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CC NEWS

Clinical Center News November/December 2024

Clinical Center Awarded Magnet® With Distinction

Clinical Center Nursing Department celebrates Magnet® certification

Four years ago, Clinical Center staff embarked on a journey to become a Magnet-accredited hospital—professional recognition that is the highest national honor for nursing excellence, encompassing nursing professionalism, teamwork, and superior patient care.

The Magnet document, comprised of metrics and narrative examples of our team's excellence, spanned nearly 3,000 pages of information, data, and stories and was submitted on March 31, 2024 to the American Nurses Credentialing Center (ANCC). Once submitted, the ANCC Magnet Appraiser team conducted an extensive review of the document and determined that the NIH Clinical Center met the requirements to proceed directly to a site visit. Moving straight to a site visit is exceedingly rare, particularly for first time applicants!

The appraiser team conducted a three-day site visit in August 2024 where they met with nurses, patients

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NIH Clinical Center Leads the Charge for the 2024 Combined Federal Campaign

Federal employees unite to "Give Happy" and support thousands of charities through workplace giving

The Clinical Center is leading this year's NIH Combined Federal Campaign (CFC), the federal government's workplace giving campaign that supports thousands of participating charities. NIH's goal is to raise $1.275 million between September and January.

"The CFC is an annual opportunity to contribute to help people I will never meet. It gives me a chance to think about being a better version of myself," said Dr. James Gilman, NIH Clinical Center CEO.

Clinical Center staff and leadership champion the launch of the CFC

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COMMENTARY

We Are More Than Our Data

Dr. James K. Gilman
NIH Clinical Center CEO

As my "use by" date fast approaches I decided that I wanted to see if I could get OCMR to publish one more op-ed in the CC newsletter. They have been indulgent to now and there is more I would like to say. This piece requires a bit of stage setting and the events come from my time in the military over 20 years ago. However, if you can stay with me through the stage setting, I will do the best I can to make any points applicable to the contemporaneous setting of the NIH. All names are excluded. However, this all really happened and will be reported to the best of my ability to remember.

The year was 2003 and a young soldier died in Iraq. The death was not attributed to battle injury or an accident. The Armed Forces Medical Examiner conducted an autopsy and ruled that the death was due to heat injury. The soldier's remains were returned to his parents and, as in all cases where deaths occur during deployment, the family was given the choice of having a flag officer (generals and admirals all have both stars and flags) preside over the military honors of the funeral and burial. The flag officer in attendance at the soldier's funeral got an earful from the soldier's parents. The Army had not taken very good care of their son. They were particularly irked at the Army's medical community.

What's so important about the death of one soldier? Remember that Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) were the first extended conflicts where the military had to continue to recruit soldiers, sailors, airmen, and marines during the conflicts. OIF and OEF were the first real tests of the all-volunteer force. The first Gulf War did not last long enough to provide much of a test. The need to continue to recruit during conflict coupled with the 24-hour news cycle put situations like this one in a strategic context. The Army needed to respond to the concerns of this soldier's family and to do it as quickly as possible. Public trust is one of the requirements for fulfilling the recruiting mission.

The flag officer presiding over the funeral contacted the Army Office of the Surgeon General. Non-commissioned officers from the soldier's unit in Iraq were dispatched back to meet with the parents and a decision was made that I should accompany them. I tried to find out as much about the soldier and what happened in Iraq as I could before making the trip. I mean, data is important! I contacted the regimental surgeon and spoke with her about her impressions. I got my hands on the soldier's medical records and the autopsy report. I managed to get some information about the soldier's service record and determined he was a pretty average soldier.

The trip to see the family with members of the soldier's unit was memorable. I had to spend the night in an airport and take off three times to land at the smallish regional airport once to link up with the representatives of the soldier's unit. I had to clean up, shave, and don my Class A uniform in the men's room of a small temporary terminal building. I finally met the members of the soldier's unit and then began the four- or five-hour journey across the state to the family's home. The home was far off any beaten path. While the culture and family tradition included a deep appreciation for military service, there was a palpable mistrust for almost all other things connected with the government.

The three-hour meeting with the soldier's parents was among the tensest of my professional career. Besides the family, a local physician was also present. While that might seem like a good thing, this physician was feeding the mistrust of the family. He specifically was critical of the military's vaccination program for soldiers about to deploy. He led the family to believe that their son's death might be attributable to one of the vaccines he was required to take.

Dr. Gilman in the newly renovated E-Wing (2024)

I continued to gather all the information I could about the soldier

and his family. For instance, I learned that one of the soldier's brothers died in a traffic accident. From four children, the family was down to two. I spent a lot of time learning more about the Army's pre-deployment vaccine policy. I found out that serious reactions that might be attributed to the vaccine could be referred to the ACIP–the Advisory Committee on Immunization Practices for a review that would not be influenced by anyone in the Department of Defense. I asked the program manager for the Army's vaccine program, an extremely intelligent and thoughtful pharmacy officer, if we could send the soldier's records to ACIP for review. He was initially resistant. The data did not support any connection between the vaccine and the soldier's death. I had no other avenues to pursue.

> **"This is still a people business"**

I persisted in the request to send the records to ACIP. The program manager relented primarily to appease me. The records were sent to ACIP. It took a few weeks before the ACIP report came back. As expected, ACIP determined that there was a negligible chance that the soldier's death had anything to do with the vaccines he received.

I contacted the soldier's mother. By this time, we were communicating by email regularly. I sent her the ACIP report. She looked at it for just a few minutes. Then came the email. Mom: "Okay, NOW I believe you." I forwarded the email to the head of the vaccine program. His response was quick: "This is still a people business, isn't it?" My response to him: "Always has been and always will be."

The number of meetings about

From (l to r) Dr. Ann Berger, Dr. Francis Collins, Dr. James Gilman and Dr. Gwen Wallen cut ribbon for opening of hospice suites (2018)

data that I attend here at the NIH has grown progressively since I arrived eight years ago. I do understand the importance of data to the biomedical research enterprise. We need good data. Data needs to be collected, stored, analyzed, curated, turned into usable information, and applied. Data systems need to be interoperable. Data needs to be shared freely with others who have an interest in it, who are subject matter experts, and who might also want to interpret the data. Alternative interpretations drive the dialogue that might eventually lead to consensus. On the flip side, data must be kept out of the hands of those who want it for nefarious purposes.

We are consumed with gathering more and more data. The clinical data entries in the Electronic Health Record may be the starting point. Then there are the genome and the exposome, including its impact on the genome (mutations or epigenetics). Next there are all the RNAs, all the *-omics*, the social determinants of health, the microbiome(s) (each of us has at least three), and the NIH is now in a big effort to understand all the viruses in and on us (the virome). We are better at collecting data than we seem to be at a priori knowing which data we need now or might want in the future. Our default position is to want as much as possible.

Lately many of the meetings seem to be looking at data about the data. I think that is what is called metadata. I was in a meeting last week where an articulate data scientist employed metadata–specific terms that were completely unfamiliar to me. No doubt this is an age-related phenomenon.

It should be readily apparent that my retirement gig, if there is one, will not be in data science. That is not a big loss to the field. However, my concern is that we have become much more comfortable with talking about the data than talking to the people who provide the data to us. I had all the data to conclude that the young soldier's death was not related to a vaccine in 30 minutes. But I didn't know enough about mom's situation – antivaxxers in her ear, another son who died tragically, environment rife with mistrust of the government – to be able to convey the information that I had in a way that would have any impact. Trust had to be earned over months of patient communication. Taking the extra step of turning the analysis of her son's death over to the ACIP finally was the tipping point.

We need great data systems, and we need lots of great data scientists. Great systems and data scientists are expensive, so we need a lot of money too. However, our patients are much more than their data. In the NIH Clinical Center, especially in the NIH Clinical Center, we should never forget that we are in the people business. We always have been, and we always will be.

Dr. Gilman will be retiring Jan. 2025.

“The Perfect Example of an Unsung Hero”

Clinical Centers Clinical Recognition Award winners highlight innovation, compassion and hard work

The Clinical Center selected six NIH staff for special honors in its 2024 Clinical Recognition Awards. Caregivers, researchers and a financial specialist all received nods for their outstanding contributions to the hospital.

The Clinical Center’s Clinical Recognition Program launched in 2018 and highlights outstanding staff clinicians, nurse practitioners, physician assistants and administrators at the hospital.

One of four clinicians to receive this year’s award, Dr. Matthew Hsieh, a staff clinician with the National Heart, Lung, and Blood Institute’s Cellular and Molecular Therapeutics Branch, was recognized for his work on sickle cell disease with Clinical Center patients.

Dr. Hsieh’s team works on curative strategies for sickle cell disease, a genetic disease that affects red blood cells and causes debilitating complications and early death. Using medications, his research team was able to reverse the disease.

“Dr. Hsieh was incredible throughout the conduct of this trial, which spanned 10 years,” said his nominator, Dr. John Tisdale, chief of the Cellular and Molecular Therapeutics Branch within the National Heart, Lung and Blood Institute and director of the Intramural Sickle Cell Disease Program.

“His work led to the first FDA approval of a gene therapy approach for sickle cell disease in December of last year. This approval would simply not have been possible without Dr. Hsieh.”

Dr. Ning Miao, an anesthesiologist with the Clinical Center’s Department of Perioperative Medicine (DPM), was praised for managing the most medically complex, resource-intensive surgical cases, many of which are deemed too high risk to be performed at outside academic medical centers.

She was also cited for serving as a role model to staff in her department and the anesthesia residents that she trains to manage surgical cases.

“Dr. Ning Miao is distinguished in providing outstanding, effective and compassionate anesthesia care to NIH patients and their families,” Dr. Julia Labovsky, deputy chief of DPM, said in her nomination of Miao.

2024 Clinical Recognition Awards

Staff Clinicians of the Year

Matthew Hsieh, MD
National Heart, Lung, and Blood Institute

Ning Miao, MD
CC Department of Perioperative Medicine

Michael A. Solomon, MD, MBA
CC Critical Care Medicine Department

Meryl Waldman, MD
National Institute of Diabetes and Digestive and Kidney Diseases

Nurse Practitioner of the Year

Laura Pinkney, FNP-C
CC Department of Perioperative Medicine

Administrator of the Year

Erin E. Dominick
CC Office of Financial Resource Management

“[She] enlisted a team of anesthesiologists who work collaboratively on these complex cases in order to gain experience and expand this expertise within DPM.” “In this way, Dr. Miao’s contributions continue to benefit the patients of the Clinical Center for years to come.”

Helping manage prescription costs led to recognition for Dr. Michael Solomon, a staff clinician and head of the Cardiovascular Section in the Clinical Center’s Critical Care Medicine Department (CCMD).

Solomon developed a Patient Assistance Program to assist with cost savings in the Clinical Center’s Pharmacy Department. The program reduced estimated medication costs by $2.4 million in the 2023 fiscal year and nearly $5 million since it was instituted in the latter part of 2021.

He also established a partnership with neighboring Suburban Hospital to ensure that Clinical Center patients requiring urgent access to care and/or procedures not available at the CC can receive those services in a safe and timely manner.

“He is an expert in managing complex patients in the ICU, a skill that is important to the successful management of many IRP patients who develop complications of their disease or therapy,” remarked his nominator, Dr. Parizad Torabi-Parizi¸ a tenure-track investigator and assistant chief of the Critical Care Medicine Department for Clinical Operations.

A focus on kidney research and treatment led to acknowledgement for Dr. Meryl Waldman, a staff clinician and chief of the Clinical Nephrology Service for the National Institute of Diabetes and Digestive and Kidney Diseases’ (NIDDK) Kidney Disease Branch.

Leading a team of three clinical nephrologists, two nephrology nurse practitioners and two hemodialysis nurses, Waldman led the Clinical Center’s efforts to modernize methods of estimating glomerular filtration rate (GFR)—the metric that measures kidney function by the blood volume filtration rate per minute. In addition, she led a committee that implemented new race-free GFR estimating equations at NIH, a health equity priority.

“Dr. Waldman is a superb clinician who helps solve complex [kidney] problems arising in patients throughout the CC, while also advancing ground-breaking research in developing a new therapeutic approach for membranous nephropathy,” said Dr. Gregory Germino, deputy director of the NIDDK Office of the Director and acting chief for the Kidney Diseases Branch.

AWARDS go to p. 5

AWARDS continued

"She promotes quality patient care and safety and is widely recognized throughout the NIH community as a truly exceptional and collegial consultant."

Laura Pinkney, a nurse practitioner in the Clinical Center's Department of Perioperative Medicine, was recognized as the Nurse Practitioner of the Year.

Pinkney evaluates or reviews nearly every patient that is scheduled for anesthesia in the Clinical Center, assessing each patient as part of a complex interrelated team of surgeons, anesthesiologists, family members and allied health professionals.

She provides outstanding, effective and compassionate care and on more than one occasion used her initiative and insight to identify critical aspects of care, such as personal or family bleeding history or unsuspected cardiac disease, that could have led to serious consequences if not discovered prior to surgical procedures.

"Laura has a strong investment in the care of these patients and will often take these tasks on herself, calling for outside records to stratify their preoperative risk," Labovsky, the DPM chief, said.

"She excels in multiple essential areas of leadership, patient safety and high-quality care and professionalism."

Erin E. Dominick, a supervisory management analyst in the Clinical Center's Office of Financial Resource Management (OFRM), was selected as Administrator of the Year.

Dominick isn't afraid of poring over spreadsheets. The Clinical Center's Nursing Department has about a dozen labor contracts, which accrue over $1 million in printed and electronic invoices each month. Dominick reviewed every timesheet for an entire year of contracts, entering details into a tracking spreadsheet she developed. This tool has been instrumental in bringing financial stability and clarity to the nursing contracts.

In addition, she and her team created a new dashboard to better track multi-year, multi-million-dollar projects, improving the system for monitoring new services, limiting manual data entries and reducing the potential for errors.

Her nominator, Juris Mohseni, a supervisory budget analyst in OFRM, noted, "Erin E. Dominick is the perfect example of an unsung hero. She is always working behind the scenes doing the research, preparing reports, reconciling numbers with all parties involved or simply being there to offer guidance or support. This year is no different, except the magnitude of tasks that she has lifted in addition to her normal duties has been more significant."

"I have never met anyone more dedicated to the Clinical Center. It's time to shine the light on this unsung hero," Mohseni said.

—Donovan Kuehn

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and our interprofessional partners to validate and amplify what they had learned from our Magnet document.

On Nov. 25, 2024, Clinical Center and NIH staff, family and friends gathered online and in person to hear the decision which did not disappoint. Dr. Sharon Pappas, the Chair of the ANCC Magnet Commission, announced that the Clinical Center had earned its highest honor—the designation of Magnet with Distinction, an elite category received by only the top 1 percent of hospitals in the U.S. Just 10 percent of U.S. hospitals receive any level of Magnet recognition.

"We are honored to receive Magnet recognition with Distinction," said Dr. Barbara Jordan, chief nurse officer. "Achieving Magnet status is a testament to the dedication of our NIH Clinical Center staff and Institute partners and reinforces the culture of excellence that is a cornerstone of how we serve our patients."

—Dan Silber

CFC from p. 1

The CFC is the federal government's largest workplace giving campaign and offers the federal community the opportunity to donate money or volunteer hours to thousands of participating charities.

On Oct. 31, the CFC held a Halloween Charity Fair and Costume Contest virtually. The light-hearted competition involved eight NIH employees showing off their costumes to raise awareness about the campaign and NIH's donation goal. In addition, three charities —The Salvation Army, Calvary Bible Institute, and Alight–shared information about their missions and how to help those in need. Although a small pool participated in the event, more than 5,000 charities are participating in the CFC this year. Costume contest winners were selected by live voting during the event. The Clinical Center PACU team took first prize with its Teenage Mutant Ninja Turtles theme.

The Clinical Center also hosted the in-person CFC Directors' Challenge, a Cornhole Tournament held in the Atrium on Nov. 21. More than 25 IC Directors, or their representatives, showed off their cornhole throwing skills. Dr. Shannon Zenk, Director of the National Institute of Nursing Research was the winner of the cornhole challenge.

CFC donations can be made in the form of an ongoing or one-time payroll deduction, or by personal checks, debit, and credit cards. If you are interested in learning about the charities, making a pledge, or participating in one of the upcoming CFC events, you can connect with your department's Keyworkers or visit cfc.nih.gov/.

—Seppideh Sami and Janice Duran

Dr. Eric Topol on How AI is Transforming Health and Medicine

The pioneering physician-scientist discussed the extraordinary advances in AI and medicine during a recent NIH Clinical Center Grand Rounds guest lecture

Humanity is on the cusp of "the most exciting time in medicine" owing to extraordinary advances in artificial intelligence (AI) and near-future applications.

So argues Dr. Eric Topol, a pioneering cardiologist and thought leader in the use of digital, genomic and AI tools to promote human health.

One of the most cited researchers in medicine, Topol is the executive director of Scripps Research, a world leader in translational biomedical research.

The physician-scientist spoke about the promise and perils of AI in health and medicine at the NIH Clinical Center while presenting a Grand Rounds Contemporary Clinical Researchers Great Teachers guest lecture on Sept. 11.

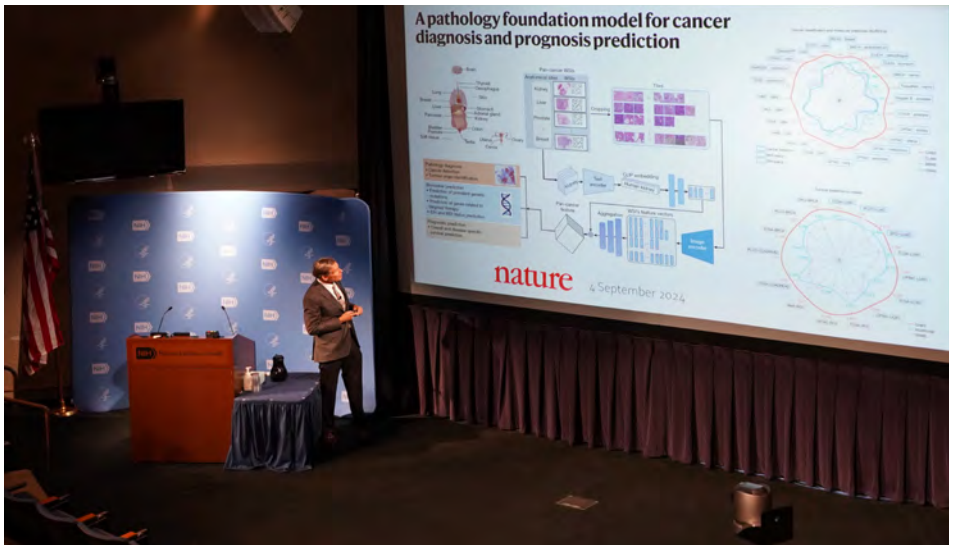
Created to inspire young clinician-investigators in the pursuit of careers in biomedical research, the special lecture series invites thought leaders in medicine and science to present on topics and ideas they are passionate about.

In an hour-long talk, Topol surveyed the latest research into artificial intelligence, highlighting areas where its application is profoundly advancing the practice of medicine, including reducing medical error and improving diagnostics, risk-screening and the doctor-patient relationship.

Topol noted a 2023 study by Johns Hopkins researchers, which estimated that 800,000 Americans each year are seriously disabled or die from incorrect medical diagnoses.

Research has shown that using AI models to interpret medical scans dramatically reduces diagnostic errors, especially when supporting a clinician.

Topol pointed to numerous studies confirming that AI "machine" or "digital eyes" have higher pickup rates for lung cancers, breast cancers, colon cancers, and other diseases.



Dr. Eric Topol speaks in Lipsett Amphitheater at the NIH Clinical Center

He noted that AI models can even detect many serious conditions before noticeable symptoms appears.

"The machine will see things that humans will never see," Topol said. "It's just extraordinary and this is why the hope for improving accuracy is so rich."

For example, using simple retina scans of the eye, AI systems can now accurately diagnose a pandora's box of serious health conditions, including high blood pressure, prediabetes, kidney disease, liver and gall bladder disease, Alzheimer's disease, stroke and heart attack risk, lipdemia, hyperlipidemia and Parkinson's disease, Topol noted.

For patients with Alzheimer's, the AI model was able to correctly diagnose the disease seven years before symptoms appeared. In Parkinson's patients, AI detected the disease five years before symptoms occurred.

During his talk, Topol heralded the advent of powerful new transformer AI models, such as ChatGPT and Google Deep Mind, which can learn on their own and do not require medical data annotated by experts to train.

When applied to cancer detection, the resulting AI foundational model can not only identify cancerous cells in pathology slides but identify the genetic mutation driving the cancer and provide a prognosis for the patient.

Transformer models are also highly effective at difficult diagnosis, Topol noted, citing the extraordinary case of a Michigan boy who suffered from an unknown disease despite consulting 17 doctors.

The boy's mother entered all her son's symptoms, which included escalating pain, stunted growth, a dragging left foot, headaches, and more, into ChatGPT, which correctly diagnosed occult spina bifida. Surgeons released the boy's trapped spinal cord, and he was cured.

Topol cited a recent study of a Google Deep Mind large language model used in a clinical setting, which evaluated 26 variables—from diagnostic accuracy to exam skills to patient-centered communication and empathy.

Publishing their results in the journal Nature, researchers found the large language model scored better than the physician. "Google AI has better bedside manner than you doctors,"

DR. TOPOL go to p. 7

DR. TOPOL continued

Topol told audience members.

Topol shared his belief that AI systems will increasingly be used to serially evaluate layers of data over the course of patients' lives, assessing everything from their DNA and RNA, to their anatomy, physiology, epigenomics, microbiome, metabolome and exposome. "[We] have the ability to predict and forecast things in medicine at the individual level that we never had before," he said.

AI will be especially useful in revamping medical screening and approaches to age-related diseases, such as heart disease, cancer and Alzheimer's.

When applied to Alzheimer's "AI can tell us when this is likely to show up and also set up the intervention to prevent this from ever happening," Topol said.

The physician-scientist said he is particularly hopeful that AI will free clinicians from the outsize burden of computer time to document patient notes, schedule tests and request insurance preauthorization.

"The gift of time from AI" will allow doctors to spend more time with their patients and restore the doctor-patient relationship, he said.

—Sean Markey

Watch the Grand Rounds here: videocast.nih.gov/watch=55082 (staff only)

Updates Make Pediatric Video Game More Inclusive

Treasure Tour, a mobile game created for children and teens receiving care at the NIH Clinical Center, just received a booster shot of new and enhanced features.

Updates include a Spanish-language play mode and greater personalization and engagement. To better reflect the hospital's diverse patient population, players can now create avatars with glasses, more hairstyles (or no hair at all), a wider array of cultural attire and an option to play through in a wheelchair.

Some of the new cultural items include the option of having the avatar wear a yamaka, head scarf, or hijab – but other changes are a bit more subtle, such as the ability for the female avatar to wear a long skirt, pants, or don a short haircut.

Players who select the wheelchair option can use unique power-up skills, such as juggling or spinning their wheelchair, adding a personalized and dynamic element to the game experience.

Lucy, a pediatric patent, plays Treasure Tour

In 2021 the NIH Clinical Center collaborated with Breakaway Games to develop the Treasure Tour. The game allows pediatric patients to explore six areas of the research hospital and to learn about procedures and tests they might undergo.

Pediatric patent learns about the Clinical Center through the app

The game, which seeks to lower the anxiety of pediatric patients by making the hospital seem more familiar, has earned plaudits from patient families.

"During our previous visits to the Clinical Center, [my daughter] Lucy had difficulties walking and was extremely happy to find out about the game that let her explore the hospital from her room," said Lucy's mom, Mary.

"Lucy is more mobile now but continues to enjoy playing it, which distracts her from all the medical procedures she needs to complete," Mary added.

The update is live now and available across PC, Android and Apple devices. Most players will receive the update automatically, ensuring a smooth transition to the new features.

—Maria Maslennikov and Dan Silber

Clinical Center Remembers the Life of Dr. John I. Gallin

Dr. John I. Gallin, who served as director of the NIH Clinical Center from 1994–2017, passed away on October 10, 2024. He often referred to the Clinical Center as the "House of Hope," and he fostered and championed its partnership with patients.

"Our patients are partners in medical discovery," he once wrote of the Clinical Center. "Our commitment to them is to marshal medical and scientific expertise, resources, and care in the search for answers. In a research setting, one patient's answers often generate new avenues for medical advancements that ultimately help others."

Gallin's career spanned more than 50 years, he served as the tenth, and longest-serving, director of the NIH Clinical Center from 1994–2017. He also served as the NIH associate director for clinical research and chief scientific officer of the NIH Clinical Center. He retired from federal service in March 25, 2023.

> **"He embodied the best and the brightest**
>
> **–Dr. Brad Wood**

His tenure at the Clinical Center brought many innovations, including the expansion of the hospital's Hatfield Building in 2003/2004, the establishment of a Department of Bioethics, the initiation of the Bench to Bedside Awards to foster laboratory and clinical collaborations and the development of a clinical research training curriculum, which today reaches over 25,000 students in 168 countries every year.

Gallin also established the Clinical Center's Patient Advisory Group in 1998 to elicit patient feedback in a forum open to all patients and their families.

Partnering with Clinical Center nurses, Gallin worked with the Foundation for the National Institutes of Health, which provided funding to build the NIH Edmond J. Safra Family Lodge. Opened in 2005, the lodge offers free, on-campus accommodations for families and loved ones of adult patients who are receiving care at the NIH Clinical Center.

Dr. Brad Wood, director of the NIH Center for Interventional Oncology and chief of the Interventional Radiology Section at the NIH Clinical Center, remembers Gallin as an extraordinarily impactful mentor for many Clinical Center staff and described him as his "mentor-in-chief."

"He is an impactful and visionary man," Wood wrote in an email to CC colleagues upon hearing the news of Gallin's passing. "I say 'is' and not 'was', because he is the Clinical Center, he is the face of what NIH aspires to attain, and he embodied the best and the brightest. A life well-lived. A mission accomplished."

NIH Director Dr. Monica Bertagnolli said, "John left an incredible legacy that lives on in the important work at the NIH Clinical Center and in generations of clinician-scientists."

—Yvonne Hylton

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