Intelligence, Integrated:

How 3DR's AI Labs Delivers Insights without Workflow Disruption

3DR® LABS

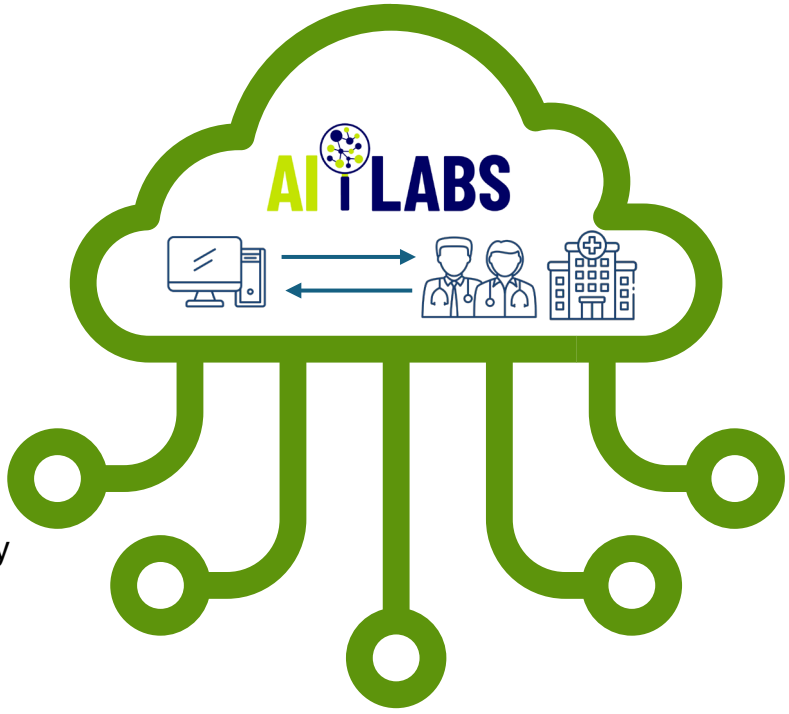
Executive Summary:

Artificial intelligence holds significant promise for medical imaging, yet many healthcare organizations struggle to move from experimentation to meaningful, scalable impact. Fragmented AI tools, workflow disruption, and concerns around trust and validation have limited adoption—particularly in high-acuity imaging departments.

3DR's AI Labs was created to bridge this gap through a managed gateway that combines high-end AI with the human intelligence of 300+ ARRT®-certified technologists*. Built on a foundation of clinical expertise, workflow integration, and operational scalability, this solution enables healthcare organizations to deploy clinical-grade AI without adding further complexity to existing imaging workflows. Rather than standalone point solutions, 3DR's AI Labs functions as an integrated extension of the imaging ecosystem – delivering consistent, reliable insights where and when clinicians need them.

The Integration Gap: Bridging the Divide Between AI Potential and Operational Reality

Imaging departments are under increasing pressure to do more with less. Rising study volumes, growing clinical complexity, and persistent staffing shortages are straining traditional workflows. At the same time, expectations for speed, consistency, and diagnostic confidence continue to rise.



Often, early AI deployments introduce new challenges. Standalone tools may require clinicians to leave their primary workflows, resulting in inefficiencies and low adoption. Variability in outputs across algorithms and vendors can erode trust, while limited scalability makes it difficult to extend AI benefits across departments or sites.

Without a cohesive strategy, AI risks becoming another layer of complexity rather than a true enabler of efficiency and quality.

From Algorithm to Action: Defining the Standards of Clinical-Grade AI

AI is no longer a theoretical concept in medical imaging – it is actively contributing to image analysis, measurement standardization, and decision support. When implemented effectively, AI can reduce variability, accelerate workflows, and enhance clinical confidence.

However, clinical-grade AI differs fundamentally from experimental or pilot solutions. To deliver real value, AI must be accurate, validated, and deeply integrated into existing workflows. It should support clinicians without replacing their judgment, providing insights that are transparent, consistent, and actionable.

Ultimately, the success of AI in imaging depends less on algorithm performance alone and more on how seamlessly it fits into daily clinical practice.

The Evolution of Expertise: 3DR's AI Labs

3DR's AI Labs was designed with a clear objective: to make AI practical, trustworthy, and impactful in real-world imaging environments. Built upon 3DR Labs' extensive clinical expertise, AI Labs extends 3DR's mission to deliver high-quality imaging services through intelligent automation and data-driven insights.

> "When a liver iron quantification study needed to be performed on a MR scanner at a different location, the 3DR Labs team confirmed protocol compatibility, coordinated and reviewed a test scan, and validated results within 24 hours through 3DR's AI Labs, combining an FDA-cleared AI algorithm with expert human intelligence. This approach allowed the patient to be scanned at the alternate location and a liver iron concentration report to be delivered the same day—without disruption to clinical workflows or patient care."
>
> -TeriAnn Stafford, Medical Imaging Manager, Carson Tahoe Health

AI Labs Architecture and Workflow Integration

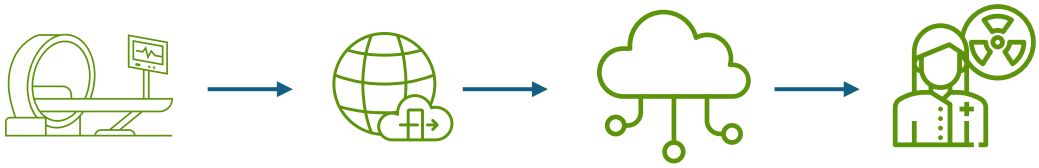
3DR's AI Labs is built on a secure, cloud-based architecture designed to deliver flexibility, scalability, and rapid innovation without adding on-premises infrastructure burden. By operating in the cloud, AI Labs enables organizations to maintain seamless integration within their existing imaging workflows.

AI-driven outputs are delivered directly into the clinician's natural workflow through established integrations with PACS, the EHR, and downstream systems. Clinicians do not need to access separate applications or manage additional technology layers, preserving efficiency and supporting consistent adoption.

This cloud-based model allows 3DR's AI Labs to scale effortlessly across sites, supporting enterprise-wide standardization. This architecture supports consistent outputs across readers and locations while reducing IT overhead, making it easier for imaging departments to adopt and sustain AI at scale.

Clinical Impact: Elevating Clinical Precision and Outcomes

In the traditional imaging model, the burden of data extraction and incidental detection falls entirely on the radiologist. 3DR's AI Labs transforms this workflow by integrating a "human-in-the-loop" AI strategy. By combining best-in-class FDA-cleared algorithms with technologist oversight, 3DR Labs ensures clinical insights are not just generated, but are actionable, consistent, and highly accurate.



Clinical Impact: Elevating Clinical Precision and Outcomes

Opportunistic Screening: Finding the "Hidden" Patient

Bone Health & Osteoporosis: Utilizing algorithms like HeartLung.AI's **AutoBMD™**, the lab can extract DEXA-equivalent bone mineral density from routine Chest CTs. This identifies at-risk patients for osteoporosis who otherwise may not have received a screening, facilitating early intervention and fracture prevention.

Cardiac Risk Assessment: Using tools such as HeartLung.AI's **AutoChamber™**, 3DR automatically detects asymptomatic cardiac chamber enlargement. Identifying these subtle markers early allows for proactive management of heart failure and structural heart disease.

HeartLung.AI

Neurovascular Response: Minutes Later

In stroke care, the phrase "time is brain" is the clinical gold standard. 3DR's AI Labs accelerates the stroke workflow through automated analysis (e.g., via partners like Brainomix).

Faster Triage: AI identifies Large Vessel Occlusions (LVO) and quantifies the ischemic core versus the penumbra in minutes.

Standardized Quality: By delivering these results 24/7/365, 3DR ensures that every patient – regardless of whether they arrive at 2:00 PM or 2:00 AM – receives the same expert-level diagnostic support required for lifesaving thrombectomy decisions.

BRAINOMIX

Clinical Impact: Elevating Clinical Precision and Outcomes

Quantitative Accuracy in Chronic Disease

Neurological Monitoring: Using ico*brain*, automated brain volume measurements are provided to track the progression of Multiple Sclerosis (MS) or Dementia.

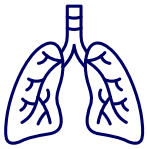
icometrix

Liver Health: Quantitative tools like FerriSmart® enable non-invasive liver iron quantification, reducing the clinical need for painful and risky biopsies.

FerriSmart®

Reducing Diagnostic Fatigue and Variability

Radiologist burnout is a growing clinical risk. 3DR's AI Labs mitigates this by handling the heavy lifting of image processing.



Vessel Suppression: Tools like ClearRead CT® suppress vessels and noise in lung images, significantly increasing the detection rate of small nodules while reducing the cognitive load on the reading physician.

Riverain TECHNOLOGIES

Clinical Consistency: Because 3DR's technologists validate the AI output, the radiologist receives a "clinically validated" report that has been double-checked for quality, reducing inter-rater variability across the health system

The ROI of Agility: How 3DR's AI Labs Outperforms Traditional Subscription Models

Beyond the clinical benefits, 3DR's AI Labs delivers significant operational value by eliminating the heavy upfront burden of traditional AI vendors. While competitors require an average initial investment of $60,000 (year 0) for subscriptions and maintenance, 3DR offers a $0 entry point. Over three years, this performance-based pricing saves organizations over $207,700, transforming a fixed capital expense into a scalable operational advantage.

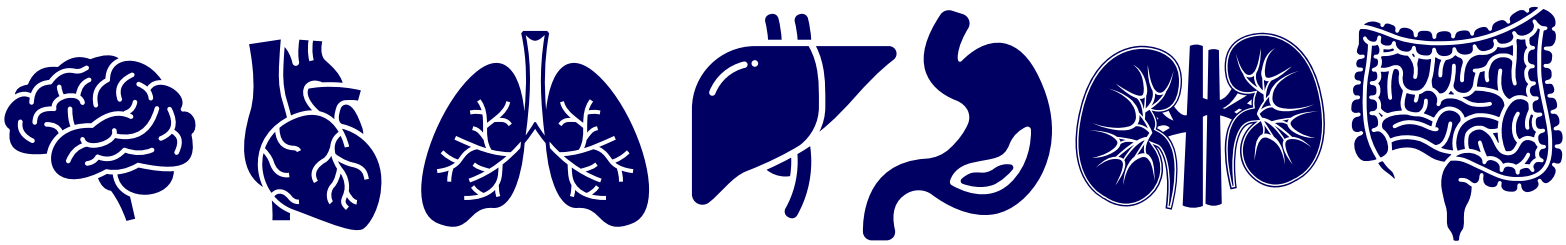
Compared to traditional AI companies that charge escalating flat fees for software and upgrades – totaling $300,000 over three years – 3DR's model reduces the expenditure to just $92,300. This enables hospitals to access multiple AI solutions simultaneously without the financial risk of high fixed subscription fees.

AI Company

Hospital Up Front Costs	Costs
Set-up Implementation Fee	$25,000
Platform Access Fee	$49,050
Algorithm Implementation Fee	$2,500
VM/Hardware-Cloud Connection	$50,000
Software License	$10,000
Additional IT Expense	$10,000
Initial Costs Total	**$146,500**

3DR's AI Labs

Upfront Costs
$0



The ROI of Agility: How 3DR's AI Labs Outperforms Traditional Subscription Models

AI Company

Fee	Year 0	Year 1	Year 2	Year 3	Totals
Subscription per algorithm	$40,000	$45,000	$50,000	$55,000	$190,000
Software maintenance	$5,000	$7,500	$10,000	$12,500	$35,000
Software upgrade	$15,000	$17,500	$20,000	$22,500	$75,000
Annual Total Costs	$60,000	$70,000	$80,000	$90,000	**$300,000**

3DR's AI Labs

Fee	Year 0	Year 1	Year 2	Year 3	Totals
AI Solution #1	$30	$18,000	$18,000	$24,000	$60,000
AI Solution #2	$20	$4,000	$9,000	$11,800	$24,800
AI Solution #3	$10	$2,000	$2,500	$3,000	$7,500
Annual Total Costs	-	$24,000	$29,500	$38,800	**$92,300**

Validation, Quality, and Governance

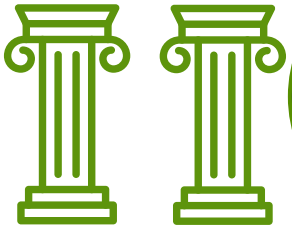
3DR's AI Labs operates under a formal AI Governance Framework designed to ensure that every model deployed in a clinical workflow is safe, equitable, and effective. We reject "black-box" implementation in favor of a Human-in-the-Loop (HITL) philosophy, where human intelligence governs the entire AI lifecycle.

The Five Pillars of Trust

Centralized Accountability

Oversight

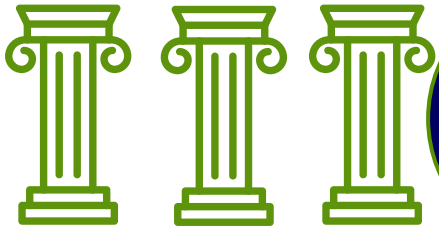
A multidisciplinary AI governance group providing continuous human oversight and risk stratification.



Clinical Readiness

Evaluation

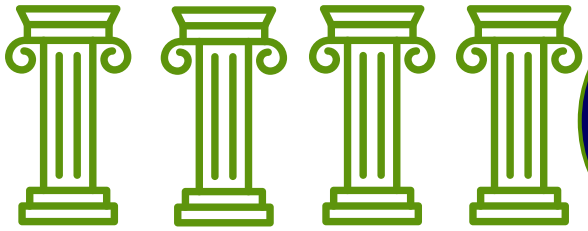
Rigorous local acceptance testing and bias review to ensure models perform on real-world data, not just vendor claims.



Sustained Accuracy

Monitoring

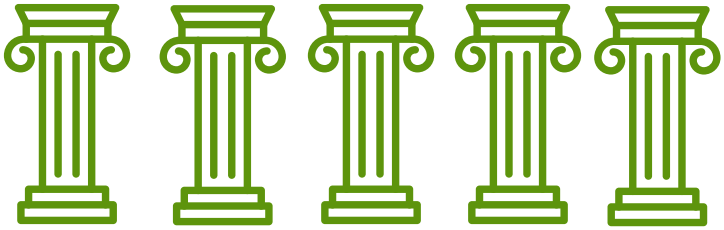
Active performance management to detect data drift and maintain model fidelity over time.



Human-AI Intelligence

Integration

Prioritizing clinician overrides and comprehensive instructions for use to support, not replace, clinical judgment.



Security & Lifecycle

Compliance

Mandatory cybersecurity checkpoints and formal sunsetting protocols for legacy models.

To ensure appropriate rigor, 3DR's AI Labs categorizes all AI tools into a three-tier risk framework:

Tier 1: Workflow & Informational Tools

Tier 2: Clinical Decision Support (Non-diagnostic).

Tier 3: Diagnostic & High-Impact Clinical Models.

Commitment to Equity

We actively audit for performance variation across patient populations. By documenting subgroup performance and mitigating health disparities, 3DR's AI Labs ensures that AI remains a tool for equitable care.

The 3DR Mandate: AI is only as effective as the humans who oversee it. Our framework ensures that while technology evolves, human intelligence remains the final authority.

Implementation and Adoption Strategy

I. Readiness: Gateway Setup
Stand up VM to deploy the vendor-agnostic gateway.

II. Integration: Workflow Audit
Managing DICOM routing and identifying "bottleneck" protocols.

III. Validation: Pilot Launch
Initial deployment and testing of a specific clinical partner (e.g., BotImage for Prostate).

IV. Scale: Automated Expansion
Full-loop automaton using Strings to monitor and optimize enterprise-wide imaging tasks.

Intelligent Imaging: The Future of 3DR's AI Labs

AI adoption in medical imaging does not need to be complex or disruptive. With the right strategy and infrastructure, AI can deliver measurable clinical and operational benefits today while laying the groundwork for future innovation.

3DR's AI Labs provides a practical, scalable approach to operationalizing AI – enabling organizations to improve consistency, efficiency, and confidence across their workflows. 3DR continues to invest in the expansion of its AI Labs, with a focus on new algorithms and broader clinical applications. Ongoing innovation is guided by real-world clinical needs and feedback from imaging professionals.

As imaging demands continue to evolve, 3DR's AI Labs is positioned to support organizations with scalable, clinician-centered AI solutions that adapt over time.

About 3DR Labs

3DR Labs transforms healthcare operations through a unified ecosystem of advanced medical imaging and intelligent automation. By integrating expert radiologic clinical services with a vendor-agnostic AI gateway and predictive workflow orchestration, 3DR harmonizes complex imaging and workflow analysis with human expertise. This end-to-end innovation empowers providers to augment clinical expertise, automate workflows, and accelerate diagnostic interpretation. The result is a more efficient imaging enterprise that optimizes performance and reduces costs—ultimately driving faster, more efficient care delivery and improved patient outcomes across the entire continuum of care.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