



INNOVATORS

HOAG INNOVATORS

**Philanthropic Leaders Catalyzing
Innovation at Hoag**

2021

“Hoag Innovators is forward-thinking and contributing to a culture of innovation at Hoag, a way of thinking that guides all we do. Their giving is both generous and strategic, positioning our most talented physicians and clinical leaders to nimbly respond to opportunities, test novel and creative approaches to complex problems and, ultimately, transform the health care experience for patients in our community and beyond.”

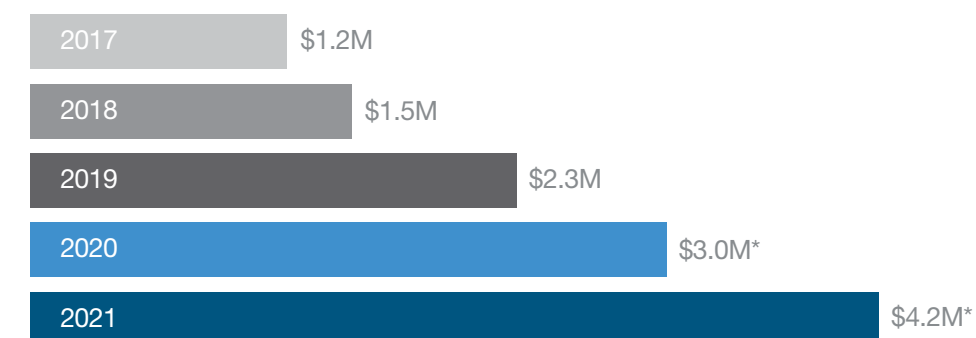
Robert T. Braithwaite
President and Chief Executive Officer, Hoag



Impact

Now in its second year of philanthropic investment, Hoag Innovators continues to make a significant impact on Hoag and its innovation strategy. Hoag Innovators have collectively invested in groundbreaking projects that represent extraordinary gains in health care across a wide range of medical specialties. These advances simply would not be possible without the Hoag Innovators' philanthropy. As a result, Hoag is better equipped to provide world-class care to our community and remain best in class in the region.

Total Giving by Year



Giving by Fund

Hoag Innovators Fund



Hoag Innovators Endowment Fund



*Totals include funds provided by the Lori and Mike Gray matching gift challenge.

Dear Hoag Innovators,

Thank you for your support and participation in Hoag Innovators. We are excited to announce that since our inception, 30 families have joined Hoag Innovators, and interest in the community is increasing every day. The growth and accomplishments our investments have helped to facilitate at Hoag over this past year are incredibly exciting, and we hope you will enjoy learning more about our impact, which is detailed in this report.

With the challenges and opportunities facing the health care industry today, it is the organizations that prioritize innovation that will thrive in the long term. Hoag's commitment to innovation is second to none, and the more resources leadership can apply to its innovation strategy, the more Hoag will achieve. Hoag Innovators was founded to leverage the power of collective giving to advance innovation across the organization and ensure Hoag's ability to continue providing world-class health care right here in Orange County.

To ensure Hoag's ability to remain a leader in health care innovation long into the future, we recently established the Hoag Innovators Endowment Fund. We are especially grateful to visionary donors Lori and Mike Gray for providing a matching gift of up to \$4,000,000 to inspire additional support to the Hoag Innovators Endowment Fund and help propel the fund toward our goal of establishing an endowment valued at a minimum of \$10,000,000.

It is an honor to collaborate with you in our shared goal of elevating Hoag. Thank you again for your commitment to Hoag and our community.

Sincerely,

Robert and Kitty Brunswick
Founding Hoag Innovators

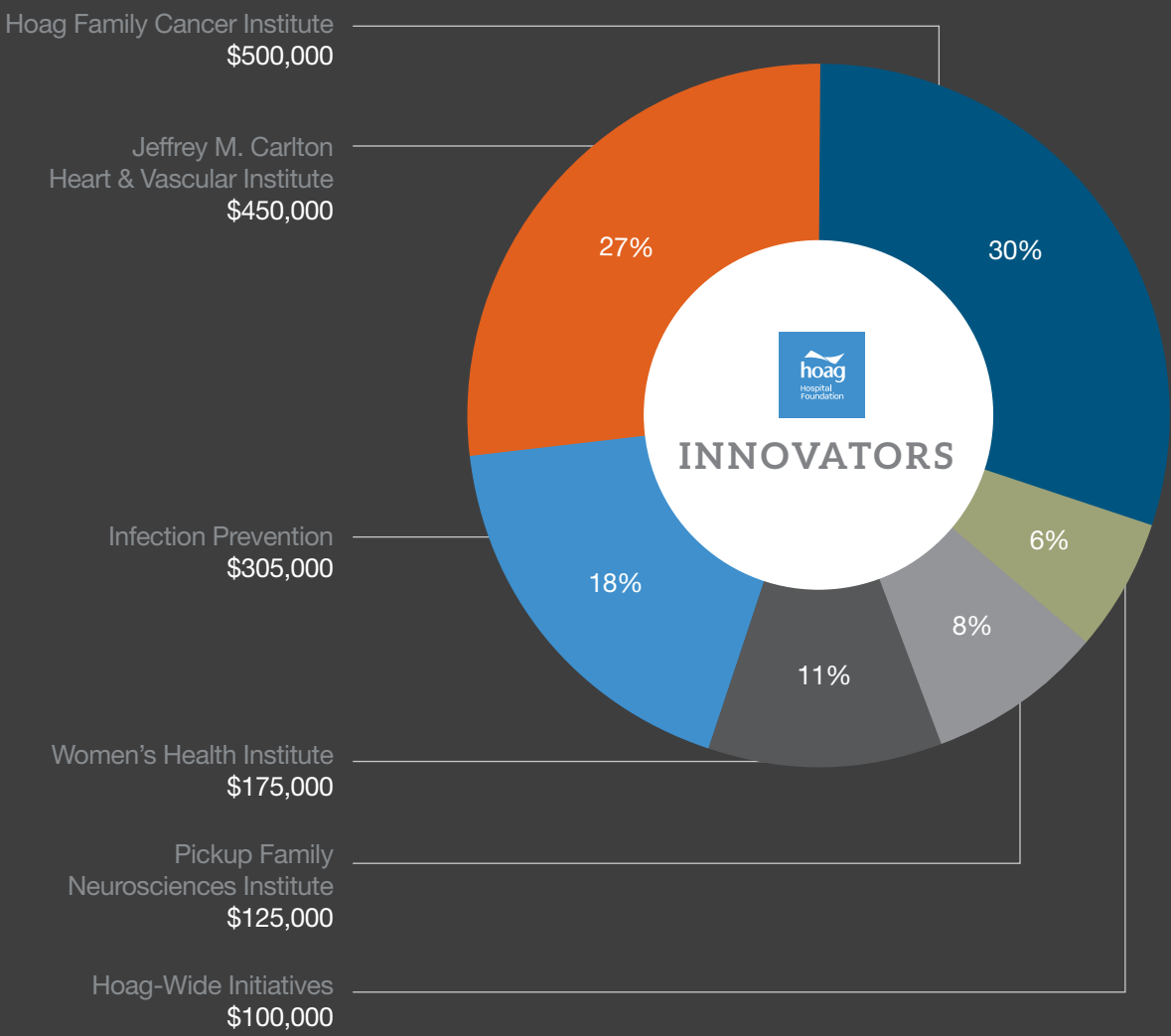


Fund Allocation

Hoag Family Cancer Institute		Pancreatic Cancer Immunotherapy Clinical Trial	\$500,000
Jeffrey M. Carlton Heart & Vascular Institute		Marfan Syndrome & Related Conditions Program	\$250,000
		KODEX-EPD 3D Cardiac Imaging	\$200,000
Infection Prevention		Xenex Germ-Zapping™ Robots (COVID-19 Support)	\$180,000
		LEAF Device System Implementation in Critical Care Units	\$125,000
Women's Health Institute		Pacify Application Pilot Program	\$175,000
Pickup Family Neurosciences Institute		Invenio NIO Laser Imaging	\$125,000
Hoag-Wide Initiatives		Transitional Care Pilot	\$100,000

TOTAL: \$1,655,000

Distribution of Funds Across Hoag



Update on Projects Funded



People & Programs

Pancreatic Cancer Immunotherapy Clinical Trial

Revolutionizing Pancreatic Cancer Treatment

INVESTMENT DATE:

FALL 2020

INVESTMENT AMOUNT:

\$500,000

THE CHALLENGE:

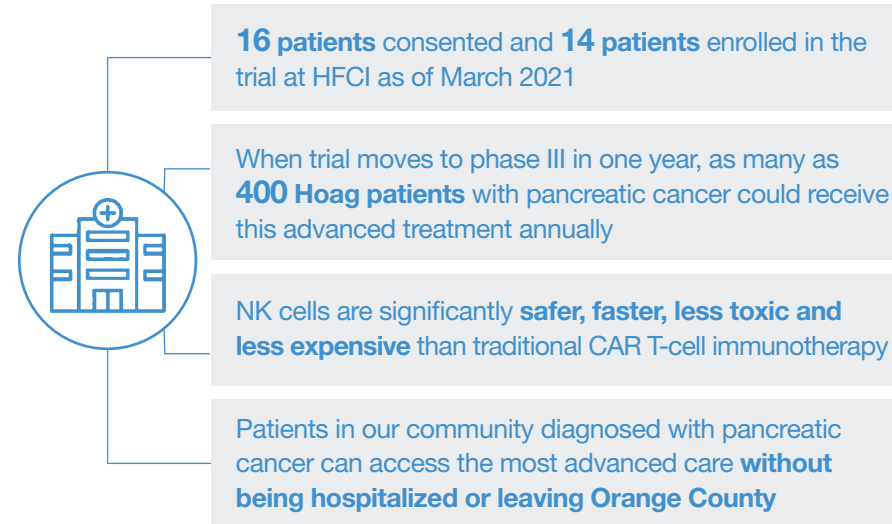
Considered one of the deadliest cancers, pancreatic cancer is one of the few cancers for which there has not been substantial treatment advancements. Currently, only 9% of individuals diagnosed survive for five years or longer. The median survival prognosis is five to eight months. Pancreatic cancer is estimated to become the second leading cause of cancer death by 2030. Effective therapy for pancreatic cancer is needed.

THE INNOVATION:

Hoag Family Cancer Institute (HFCI) is one of only two sites in the country to offer the most advanced immunotherapy clinical trial currently available for the treatment of locally advanced and metastatic pancreatic cancer. In partnership with leading immunotherapy company ImmunityBio, the phase II trial uses innovative NK (natural killer) cells, which are manipulated to recognize and target cancer cells. When injected into the patient, the NK cells activate the patient's immune system to create antibodies that fight pancreatic cancer in combination with chemotherapy.

THE RESULTS:

With promising early results, this unique and innovative therapy has the potential to change the standard of care for pancreatic cancer. The trial not only brings hope to patients receiving this devastating diagnosis, it advances Hoag's reputation as a destination site for cancer immunotherapy.



Marfan Syndrome & Related Conditions Program

Expert Care Locally for Patients with Rare Disease

INVESTMENT DATE:

SPRING 2019

INVESTMENT AMOUNT:

\$250,000

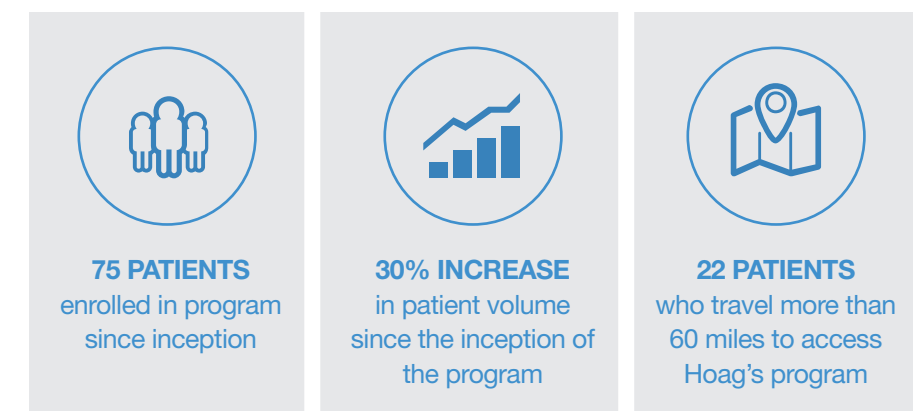
THE CHALLENGE:

Marfan syndrome and related conditions are rare and life-threatening genetic disorders that put patients at risk for aortic disease and dissection. Few programs exist in the U.S., so many patients must travel for expert care.

THE INNOVATION:

World-renowned cardiologist Dr. David Liang, who was recruited from Stanford thanks in part to the investment provided by Hoag Innovators, leads the multidisciplinary team of experts at Hoag's comprehensive Marfan Syndrome & Related Conditions Program. The only comprehensive Marfan syndrome program in Southern California, it's also the only one at a community hospital in the United States.

THE RESULTS:



National Recognition

In the summer of 2022, Hoag will host The Marfan Foundation's Annual Conference, a first for a non-academic institution. It will be the first time the Marfan community has gathered in person since COVID-19.

"My condition, Vascular Ehlers-Danlos (vEDS), is very rare, and not all hospitals have the kind of expertise like Hoag does to care for me. Pregnancy in vEDS patients is extremely risky, but Hoag pulled together a team of skilled, multidisciplinary experts across a spectrum of specialties to account for every possibility and ensure the healthy delivery of my daughter, Avery."

Lauren
Hoag Marfan Syndrome & Related Conditions Program Patient



Technology & Equipment

Xenex Germ-Zapping™ Robots

Exceeding Infection Prevention Standards

INVESTMENT DATE:

SPRING 2020

(Reallocation from Bioquell ProteQ Bio-Decontamination System)

INVESTMENT AMOUNT:

\$180,000

THE CHALLENGE:

Hoag's commitment to infection prevention and patient safety drives the organization's continuous search for innovative ways to enhance the hospital's cleaning and disinfecting processes, which became more important than ever with the onset of the COVID-19 pandemic.

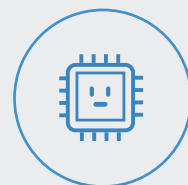
THE INNOVATION:

Xenex Germ-Zapping™ Robots provide an additional layer of protection against the bacteria and germs that can lead to healthcare-associated infections and surgical site infections. The robots use UV technology to disinfect the area without causing damage to hospital surfaces and are used following Hoag's rigorous manual cleaning process by our environmental services (EVS) team.

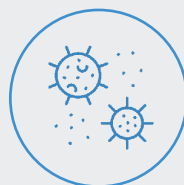
THE RESULTS:



17 EVS STAFF members, including supervisors, operations managers, shift managers and leads, trained by Xenex on how to use the robots.



3 ROBOTS deployed for phase I in March 2021, which includes weekly use in Hoag Hospital Newport Beach's 21 operating rooms and daily use at Hoag Hospital Irvine's two operating rooms. It takes 30 minutes to disinfect one operating room with the robot. Phase II will expand use of the robots to other clinical areas, such as patient isolation rooms.



Hoag's use of the Germ-Zapping™ Robots increases the confidence of patients, the community and hospital staff that Hoag is making every effort to ensure the highest levels of safety.

KODEX-EPD 3D Cardiac Imaging

Enhancing Electrophysiology Procedures for Arrhythmia Treatment

INVESTMENT DATE:

FALL 2019

INVESTMENT AMOUNT:

\$200,000

THE CHALLENGE:

Despite advances in technology used for electrophysiology procedures, physicians still encounter challenges when performing procedures to treat arrhythmias. Improved cardiac imaging can enhance electrophysiology procedures for arrhythmia treatment while minimizing radiation exposure to both patients and clinicians.

THE INNOVATION:

The KODEX-EPD 3D Cardiac Imaging system provides real-time, high-definition images of the patient's anatomy during electrophysiology procedures without exposing the patient or clinical team to radiation. The detail achieved in the images is unmatched, giving electrophysiologists a more complete view of the patient's cardiac anatomy and anatomical variations. Subsequently, therapy can be personalized, more precise and more effective.

THE RESULTS:

Hoag adopted the novel technology in November 2019 and identified opportunities to integrate it more effectively with existing technological systems. Because of Hoag's leadership and expertise in the arrhythmia space, KODEX called on Hoag's team to collaborate in developing the technology further to maximize its benefit. With Hoag's input, KODEX spent one year enhancing the technology, and it became available in March 2021. Hoag is currently operationalizing the technology for clinical use.



Pacify Application Pilot

Supporting Healthy Moms and Babies

INVESTMENT DATE:

FALL 2019

INVESTMENT AMOUNT:

\$175,000



THE CHALLENGE:

During the early days of a newborn baby's life, parents need fast answers and resources they can trust. Providing virtual and convenient support to mothers and their babies can help make the transition from the delivery room to the home environment smoother.

THE INNOVATION:

The Pacify App allows for virtual, 24/7, on demand access to helpful postpartum resources, including lactation consultants, nutritionists, midwives and social workers. Available in both English and Spanish, the app serves as a critical support at the stage moms need it most. With the onset of the COVID-19 pandemic in early 2020, the ability to access this type of help remotely became even more essential. The Pacify App is a component of the Women's Health Institute's 4th Trimester Program, which was designed to provide comprehensive, personalized support to parents from immediate postpartum through the first year of their baby's life.

THE RESULTS:



1,561 patients
enrolled in
Pacify



2,930 total
calls lasting an
average of 15
minutes each



63% of calls
came outside of
normal business
hours



4.9/5 Stars
average rating

Hoag is the first hospital to offer Pacify to every maternity patient at no cost

"Pacify made a HUGE difference in making those first days and months of being a new mom easier. Every future new mom I talk with, I kindly encourage to get and use Pacify because it will just make life simpler. Every new mom needs a support system, and Pacify is a great place to start."

Ann Marie
Hoag Patient and Pacify User

Invenio NIO Laser Imaging

*Reducing Length of Surgery
for Patients*

INVESTMENT DATE:

FALL 2019

INVESTMENT AMOUNT:

\$125,000

THE CHALLENGE:

Pathology examination of specimens removed during surgery can take up to 30 minutes before surgery can continue. Adopting novel pathology and imaging technology can decrease time spent in surgery by minimizing the wait for pathology analysis of the patient's specimens.

THE INNOVATION:

The NIO Pathology and Slide Imaging System allows examination of specimens from multiple sites in the patient in real time, rather than waiting for each sample to be analyzed in the pathology lab. The high quality of the Invenio images allow neurosurgeons to make a more accurate diagnosis in some cases. To maximize the technology even further, Hoag's team established connectivity to Ambra, a cloud-based image management system, for web stream of images directly from the OR to the lab, enabling further streamlining and more rapid diagnosis. The Hoag team also recently activated the system's artificial intelligence feature, which sends an AI diagnosis via text message to the surgeon within five minutes.

THE RESULTS:



More than
100 CASES
completed, averaging
8 cases per month



25 MINUTES
Average time
savings compared
with conventional
frozen section



41.6 HOURS
Total time saved
across all patients
since implementation

Superior diagnostic accuracy helps identify tiny tumors that would otherwise be difficult to detect.

Initiated a clinical trial for adequacy assessment of GI biopsies for colonoscopy and endoscopy.



LEAF Device System Implementation in Critical Care Units

Preventing Pressure Injuries to Critical Care Patients

INVESTMENT DATE:

FALL 2019

INVESTMENT AMOUNT:

\$125,000

THE CHALLENGE:

Patients endure painful hospital-acquired pressure injuries (HAPIs)—injuries to the skin or underlying tissue from prolonged pressure—when their mobility is limited or when they are unable to change positions in bed. HAPIs can complicate a patient's recovery, but they can sometimes be prevented through timely patient repositioning.

THE INNOVATION:

The LEAF Device System is an innovative monitoring system that uses a sensor adhered to the patient's chest to detect their position and movement. The care provider can remotely monitor and reposition the patient at exactly the right time to prevent injuries from prolonged pressure. The LEAF Device System is currently being used in Hoag's Critical Care Units (CCUs).

THE RESULTS:



95% TURN PROTOCOL ADHERENCE

Literature shows hospitals without LEAF monitoring have a turn protocol adherence between 38% to 52%



60% OVERALL REDUCTION

in
hospital-acquired
pressure injuries
in CCUs

67% OVERALL REDUCTION

in Reportable
hospital-acquired
pressure injuries
in CCUs



Process Improvement

Transitional Care Pilot Program

Preventing Hospital Readmissions

INVESTMENT DATE:

FALL 2019

INVESTMENT AMOUNT:

\$100,000

THE CHALLENGE:

Patients with multiple, complex medical conditions face obstacles in their recovery upon discharge from the inpatient setting. From an inability to follow up with their physician or obtain prescribed medications to difficulty reconciling those new medications with the previous ones to simply not having access to groceries for healthy meals, these difficulties can lead to emergency department visits and hospital readmissions.

THE INNOVATION:

Hoag launched the Transitional Care Pilot Program, funded by the Hoag Innovators, to develop a better way to support these patients. Those enrolled in the pilot receive post-discharge home health care and resource coordination designed to help them navigate their complex medical journey, reduce length of stay and prevent unnecessary hospital readmissions and ER visits.

THE RESULTS:

The pilot program has provided a deeper understanding of what is required to provide effective post-discharge care coordination for medically complex patients. It also served as a proof of concept for successful delivery of acute services in the home setting. Upon completion of the pilot, this knowledge will be scaled to serve additional patients.



139 PATIENTS
enrolled in Transitional
Care Pilot Program



50% REDUCTION
in rate of hospital
readmission following
intervention through
the pilot program



An abstract graphic consisting of a network of white dots connected by thin white lines, forming a complex, interconnected web that spans across the upper half of the image against a blue gradient background.

“When we evaluated our philanthropic commitment to Hoag, we envisioned a platform for us and other like-minded donors to support multiple initiatives while learning and growing along the way. We are excited about how this dynamic group of donors is helping Hoag drive health care innovation here in our community and beyond. As we look to further our impact, we hope you will join us in inviting others to become Hoag Innovators.”

Robert and Kitty Brunswick
Founding Hoag Innovators



INNOVATORS



Hoag physicians in every institute and specialty are on the front line of medical advances through collaborations with leading companies and startups as well as through their own ideation and creation of processes and techniques that improve patient quality and outcomes. Hoag Innovators are catalyzing progress not only across the Hoag enterprise but in medicine as well.”

Michael Brant-Zawadzki, M.D., F.A.C.R.

*Ron & Sandi Simon Executive Medical Director Endowed Chair,
Pickup Family Neurosciences Institute
Senior Physician Executive, Hoag*

For more information about Hoag Innovators, please contact
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