CYDARMEDICAL

Cydar Maps User Case Study:

How Cydar Maps improves clinical, economic and strategic institutional positioning—creating a self-sustaining growth cycle for advanced vascular care.

The Challenge:

Delivering complex image guided endovascular aortic care means overcoming many barriers. Modern endovascular, aortic, and visceral interventions demand dynamic, three-dimensional visualization. Traditional 2-D fluoroscopic guidance often requires multiple DSA runs or cone-beam CTs, increasing radiation and contrast exposure. Hospitals without advanced image guidance frequently transfer challenging cases to tertiary centers, resulting in lost case volume and associated revenue, fragmented continuity of care, and reduced program competitiveness.

Other common challenges are staff burning out, finding productivity improvements, and managing the rising cost of delivering care.

Many new software technologies are becoming available to support image guided procedures, but it is challenging for hospitals to onboard multiple technologies and ensure they work seamlessly together and with existing workflows to deliver the value promised.

To overcome these challenges health systems are implementing Cydar's AI-enabled integrated end-to-end software solution, comprising: pre-operative planning tools, real time intra-operative deformable overlay and guidance and automated post-operative clinical assessment tools.

The Solution:

A board-certified Vascular Surgeon at a major US Heart and Vascular Care Center chose to implement Cydar Maps in a hybrid operating room for informed decision making before, during, and after surgery. This AI-driven solution supports the full patient journey—from preoperative disease monitoring and procedure planning to real-time intraoperative navigation and automated post-operative patient surveillance—allowing hospitals to perform complex vascular interventions more safely and efficiently using existing infrastructure. Cydar Maps is a system-agnostic imaging solution, making implementation an ease at a large, multi-hospital academic health system.

The Cydar solution is vendor-neutral and leverages existing imaging systems, avoiding major capital investment. Cloud collaboration features enable remote, connected care across referring physicians, satellite hospitals, and partner institutions. This includes simple, compliant CT image sharing between sites, shared preparation of a pre-operative plan, real-time intra-operative screen sharing, and post-operative analysis.

The Results:

The Cydar Maps implementation and usage by this surgical team resulted in over 50% reduction in radiation exposure, 30% shorter procedure times, and 22 complex endovascular cases retained locally that otherwise would have been referred out of state, outside of their network. This generated a significant increase in institutional revenue in the first year of subscription to Cydar Maps, delivering a sizable return on investment (ROI) with a very short payback period, while improving efficiency, safety and supporting patient continuity of care.

Metric:	Pre-Implementation:	Post-Implementation:	% Change:
Mean Radiation (DAP/AK)	Baseline	↓ > 50 %	-50%
Mean Procedure Duration	Baseline	↓ > 30 %	-30%
Contrast Volume	Baseline	↓ ~ 20 %	-20%
Complex Cases Retained Locally	Minimal	22	-
Surgeons Performing Complex Cases	1-2	5	+150%

In addition to the above, the Cydar Maps automated aortic volume assessment enables consistency and automation of the assessment of patient follow up CT scans, saving the team time and supporting productivity improvements post-operatively.

Summary:

The Cydar Maps technology proved both clinically and financially compelling, demonstrating that intelligent imaging and a digital patient pathway can simultaneously improve safety, efficiency, and institutional growth without additional capital equipment. The platform enhanced both economic and strategic positioning—creating a self-sustaining growth cycle for advanced vascular care.

Hospitals seeking to localize complex vascular care can expect proportional gains where advanced cases are currently referred externally.

About Cydar:

For healthcare providers and surgical teams seeking to improve accuracy and outcomes, Cydar Medical delivers the world's leading AI-driven, cloud-based surgical intelligence solution, Cydar Maps. Unlike simple imaging fusion, Cydar integrates real-time surgical data and enables collaboration between clinical teams to achieve better results for patients, hospitals, and health systems.

The Cydar platform combines:

- ↗ Cydar Connect: HIPAA compliant collaboration
- ↗ Plan: Preoperative Planning
- ↗ Guide: Intraoperative Navigation
- ↗ Analyze: Post-operative analysis

To learn more about how Cydar Maps can standardize workflows, while achieving ROI and increased safety:

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