STAYING CURIOUS

WHEN IT COMES TO EFFECTIVE WOUND CARE, DR. MISAEL ALONSO IS A FIRM BELIEVER IN THE IMPORTANCE OF EMBRACING INNOVATIVE, NON-INVASIVE TOOLS AND TECHNIQUES, INCLUDING SNAPSHOTNIR.

Dr. Misael Alonso still vividly recalls one of his earliest experiences in wound care. As a medical student at the University of Illinois at Chicago College for Medicine in the 1990s, he was directed during a general surgery rotation at Cook County Hospital to remove a patient's wet-to-dry dressing by the supervising surgery resident.

"I'll never forget the way that patient just cried out in so much pain when I ripped off the gauze," Dr. Alonso says. "After that, I wanted absolutely nothing to do with treating wounds."

Instead, he pursued a career in internal medicine upon finishing his residency at the Los Angeles County Hospital + University of Southern California in 2003. He also joined the United States Air Force Reserve at the beginning of his residency. This brought him to Arizona, where he practiced as an internist both at an outpatient military clinic at Luke Air Force Base as well as nearby community hospitals. It was during his time in hospital medicine that his attitude toward wound care began to shift.

"There were two wound care nurses at the hospitals, and I really credit both of them for piquing my interest," he says. "They would show me which new wound care products and techniques they were using and talk about the advantages and disadvantages of each one."

In comparing newer treatment modalities to the more invasive wound care techniques he'd been taught in medical school, Dr. Alonso was galvanized by the innovative procedures and emerging technologies he was being shown. He found himself wanting to focus more and more on finding new and better ways to treat chronic wounds.

"I realized, 'Hey I'm actually really liking this,'" he says.

Today, Dr. Alonso works as a full-time, independent wound care specialist in Goodyear, Arizona, where his passion for the discipline continues to grow.

"For me, one of the greatest joys is taking a patient who's had a chronic wound for years, and then helping them to heal when they never thought it would be possible," he says, adding that a foundational tenet in his approach to healing wounds is the willingness to seek out emerging technologies, products, and procedures. "I attend every wound care conference to see what's out there, and I'm never disappointed because there's always something new, something different to try out."

At a national wound care symposium in 2021, Dr. Alonso first discovered SnapshotNIR, a portable, non-invasive device from Kent Imaging that uses near-infrared light to identify the ratio of oxygenated to deoxygenated hemoglobin at a wound site. As he watched a representative from Kent demonstrate to conference attendees how SnapshotNIR, operating much like a digital camera, captures near-instantaneous images that allow physicians to visualize microvascular tissue oxygen saturation, Dr. Alonso realized how useful the device could be in his day-to-day practice.

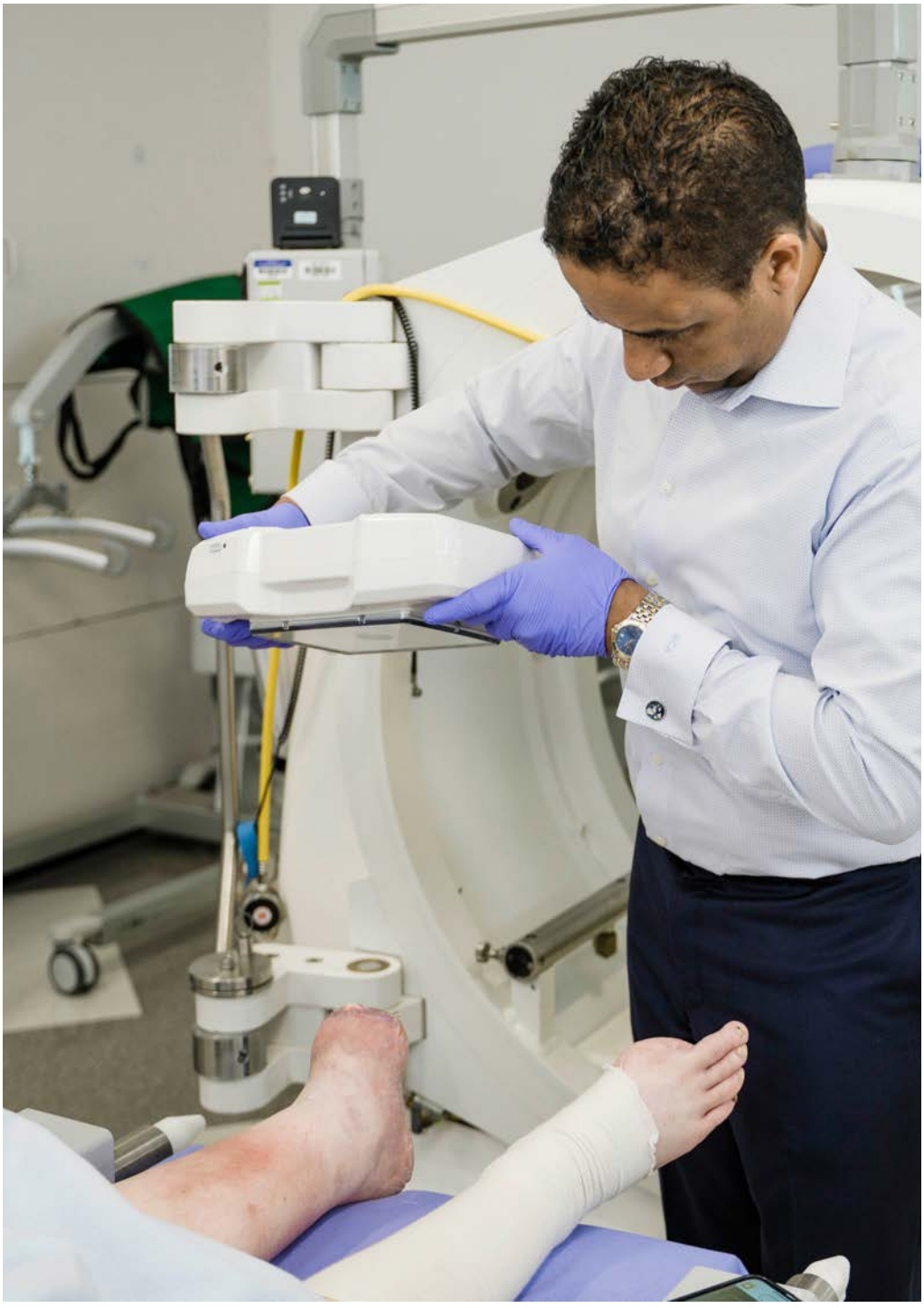
He quickly went about acquiring a SnapshotNIR device and has used it on a regular basis ever since. "My patients and colleagues probably think I'm a paparazzo because I'm always coming in with the Snapshot and taking pictures," he says with a laugh. But those pictures have made a world of difference for Dr. Alonso when it comes to assessing wounds, determining treatment paths and tracking and demonstrating healing progress.

A PICTURE IS WORTH A THOUSAND WORDS

Among the many patients who have benefited from Dr. Alonso's "picture-taking" is a man who initially came in with a diabetic foot ulcer on the plantar aspect. Although the 65-year-old patient had previously been told by a cardiologist that he had no vascular issues, his wound had become so swollen and abscessed that Dr. Alonso sent him to the hospital for imaging.

"Low and behold, he had horrific peripheral arterial disease (PAD)," recalls Dr. Alonso. "Many of the arteries were occluded, and he was subsequently told by several physicians that he would require amputation."

Not surprisingly, the patient was extremely reluctant to have his foot amputated, so Dr. Alonso decided to bring him back to the clinic and start him on hyperbaric oxygen therapy (HBOT). "That was right around the same time that I obtained SnapshotNIR," says Dr. Alonso, who immediately put the imaging device to work, taking pictures of the patient's wound before and after each hyperbaric session.



"Now, with Snapshot, I can take a picture and get a result within mere seconds. So, we no longer use TCOM here at the clinic; we only use the Snapshot device."

After a few treatments, it was evident that things were going well—the patient was slowly healing. But just as that glimmer of hope began to grow stronger, the patient's insurance company decided not to approve any further hyperbaric oxygen sessions.

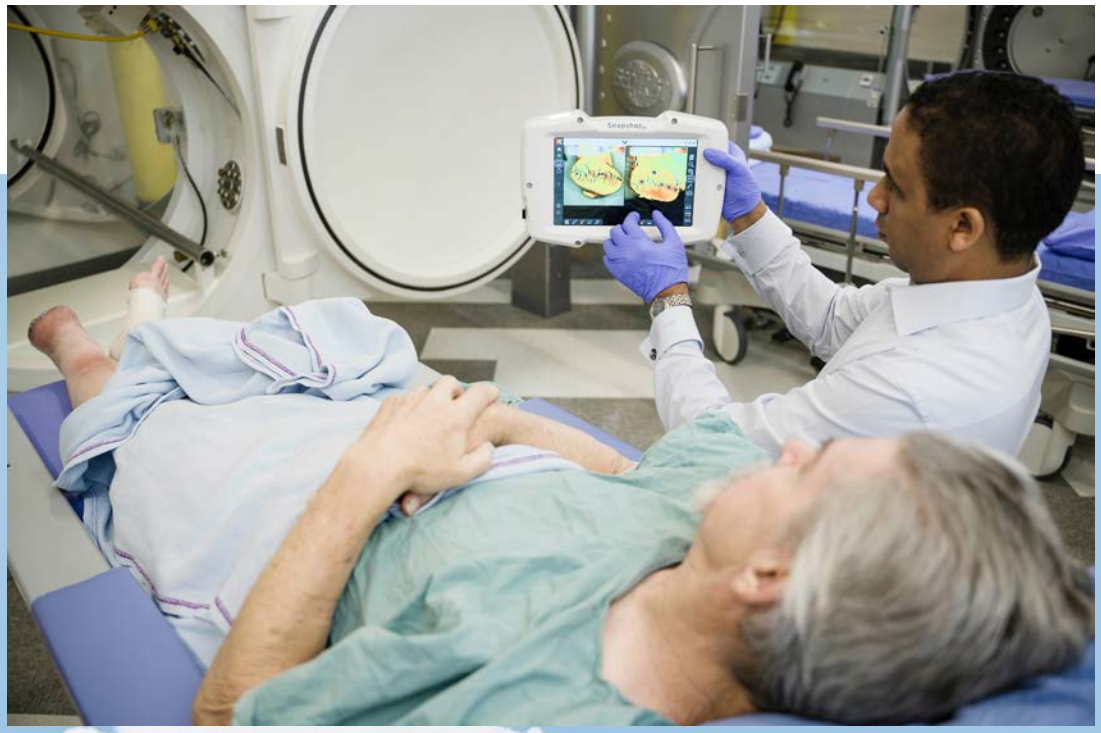
"Thankfully, I was able to show [the insurance company] the Snapshot images that were taken before the patient went into the hyperbaric chamber and after the patient came out," says Dr. Alonso. "Those images, along with the wound measurements captured by the device, all showed great improvement. Because of this proof, HBOT was approved for 30 more sessions, and the patient is walking on his own foot to this day."

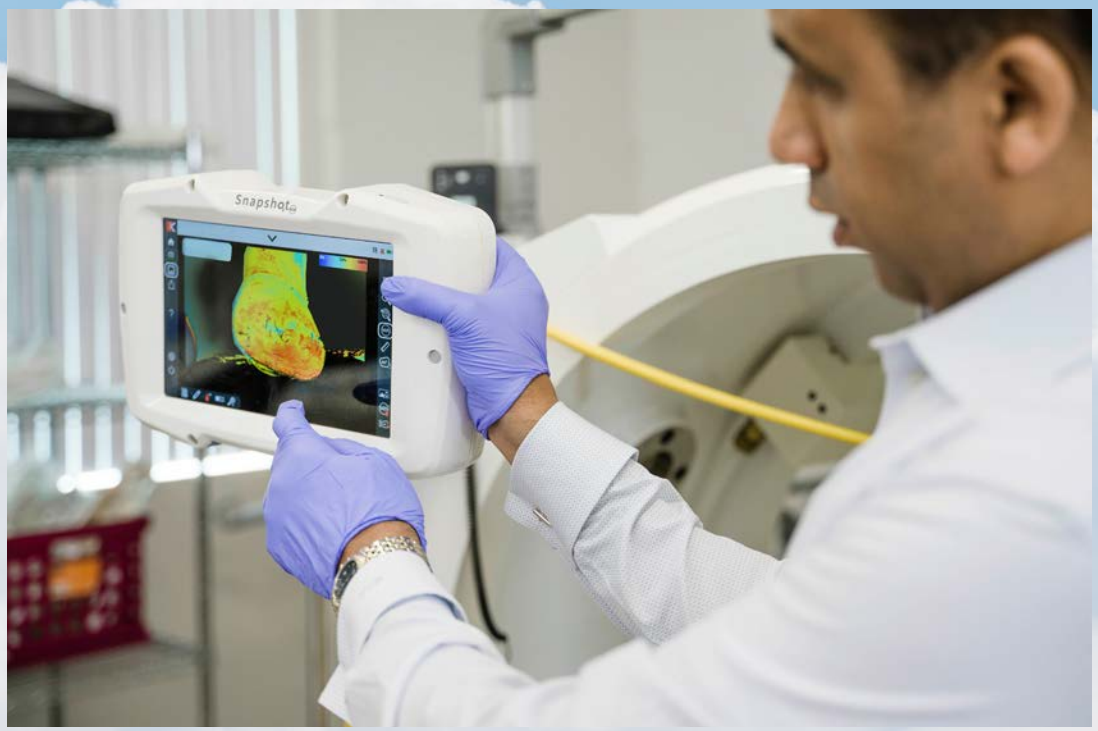
COMPLEMENTARY TOOLS

With three hyperbaric oxygen chambers available to Dr. Alonso, he frequently uses HBOT in conjunction with other procedures when treating patients with chronic wounds. And SnapshotNIR, he says, has come to serve as a vital tool through every step of the HBOT process, including initial assessment.

"Prior to using the Snapshot device, we had the option to perform a procedure called transcutaneous oxygen measurement, or TCOM, to determine if a patient's wound would benefit from hyperbaric oxygen therapy. But TCOM can take a long time," says Dr. Alonso. "Now, with Snapshot, I can take a picture and get a result within mere seconds. So, we no longer use TCOM here at the clinic; we only use the Snapshot device."

SnapshotNIR has also been instrumental to Dr. Alonso as a visual teaching tool, thanks in large part to the colors it shows. When using near-infrared spectroscopy (NIRS) to capture an image, it's the level of light absorption and reflection that conveys tissue health.





Above: Dr. Alonso shows a SnapshotNIR StO_2 (tissue oxygenation) image to a patient under his care.


SECHRIST

"For me, one of the greatest joys is taking a patient who's had a chronic wound for years, and then helping them to heal when they never thought it would be possible …"

Light absorption of hemoglobin differs depending on the amount of oxygen present, with the color red showing the highest level of oxygenation at a wound site, and blue showing very low levels of tissue oxygen saturation. Those colors, and the spectrum in between, reflected in the captured images, provide an easy way to help demonstrate to patients and colleagues alike why a wound is or isn't healing, and whether a certain treatment path is the way to go.

In one case, a daughter brought her father—a man in his early 80s—to the clinic because he had a painful, non-healing ulcer. Whenever the patient would lift his leg, he was in terrible pain. Dr. Alonso took SnapshotNIR images of both feet and, when the images came back mostly blue, he was able to show those images to the man and his daughter and clearly explain that the patient had arterial disease and required a vascular surgeon to open up his arteries.

Later, when the same patient ended up back in the hospital after experiencing a clot in one of the repaired arteries, Dr. Alonso was able to take more Snapshot images and get him approved for hyperbaric oxygen therapy.

"He recently finished 20 sessions," says Dr. Alonso. "He's walking, he's doing great, and thanks to Snapshot, he and his daughter have been able to understand why he wasn't doing well initially and why he's doing better now."

Dr. Alonso has also used Snapshot to track the progress of a military patient who was in need of dental extractions after undergoing radiation therapy to treat his head and neck cancer. In some patients who have been irradiated, a condition called osteoradionecrosis can make it near impossible for wounds to heal. But consistent hyperbaric oxygen sessions can vastly improve the likelihood of healing.

Interested to see if he could use SnapshotNIR to track the condition of the patient's gums before and after treatment, Dr. Alonso took images inside and outside the mouth throughout the entire therapy process. "All the pictures consistently showed improvement of oxygenation every time the patient came out of the hyperbaric chamber," he says.

It's this kind of outcome that inspires Dr. Alonso to remain committed to proven treatment modalities while staying perpetually open to trying new procedures and innovative tools like SnapshotNIR. "One big thing I've learned in wound care is that not everything works on every patient, so you have to adapt. You must be willing to try different techniques," he says. "You have to be curious." ■

Left: Dr. Alonso stands beside one of three hyperbaric oxygen chambers. Hyperbaric oxygen therapy helps injured tissue absorb a highly concentrated amount of oxygen.

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