





UNITED AGAINST CANCER

Olivia Newton-John Cancer Research Institute gears up for global research collaboration

Data has become essential in modern cancer research, driving progress in prevention, diagnosis, treatment, and understanding of the disease. The <u>Olivia Newton-John Cancer Research Institute</u> has transformed its approach to data storage to empower researchers, as it seeks to accelerate time to discovery.



Customer: Olivia Newton-John Cancer

Research Institute

Industry: Life Sciences / Healthcare

Country: Australia

Discovering and developing breakthrough cancer therapies

Cancer survival rates have made significant strides in recent years. More people are surviving a cancer diagnosis, those receiving treatment experience a better quality of life, and there is more effective monitoring of long-term conditions. In many countries, overall survival rates have doubled in the last 10 years.

However, some cancers are incurable or remain difficult to detect and treat, and significant inequities in cancer outcomes persist.

What is undeniable is that cancer research is now a data-dependent endeavor. Genomics, molecular profiling, and the tracking of genetic biomarkers all require vast datasets and high performance computing. International research teams are often working together on the same challenges. The next generation of breakthroughs will rely heavily on advances made in the data center alongside lab research.

"We know personalized diagnostics are the future," says Dr. Christine De Nardo, Chief Operating Officer, Olivia Newton-John Cancer Research Institute (ONJCRI). "Advances in technology allow us to genuinely innovate and push the boundaries of how we perform our research."

In Australia, ONJCRI is a leader in advancing cancer research. It has more than 140 research projects in progress. In 2024, ONJCRI lead 13 investigator-initiated clinical trials that enrolled 115 participants from 20 sites around Australia and New Zealand.

If it is to continue to make progress, ONJCRI must attract the best research talent and provide the best conditions for their work.

"As Chief Operating Officer, my role is to create the efficiencies and enablers that allow our teams to focus on advancing cancer research," says De Nardo.

Today, national and international collaboration is key to bringing together the brightest minds working on this common goal of finding more effective cancer treatments.

"Our continued success will require managing complex, collaborative research programs and establishing strong partnerships within the industry to secure the support required to drive translational research endeavors," says De Nardo.

"Advances in technology allow us to genuinely innovate and push the boundaries of cancer research."

- Dr. Christine De Nardo, Chief Operating Officer, Olivia Newton-John Cancer Research Institute

Vision

Facilitate the use of emerging technologies, new tools, and international collaboration to uncover new breakthroughs in cancer diagnosis and treatment

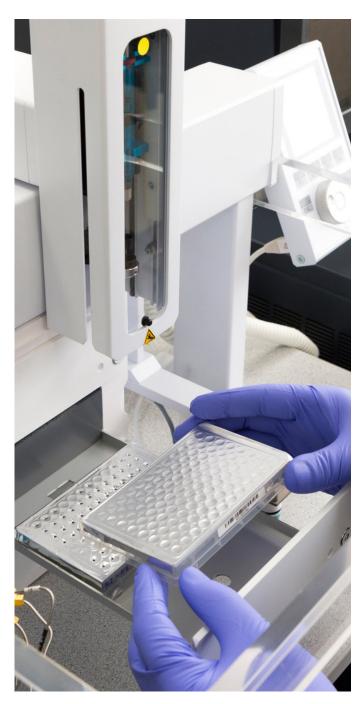
Strategy

Simplify access to and provisioning of flexible data storage, streamline costs, and accelerate time to discovery

Outcomes

- Accelerates research projects through simplified access to data storage
- Enables researcher access to new tools, applications, and ways of working
- Enhances international collaboration capabilities with data storage headroom to accommodate future growth





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- Peter Lawry, IT Manager, Olivia Newton-John Cancer Research Institute

Handing researchers scalable and secure resources

ONJCRI is transforming the way its research teams store, share, and access data. The institute wants to make data management a utility, where researchers can self-serve the resources they need.

"Our ultimate goal is to create a research platform that is not confined to four walls," says Peter Lawry, IT Manager at ONJCRI. "We want our researchers to be able to plug into global, scalable, and secure resources."

The new approach is in response to rapid rises in data use. In 2014, the institute housed around 14 TB of data. Lawry says. Today, new tools and collaborative ways of working mean ONJCRI holds around 250 TB with one of the lab groups now expecting to generate 100 TB of new data on an annual basis.

Accommodating such increases would be near impossible with the previous on-premises storage solution, Lawry says. As a nonprofit, this approach would be economically out of reach.

"Collaboration and partnership are essential," says Lawry. "We have to take a hybrid approach to data storage, so we can leverage capabilities outside our four walls."

From its base in Melbourne, ONJCRI had around 60 international researchers from 25 countries working to deliver high-impact translational research through 2024. The institute was involved in more than 200 collaborations across 16 countries. Much of this work required the movement of large datasets, remote access, and real-time decision-making.

The hybrid approach to data storage allows work to continue uninterrupted, expanding collaboration options and discovering opportunities to access advanced capabilities in the cloud. It helps eliminate single points of failure and further mitigates the risk of data loss through improved replication, archive, and backup. Lawry says this approach should support ONJCRI through the next five years of growth and simplify adding capacity.

"We know we can't continue to operate the same way we always have," he explains. "Our mindset was: if we want to advance, we have to provide new capabilities."



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- Peter Lawry, IT Manager, Olivia Newton-John Cancer Research Institute

Dynamic storage to power global collaboration

For ONJCRI, breakthroughs in cancer research will be built on HPE Alletra Storage MP B10000, powered by AMD EPYC™ Embedded processors and the HPE Alletra Storage Server 4000 with Qumulo, providing local access speed to remote files by intelligently caching data at edge locations and helping eliminate the need for full copies and constant replication across regions. The use of HPE MSA 2062 Storage and HPE StoreEver MSL6480 Tape Library supports the efficient storage of older data.

HPE Alletra Storage MP B10000 simplifies on-premises data storage with the speed and agility of an Al-driven cloud experience. Users can experience significant operational time savings with intelligent, self-service provisioning. The unique disaggregated architecture of B10000 enables ONJCRI to scale performance and capacity independently for greater flexibility and lower costs. It can meet stringent SLAs with mission-critical storage that delivers 100% data availability guaranteed. In addition, the AMD EPYC Embedded processors combine speed and efficiency, helping reduce both overall system energy costs and total cost of ownership.

"It reduces the overheads associated with managing the IT infrastructure. We're no longer juggling data between different storage silos," says Lawry. "It gives us the brain space to look at more important strategic activities."

The move to HPE Alletra Storage MP B10000 and the HPE Alletra Storage Server 4000 with Qumulo was undertaken alongside HPE Migration Services. The migration involved a significant amount of data, particularly medical imaging files, which consumed a lot of storage space. Hewlett Packard Enterprise used Miria temporary licenses to facilitate the data transfer. These licenses allow for a month-long migration period once activated. The engagement with Advisory and Professional Services meant the transition was completed with as little downtime as possible and no interruption to critical research work.

HPE Alletra Storage MP B10000 with the HPE Alletra Storage Server 4000 running Qumulo software establishes flexible storage capacity. In effect, it enables ONJCRI to step back from storage capacity planning. Previously, if a researcher wanted to start a project involving heavy data sequencing, Lawry would need to make estimates about how much data needed provisioning. In turn, this would mean moving data between silos. Today, ONJCRI has the appropriate data headroom in place which can then be provisioned to researchers in minutes.

Lawry and his team worked closely with HPE Lifecycle Services to create the new storage environment. This early design work, he says, was essential in creating a platform that the organization could use.



"The beauty of the new storage environment is that you don't need to be a rocket scientist to manage the platform or provision storage. The platform simply works. Our focus can be service, not operations."

Rethinking storage enables ONJCRI to reimagine what might be possible, Lawry states. It has shifted the conversation from fixing capacity planning to finding new ways of working. "This type of storage will be the foundation of new research pathways. We know Al will open new possibilities, and that requires a more scalable storage infrastructure.

"Our storage platform is ready. We're ready."

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Solution

Hardware

- HPE Alletra Storage Server 4000 with Qumulo
- HPE Alletra Storage MP B10000 powered by AMD EPYC Embedded processors
- HPE MSA 2062 Storage
- HPE StoreEver MSL6480 Tape Library

Services

- Advisory and Professional Services
- HPE Lifecycle Services

