

WHITE COAT ADDRESS 2024 DENNIS S. CHARNEY, MD ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI

Class of 2028, parents, family members, faculty, and members of the Boards of Trustees, welcome to the annual White Coat Ceremony of the Icahn School of Medicine at Mount Sinai.

Students, this is an exciting day for you, an important milestone toward your career in medicine. It's an exciting day for me too—not only because I take great pride in you, but also because when I look at you, I see the future of medicine.

Fifty-one years ago, I was sitting in your position—a first-year medical student.

It was 1973. On the radio was John Lennon's "Imagine"—his iconic song about peace, harmony, and a better future for the world. My class was determined to make the world better by healing the ill. But we could only imagine the bright future ahead for medicine—how dramatic advances would help us save lives and improve the quality of life for millions of people.

In 1973, many of the tools available to doctors today didn't exist:

- · There were no MRI scans
- No PET scan imaging
- · No statins for reducing cholesterol
- · No ACE inhibitors for lowering blood pressure
- · No new treatments for major depression or schizophrenia
- No immunotherapies for cancer and other diseases
- · No fundamental advances in vaccine discovery
- · And sequencing of the human genome had not occurred.

Why, we didn't even have personal computers...or cell phones. Yes, try to imagine your life without a smartphone! In fact, the company Apple Computer didn't exist.

And get this—all telephones had cords attached to wires in the wall. Phone numbers referred to a place, not a person. And to make a call from the street you needed to insert a dime into a pay phone.

Parents and grandparents, do you remember those days?

In just 50 years, how the world has changed. That's especially true in medicine. We've seen tremendous innovations, many of which have occurred right here at Mount Sinai!

For example, we have developed:

- New chemotherapy and immunotherapy approaches that are curing cancer patients and improving their quality of life
- · New, highly effective treatments for inflammatory bowel disease
- · New therapies for major depression
- New imaging techniques that can pinpoint early signs of heart disease and cancer
- And numerous novel and highly effective surgical techniques.

That's just a small sampling of our achievements. And we're just getting started.

So, Class of 2028, now I want you to close your eyes—please close your eyes and imagine.

Imagine what medicine can be over the next 50 years...when you'll be in my position, looking back on your careers. How will you apply artificial intelligence? How will you use your patients' genomic sequencing data to prevent, predict, and treat human disease?

How will the advances in digital medicine allow you to identify medical problems in real time, facilitating early intervention?

What medicines will be discovered that are more precise and effective?

What else will happen? Time will only tell.

Now, open your eyes. Class of 2028, what you are imagining is what you can make possible.

Many of you will become clinicians. You'll be able to apply new technologies to improve diagnoses so that disease can be caught earlier and treated more effectively. Others will become researchers. You will extend the boundaries of science to help find

new therapies. Some of you will become health care leaders and policymakers who can build more comprehensive and equitable health care systems here in the United States and around the world.

Wherever your path leads, you will create the future.

At Icahn Mount Sinai, we see this as our responsibility—to advance medicine for the benefit of patients worldwide.

We have invested heavily in artificial intelligence—in fact, we just opened a new building on campus devoted to AI and human health. We have recruited great scientists not only from the biomedical sciences, but also from the worlds of technology, engineering, and math so that we can harness the full potential of advanced computing.

The Mount Sinai Million Health Discoveries Program will sequence the genes of a million Mount Sinai patients, creating the world's most diverse genomic database. Machine learning algorithms will analyze the data and generate insights that will be translated into routine clinical care.

Our Precision Immunotherapy Institute has engineered CAR-T cell therapy that kills white blood cells known as macrophages that protect cancer cells. When macrophages are gone, tumors become vulnerable to attack from the immune system.

The Icahn Genomics Institute has invented a new nanoparticle formulation that enables the precision delivery of mRNA and CRISPR therapeutics to treat diseases such as cystic fibrosis, sickle cell anemia, and Alzheimer's disease.

These are just some of the targeted therapies we are developing.

So, big changes will occur over the course of your careers.

But what won't change is the fact that medicine will still be highly challenging on a personal level. As physicians, you will face many difficult days. You will be with patients and their families at the toughest times in their lives—and there is no ChatGPT automated formula for dealing with those moments.

As a physician, you will need to apply your knowledge with an equal dose of care. You will need to rely upon your humanity. This is an important part of what we nurture here at Icahn Mount Sinai. We teach compassionate care.

So let me be clear. The White Coat you are about to receive does NOT represent your induction into an elite society. Rather, it represents your acceptance of great responsibility, a commitment to your patients, persistence, personal sacrifice, a collaborative spirit, and your willingness to step forward to lead and to serve. These are the qualities that make great clinicians and scientists. Class of 2028, I know that you all have that in you.

John Lennon imagined that there would be no war, no conflict, no greed, nor hunger. We can imagine a world with far less suffering and pain, a world where there will be no disease that cannot be diagnosed and treated. This is all possible.

Class of 2028, you are among the most talented medical students in the nation, with limitless potential. If you don't do it, who will? So, as you progress in the next four years and beyond, I want you to maintain this perspective: keep imagining what is possible. Imagine what you can achieve. And know that you can make those dreams come true.

As John Lennon wrote, "You may say that I'm a dreamer. But I'm not the only one."

Thank you.