Private 5G Network from AT&T Now Connecting Researchers and Patients at Lawrence J. Ellison Institute for Transformative Medicine of USC

State-of-the-Art Medical Facility Among the First in the Country to Use 5G to Advance Cancer Research

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What's the news? A new private 5G network from AT&T* is helping to revolutionize the way patients and researchers connect at the Lawrence J. Ellison Institute for Transformative Medicine of USC. The on-site 5G network is providing ultra-fast connectivity for patient-centered cancer research, treatment, and wellness education. The Ellison Institute is among the first medical facilities in the country using 5G to help advance cancer research.

Part of the mission of the Ellison Institute is to use technology to create an immersive, first-of-its-kind experience for patients, visitors, clinicians, and students. 5G connectivity is at the core of that goal. The addition of AT&T Multi-access Edge computing (MEC) and ultra-fast 5G+ millimeter wave service to the private 5G network will help the Institute create new outcomes and capabilities at its "smart" facility. For example, the Institute will be able to capture and analyze data faster and more securely at its point of origin rather than the data having to travel to a remote data center for analysis.

Why is this important? The Ellison Institute has created a model in cancer research and treatment where patients, researchers, doctors, and scientists can interact in a community environment. Integrating these cutting-edge technologies with the building is helping reimagine the connectivity within healthcare and enhancing the patient experience within the clinic.

- Data collected on-site via the private 5G network will allow doctors to make decisions on the spot due to ultra-low latency. Add in the use of Internet of Things (IoT) technologies, and clinicians can create a daily almost instantaneous feedback loop that will help them improve what they do.

- The higher speeds and bandwidth provided by the private 5G network will help advance research at the clinic, such as the use of 3D tumor imaging, and increase the privacy and security of the data since it is being analyzed locally. One example is 3D tumor imaging.

- Digital bracelets given to patients upon their arrival will map their journey through the 80,000 square-foot, state-of-the-art facility, which includes a demo kitchen, History of Medicine Gallery, and museum-quality artwork. Appointment alerts can be sent to patients anywhere in the facility.

- Wireless connected screens allow researchers to send large data files from one lab to another.

- With patients, researchers and staff all wearing connected sensors, the Institute will be able to track how much patient interaction is taking place. For instance, is a scientist stopping at a connected screen to explain to a patient more about research being done? Or, is a doctor interacting with the patient in the Institute's gallery? Being able almost instantly to study the research and care process can lead to better collaboration and outcomes.

- Reliable wireless communications – provided through a private 5G network using low-band spectrum – allows for wall-to-wall coverage inside the Ellison Institute with enough capacity for thousands of users.

- Immersive, personalized, and engaging experiences for patients and visitors can be delivered through the combination of these and other technologies. For example, the type of music and lighting used during a patient's visit can be customized to reflect the patient's preference.

What's next? Our MEC technology is scheduled to go live at the Institute in June 2021. Rollout of our 5G+ millimeter wave network at the Institute is scheduled to start later in the summer.

What are people saying?

"Data is at the core of everything we do at the Ellison Institute, and our work with AT&T enables us to capture and employ that data in meaningful ways that benefits science and our patients," said **Dr. David Agus, CEO, Ellison Institute for Transformative Medicine of USC**. "This collaboration is developing programs to use 5G to collect data from patients, healthcare providers and scientists, as well as using the Internet of Things to effectively manage our clinic and labs. It's an exciting step forward."

"5G is going to be a game-changer for the healthcare industry," said **Anne Chow, CEO, AT&T Business**. "One lesson from this pandemic is there is a strong need to be able to treat

and monitor patients remotely. 5G's fast speeds and lower latency can help expand the use of telemedicine. And it can help deliver the near real-time data healthcare providers need to make quick decisions. The future of healthcare is about delivering a personalized patient experience and improving outcomes. 5G is already helping to make that a reality."

Where can I find more information?

Go here to learn more about AT&T healthcare solutions or visit the Ellison Institute here.

In addition, Ellison Institute CEO Dr. David Agus and AT&T Business CEO Anne Chow will discuss transforming healthcare through 5G at *The Wall Street Journal's* Future of Everything Festival on Thursday, May 13 at 2 pm EDT.

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