensive and disruptive changes roil hospitals and practices around the country, it is reassuring that Northern Light offers partnership, with no risk of a "messy divorce."

The results speak for themselves.

Northern Light has doubled in size every year. By the end of 2025, they expect to be processing 2 million imaging studies in the year. By the end of 2026, they intend to reach 4 million. And by the end of 2028, Northern Light's goal is nothing less than to be the largest independent radiology practice in the United States, with a footprint in all 50 states. If there's one thing Patrick Santore Jr. has learned from his experience, having the right tech stack ensures that there are no limits to achieving this goal.

> "Using Merge as our teleradiology solution, there are no restrictions. We grow organically, not through acquisition, and as a result we work in multiple states; we want to be in all 50. That's what we're working towards, and I know Merge can help us get there in the next few years."

Patrick Santore Jr.
Founding Partner and Chief Executive Officer,
Northern Light Medical Management

About Northern Light

Northern Light is a highly trusted on-site and remote Professional Radiology Services provider for Health Systems of various sizes across the United States. Northern Light has been recognized for its commitment to excellence, reliability and innovation in diagnostic imaging services, as well as in its ability to successfully deploy full 24/7 coverage with limited notice. Northern Light presently performs over 1.4 million diagnostic imaging studies annually.

About Merge

Trusted by 6 of the 10 largest U.S. health systems, Merge by Merative empowers healthcare organizations with advanced medical imaging solutions to enhance workflows, optimize care delivery, and help improve patient outcomes. Merge's Imaging Suite, built on a cloud-native foundation, provides solutions for Vendor-Neutral Archive (VNA), PACS, Enterprise Image Viewing and Workflow Orchestration. Merge's portfolio also includes Best in KLAS Cardiology and Hemodynamic Monitoring, and Digital Pathology.

Learn more at merative.com/merge-imaging

About Merative

Merative provides data, analytics, and software for healthcare and government social services. With focused innovation and deep expertise, Merative works with providers, employers, health plans, governments, and life sciences companies to drive real progress. Merative helps clients orient information and insights around the people they serve to improve decision-making and performance.

Learn more at merative.com

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