How Cancer Center Is Unifying Healthcare With A Cloud VNA

Presented by Dicom Systems and Google Cloud

The cancer center had set out to improve patient access by expanding their presence across the U.S., what they discovered was a new way to change the entire healthcare experience for their patients.

With 1 in 3 patients reporting pain after the treatment, the cancer center has been relentless in designing an integrated healthcare ecosystem that supports the patient's overall quality of life. Oncology rehabilitation, nutrition therapy, and acupuncture are just a sample of services at the cancer center that supports the patient physically and emotionally. The "all under one roof" approach requires

Up to **80%** of adults living with cancer are malnourished.

65% of patients take a natural supplement during treatment.

1 in 3 cancer patients continues to experience pain after treatment.

At diagnosis, **1 in 2** patients has some form of nutritional deficit.

At least **7 in 10** cancer patients undergoing treatment experience fatigue.

Fewer than **1 in 5** patients receives spiritual support from a doctor.

overcoming challenges around care delivery, data access, and a treatment schedule free of delays. When gaps in care could give the cancer time to grow, continuity is essential. In addition to owning and operating five hospitals, the global cancer experts have recently extended their care delivery through a growing network of the cancer center outpatient centers, affiliated hospitals and physician practices--a move that would cut down or eliminate travel time altogether for patients who hail from all 50 states, traveling as far as over 200 miles each way.

The challenge now was to connect these new centers and care networks, all with disparate and legacy systems, to the cancer center's central IT hub without reinventing the wheel. For this large undertaking, they needed a powerful infrastructure that was secure and scalable. the cancer center chose Google Cloud which would deliver the Dicom Systems Unifier platform, a high-performing integration engine that would serve as the "data lifeline" to the expanded care sites by virtually extending the cancer center's core IT infrastructure.

This is the first time in the cancer center's 30 years that they have opened the door to being a cloud-first organization. The Google Cloud cluster will be the traffic controller to route the imaging traffic to the cancer center's expanding imaging groups. The Unifier Archive, as a technology, will be the focal point of an onslaught of new clinical workflows, placing the cloud central in everyday healthcare. With a robust and secure framework in place, data travels wherever the patient goes on their journey to health.

The Cancer Center's Strategy
- Break silos and integrate all systems: Enterprise Imaging applications, EHR, LIS (Laboratory Information System), and Radiation Treatment Archives using Dicom Systems Unifier as the integration and distribution engine to ingest and normalize data, process workflows as well as archive ancillary health data.
- Shore-up data outliers: Previously, treatment images would automatically go to the radiation treatment archive where it was not accessible
- Deploy a cloud VNA that would future-proof legacy systems and provide virtual access to clinical data anywhere
- Build data lake with distinct data elements for future research

Patient Benefits
- Eliminated duplicate/repeat studies due to data silos and lack of integration
- Reduced double radiation exposure to patients already receiving chemotherapy or radiation treatment
- Minimized wait time associated with sending patient charts and reviews
- Reduced incidence of interrupted treatment schedules
- Empowers patients to take control of their health data through a web-based EHR portal that they can access directly and enable access to providers.
- Full visibility into personal health data--patients receive the same access as providers

Provider Benefits
- 360-view of patient health history including all medical charts, imaging, and lab data
- Immediate access with web browser through simple sign-on
- All images are presented in diagnostic quality

Results
- Better patient care
- Resolves the data silo holdout--valuable treatment images are now integrated
- Extradite care by eliminating requests for patient files
- Builds a culture that supports real-time care, every time
- Unifies all healthcare regardless of medical specialty and original data format
- Clean, normalized data supports the cancer center in precision medicine, research and discovery initiatives

"A unified IT infrastructure allows us to work collaboratively across the enterprise to deliver the same world-class care and commitment we deliver at our hospitals. When it comes to protecting patient data, we make zero compromises. The Google Cloud Platform provides significant advantages in scaling over on-premises systems while maintaining security. Our move to the cloud helps us reach more of our patients where they live." - Director of Diagnostic Services