



INSIDE

Career: Hospitalist Update: For Hospital Medicine Physicians, Emerging Opportunities Plentiful in Clinical and Operational Realms. Pg. 1

Career: When Is It Time to Change Jobs? Pg. 9

Clinical: Screening for Prostate Cancer, as published in the *New England Journal of Medicine*. Pg. 11

The latest physician jobs brought to you by the NEJM CareerCenter

Tailor Made Edition
Jobs tailored to your career

Featured Employer Profile

CompHealth®



April 20, 2023

Dear Physician:

As a physician about to enter the workforce or in your first few years of practice, you may be assessing what kind of practice will ultimately be best for you. The *New England Journal of Medicine* (NEJM) is the leading source of information about job openings for physicians in the United States. To assist you with your career advancement, this issue includes recent selections from our Career Resources section of NEJMCareerCenter.org.

The NEJM CareerCenter website (NEJMCareerCenter.org) receives consistently positive feedback from physicians. The website incorporates key input from your colleagues and offers physician users many confidentiality safeguards that keep your personal information and job searches private.

At the NEJM CareerCenter, you will find:

- Hundreds of quality, current openings — not jobs that were filled months ago
- Email alerts that automatically notify you about new opportunities
- Sophisticated search capabilities to help you pinpoint the jobs matching your search criteria
- A comprehensive Career Resources Center with career-focused articles and job-seeking tips
- An iPhone app that sends automatic notifications when there is a new job that matches your job preferences
- Quick and easy options to apply for jobs through mobile and tablet devices

A career in medicine is challenging, and current practice leaves little time for keeping up with new information. While our commitment to delivering the highest quality research and clinical content remains unchanged, NEJM continually develops new features and enhancements to bring you the best, most relevant information each week in practical and clinically useful formats.

As an example, our popular Clinical Practice articles offer evidence-based reviews of topics relevant to practicing physicians. This edition includes the April 13, 2023, article, “Screening for Prostate Cancer.” Or, you might also want to explore the newly launched podcasts from NEJM and NEJM Group that are now freely available on Apple, Spotify, Google, Podbean, or wherever you listen to podcasts. From NEJM, *Intention to Treat* offers a behind-the-scenes look at some of the most complicated, perplexing, and fascinating issues facing medicine today; while *Not Otherwise Specified*, hosted by Dr. Lisa Rosenbaum, features conversations with some of medicine’s most innovative thinkers who delve into health care’s toughest challenges and greatest promise. From NEJM Group, *AI Grand Rounds* features informal, expert conversations on the deep issues found at the intersection of artificial intelligence, machine learning, and medicine.

If you are not currently an NEJM subscriber, I invite you to become one by subscribing at NEJM.org.

On behalf of the entire *New England Journal of Medicine* staff, please accept my wishes for a rewarding career.

Sincerely,

Eric J. Rubin, MD, PhD



Hospitalist Update: For Hospital Medicine Physicians, Emerging Opportunities Plentiful in Clinical and Operational Realms

By Bonnie Darves

Hospital medicine has made a lot of headway for a relatively new physician specialty. In just over 25 years, hospitalists have integrated themselves into virtually every aspect of care delivery in hospitals and health systems. From their beginnings as in-hospital internists and family medicine physicians managing the inpatient care of community primary care physicians’ patients, a vital role that persists today, hospitalists are now serving in top leadership positions, commandeering quality improvement initiatives, and developing facility-wide protocols. They’re also comanaging specialists’ patients and delving deep into hospital operations and IT infrastructures to help facilitate systems improvements.

For young physicians contemplating where they’ll hang their stethoscopes, that broad swath of practice possibilities is a large part of the specialty’s appeal, according to Rohit Uppal, MD, MBA, chief clinical officer for TeamHealth Hospitalist Services in Orlando, Florida. “The lure of hospitalist practice is that physicians are exposed to aspects of medicine that they might not encounter elsewhere and also have the opportunity to learn

Career Resources articles posted on NEJM CareerCenter are produced by freelance health care writers as an advertising service of NEJM Group, a division of the Massachusetts Medical Society, and should not be construed as coming from the *New England Journal of Medicine*, nor do they represent the views of the *New England Journal of Medicine* or the Massachusetts Medical Society.

leadership skills on the job,” Dr. Rohal said. “There’s really no other specialty that exposes you to the breadth of medicine.”

For example, hospitalists may work with colleagues in the ER and critical care, cardiology, neurology, orthopedics, and, in limited cases, trauma specialists, Dr. Rohal said. In a newer role, serve as physician advisers assessing the status of and optimal care setting for an even broader range of patients.

Increasingly, Dr. Rohal said, hospitalists are also integrally involved in managing transitions of care and the systems issues that challenge hospitals. Hospitalists are moving into informatics, quality improvement (QI), care management, telehealth, and services utilization. “The possibilities, in terms of career paths for hospitalists, are robust — and growing. Hospitalists were already being viewed as leaders in the hospital before the pandemic hit. Their impressive performance during COVID-19 cemented that,” said Dr. Rohal, whose company employs approximately 3,000 hospitalists at 200 U.S. sites.

Jerome C. Siy, MD, a past president of the Society of Hospital Medicine and division medical director of hospital-based specialties for HealthPartners in Minneapolis, Minnesota, agrees that hospitalists’ role in helping hospitals navigate the pandemic has revealed even more ways, particularly in telehealth, that hospital medicine physicians’ expertise might bring value.

Today, Dr. Siy said, hospitalists are being tapped for key roles in operations — improving electronic health records (EHRs) and consulting on informatics innovations. “We’re even seeing hospitalists getting involved in emerging areas such as predictive analytics, patient risk scoring, population health, and nascent hospital-at-home programs,” he said.

“As an early-career hospitalist, you have to invest in growing your knowledge base and carving out time to do committee work if you want to pursue a leadership role. There are new skill sets to learn, and that takes time.”

— Jerome C. Siy, MD, HealthPartners

Per Danielsson, MD, a hospitalist who has helped hospitals pilot hospital-at-home (HAH) programs, which seek to provide hospital-level care for older patients who may be at risk for functional decline or other problems

associated with long inpatient stays if they remain in the hospital. He views the model as a win-win for hospitals and the hospitalists who clinically manage such patients. Hospitalists bring valuable experience to HAH programs because of their extensive expertise in triaging acutely ill patients, working in multidisciplinary teams, and, recently, delivering telemedicine. In a June 2019 article in the *Journal of Hospital Medicine*, Dr. Danielsson predicted that HAH hospitalists might one day become a subspecialty of their own.

In a field that continues to grow steadily, and at a time when hospitals are amenable to placing talented hospitalists in just about any administrative role they’re interested in, there’s no shortage of both traditional practice opportunities and jobs that combine clinical and administrative work. Today, an estimated 50,000 hospitalists practice in the United States, and the specialty experienced a 50 percent growth rate between 2012 and 2019, according to a study published in *Journal of Hospital Medicine* in August 2022.

What early-career hospitalists are seeking

Even if the sky is the limit in terms of the myriad ways that hospitalists might configure their clinical careers or combine clinical and administrative work, young physicians considering — or newly entering — the field choose the specialty for its schedule flexibility and its perceived ability to deliver acceptable work/life balance. Ijeoma Carol Nwelue, MD, hospitalist medical director for Baylor Scott & White Health in Fort Worth, Texas, said that even early-career hospitalists aren’t shy about articulating their wish lists.

“Young physicians really want that work/life balance, so schedules are a big issue for them,” she said. “Hospitalists really want their work planned around their life, and they’re expecting not to have to grind it out every day. They want specific fixed hours, but they also want some schedule flexibility when they need it.”

Most hospitalist organizations are attempting to deliver on both fronts. Still, the predominate schedule in the specialty is seven on/seven off (often called a “7/7”) — hospitalists work seven days or nights in a row, followed by seven off — can be a bit of a grind when hospitalists are in the “on” mode, several sources acknowledged. As such, some groups are exploring ways to shorten shifts or otherwise reconfigure schedules. So far, no new standard has emerged.

Young physicians are also looking for ways to serve the community at large. They're increasingly articulating that desire when they interview for positions, observed Dr. Nwelue, now a veteran of the field. "That's something we've been seeing a lot in recent years — young physicians wanting dedicated time for community outreach, for opportunities to care for or teach patients outside of the hospital setting," she said. "It's a common request of this new generation."

Hospitalists want to teach, too

Also high on the wish list for many young hospitalists are formal or informal teaching opportunities. Although hospitalists in academic medicine have such opportunities as a matter of course, many of those practicing in other settings such as community hospitals also want to spend some time teaching students, residents, or even other colleagues, several sources mentioned. Fortunately, some of the hybrid community hospital/academic institution partnerships that have emerged in the past decade are giving hospitalists a chance to do some teaching and research work in addition to their clinical duties.

In the academic realm, some programs are seeking more expedient pathways for early-career hospitalists move into medical education more quickly — with the objective of providing that career satisfier sooner than it might occur traditionally in competitive academic environments. The University of Chicago, for instance, has pioneered an innovative Passport to Clinical Teaching program, which offers early-career hospitalists access to medical-education opportunities that they can pursue on their own time and can coordinate with their clinical responsibilities.

"A lot of young hospitalists really want to teach and to learn how to become mentors, but it's challenging because their schedules are heavy clinically. And there is substantial competition for available teaching time in academic environments," said Elizabeth A. Murphy, MD, assistant professor and director of clinical service development in the University of Chicago's Section of Hospital Medicine. "What we've done is create structured content on becoming a better teacher that hospitalists can access on their own time."

More limited teaching opportunities are available as a series of Passport rotations in various domains, that cohort members complete within about a year, Dr. Murphy noted. Participants typically spend time at external community hospitals that operate smaller residency programs or host

medical students and can use extra hands. Cohort members also learn how to develop continuing medical education (CME) offerings, work in community health clinics, and engage in scholarly activities, among other offerings.

J.P. "John" Murray, MD, a young University of Chicago hospitalist who now directs the hospitalist consult service, maintains that his Passport program participation effectively jumpstarted his career. "I really appreciated the fact that the Passport program is geared toward young hospitalists. It provides lots of opportunities to get involved with residents and medical students, that you might not have otherwise," Dr. Murray said. "It provides a framework and exposure. It keeps you sharp, and it provides a way to show leadership that you're very interested in teaching."

The program started in 2020 and has been well received, Dr. Murphy said. Some of the learners in the initial cohort have received teaching awards or moved into formal teaching roles. "Many hospitalists come into academic medicine because of their favorable training experiences and because they want to be part of what academic medicine does," Dr. Murphy said. "This offers early-career hospitalists a way to do that, and it gives us a way to harness the mentoring talent we have."

Telehealth and other practice options

Not surprisingly, because of their varied exposure to many aspects of care delivery and the skills they gained navigating the pandemic, hospitalists have been pivotal in helping hospitals develop and expand telehealth services, to reach both home-bound patients and those in underserved areas. Dr. Siy noted that hospitalists at his organization provide telehealth services at night to outlying hospitals and some reserve a portion of their clinical time to work in rural hospitals.

Dr. Nwelue reported that her organization is piloting a hospitalist-managed telehealth service aimed at managing lower-acuity patients — such as those with infections that require IV antibiotics — who can be safely cared for at home with nursing intervention and hospitalist management. Likewise, in pediatrics, a field that has struggled with capacity as dedicated pediatrics units have shrunk or disappeared, pediatric hospitalists are using telemedicine to expand their reach into rural and smaller hospitals. In particular, pediatric hospitalists are helping such facilities care for lower-acuity young patients that present to their emergency departments.

In recent years, another brand of hospitalist has emerged — transitionalists. These hospitalists focus on the intersection of inpatient care and so-called step-down units. Transitionalists practice either part-time or full-time in post-acute settings such as inpatient rehabilitation facilities, long-term acute-care hospitals, or skilled nursing facilities. In such roles, hospitalists often serve as medical directors.

In another recent development, hospitalists are being tapped as in-house consultants. They're helping hospitals reduce unnecessary services utilization, assess medical-necessity issues, and streamline post-discharge care continuity. Because hospitalists develop in-depth familiarity with specialists' practice patterns, test ordering, and patient lengths of stay, hospitals are discovering that hospitalist input pays dividends in both reducing costs and improving care.

Inside hospitals and health systems, organizations are realizing that young tech-savvy hospitalists can also be instrumental in helping them vexing issues. Hospitalists are being tapped to help resolve workflow, IT, and EHR issues that cause inefficiencies — or clinician frustration. “This is an ideal role for early-career hospitalists who have an interest and some expertise in healthcare technology,” said Dr. Siy. “There’s a real demand for such skills.”

One of the big draws in the early years of hospital medicine was that hospitalists working “7/7” schedules could use some of the off-week time to moonlight at local hospitals, perhaps to pay off education debt more rapidly. Although moonlighting isn’t as common as it once was in the field, some hospitalists recognize that they can use their off time to learn new clinical or business skills or even start new ventures.

Mitchell Durante, DO, and Anthony King, DO, hospitalists at BJC Healthcare Christian Hospital in St. Louis, Missouri, recently decided to take advantage of their “7/7” schedule flexibility to start a manipulative medicine clinic that’s open during their off weeks. “It took us a few years to get this up and running, but we’re excited about starting our own business,” Dr. Durante said. “That’s one of the good things about hospital medicine — it gives you the flexibility to do something like this.”

Some hospitalists are also utilizing their newly developed telemedicine skills with their flexibility to carve out opportunities to provide remote care and consultations from home. Others are developing new products or apps, launching podcasts, or serving as independent medical reviewers.

The other ‘ists’—growth of specialty hospitalists is slow, but steady

In the past 15 years, several specialties have made strides in developing inpatient-only services based on the hospitalist model as specialists wrestle with the growing challenges of simultaneously managing a combined outpatient/inpatient practice.

The mainstays of the specialty hospitalist movement remain orthopedics, trauma, anesthesiology, OB/GYN, general surgery, and gastroenterology. But psychiatry and neurology are both increasingly embracing the hospitalist model. In a pioneering venture, the University of California San Francisco has started a Neurohospitalist Division that utilizes a structure similar to the traditional medicine hospitalist model.

Leadership roles

Although it’s not uncommon now to see hospitalists as medical directors, chief medical officers, and health-system committee chairs, young hospitalists should understand that both a learning curve and a willingness to devote extra time to small-scale initiatives are prerequisites for obtaining leadership roles, Dr. Siy noted. “As an early-career hospitalist, you have to invest in growing your knowledge base and carving out time to do committee work if you want to pursue a leadership role. There are new skill sets to learn, and that takes time,” he said.

Organizations are trying to accommodate hospitalists’ desires to move into leadership roles without waiting a decade or longer. TeamHealth, for example, operates a designated leadership track for interested hospitalists. And it’s a popular option, according to Dr. Uppal. In addition, the Society of Hospital Medicine’s Leadership Academy offers a wide range of courses that enable hospitalists to obtain leadership and management skills.

“The possibilities, in terms of career paths for hospitalists, are robust — and growing. Hospitalists were already being viewed as leaders in the hospital before the pandemic hit. Their impressive performance during COVID-19 cemented that.”


— Rohit Uppal, MD, TeamHealth Hospital Medicine

For Jessica Porter, MD, a TeamHealth hospitalist medical director at Memorial Hospital Miramar in Hollywood, Florida, the opportunity to

lead came early — soon after she completed residency in 2016. She jumped at the chance. “I’d always been interested in leadership, and in contributing, because, well, someone did the same for me. It was a steep learning curve, but I managed it and found I really enjoyed the administrative work,” said Dr. Porter.

Today, although Dr. Porter maintains a full clinical schedule, she manages to fit in most of her administrative duties during her “on” weeks, and receives a stipend for her leadership work. Those duties include managing operations and coaching physicians, representing hospitalists’ interests at hospital management meetings and, as needed, boosting morale. “It’s very gratifying work, and I think it’s important to have a seat at the table when [organizational] decisions are being made,” she said.

Dr. Porter advises young hospitalists who are interested in leadership to look for committee and task force openings, engage in quality improvement initiatives and, above all, express their interest in leadership roles. “If you don’t ask, you don’t get it — whether it’s a raise or a leadership opportunity,” she said.

 Did you find this article helpful? Sign up for our Career Resources Update e-newsletter to get more physician career articles delivered right to your inbox! www.nejmcareercenter.org/register.



When Is It Time to Change Jobs?

By Nisha Mehta, MD, a physician leader whose work focuses on physician empowerment, community building, and career longevity in medicine

Statistically, the majority of physicians will change jobs within their first five years out of training. Additionally — even at later stages of physician careers — an increasing percentage of the physician population consider changes in their career. Physician turnover is an often talked about issue amongst hospital administrators and practice owners.

Why is this? Well, part of it has to do with the challenges associated with being a physician in the current health care landscape. My father, a cardiologist, spent four decades of his career with the same group. Many of his friends can say the same. On the other hand, I know a far lower percentage of colleagues who could say with confidence that they see themselves with the same group for the remainder of their careers. Aside from practical drivers of physician turnover, such as a desire to be closer to family or a change in the job of a significant other, many are finding their workplaces increasingly challenging. As consolidation within the health care space increases, physician demographics change, and the pressure to do more with less increases, more physicians find themselves asking if their situation is sustainable.

We all have aspects of our jobs that are pain points, and the expectation that any job will be perfect is unrealistic. How do you know you’re not

Career Resources articles posted on NEJM CareerCenter are produced by freelance health care writers as an advertising service of NEJM Group, a division of the Massachusetts Medical Society, and should not be construed as coming from the *New England Journal of Medicine*, nor do they represent the views of the *New England Journal of Medicine* or the Massachusetts Medical Society.

CLINICAL PRACTICE

Caren G. Solomon, M.D., M.P.H., *Editor*

Screening for Prostate Cancer

Paul F. Pinsky, Ph.D., and Howard Parnes, M.D.

This Journal feature begins with a case vignette highlighting a common clinical problem. Evidence supporting various strategies is then presented, followed by a review of formal guidelines, when they exist. The article ends with the authors' clinical recommendations.

A 60-year-old patient asks whether he should undergo screening for prostate cancer and, if he undergoes screening and the results are positive, what his options would be with respect to further diagnostic testing and treatments. How would you respond?

From the Early Detection Branch (P.F.P.) and the Prostate and Urologic Cancer Branch (H.P.), Division of Cancer Prevention, National Cancer Institute, National Institutes of Health, Bethesda, MD. Dr. Pinsky can be contacted at pinskyp@mail.nih.gov or at the Division of Cancer Prevention, 9609 Medical Center Dr., National Cancer Institute, Rockville, MD 20852.

N Engl J Med 2023;388:1405-14.

DOI: 10.1056/NEJMcp2209151

Copyright © 2023 Massachusetts Medical Society.

THE CLINICAL PROBLEM

PROSTATE CANCER IS CURRENTLY THE MOST DIAGNOSED CANCER (EXCLUDING nonmelanoma skin cancer) and the second leading cause of cancer death among U.S. men. Prostate cancer was diagnosed in an estimated 268,500 men in 2022, and approximately 34,500 died of it.¹ The disease occurs primarily in older persons, with the incidence greatest among men in their 70s and mortality highest among men in their 80s. The incidence among non-Hispanic Black men is 1.7 times as high as that among non-Hispanic White men, and mortality is 2.1 times as high; incidence and mortality are lower among Hispanic men and Asian men than among White men and non-Hispanic Black men.¹

Measurement of prostate-specific antigen (PSA), a protein secreted by both normal and malignant prostate epithelial cells, was approved by the Food and Drug Administration (FDA) in 1986 for use in monitoring patients with known prostate cancer and later (in 1994) as an aid in the detection of prostate cancer in conjunction with digital rectal examination in patients 50 years of age or older.^{2,3} Notably, this approval occurred in the absence of evidence that early detection of prostate cancer leads to improved patient outcomes. The onset of widespread PSA screening in the late 1980s is widely acknowledged to be the primary cause of the sharp increase in prostate cancer incidence that was observed in the next decade; rates later fell, beginning in approximately 2009 (Fig. S1A in the Supplementary Appendix, available with the full text of this article at NEJM.org).^{1,4} From a peak in the early 1990s, prostate cancer mortality steadily decreased during the next two decades by approximately 50% and has subsequently remained essentially constant (Fig. S1B).¹

The association between PSA screening and mortality is less clear than the association between screening and incidence, with various analyses undertaken to assess the relative contribution of screening (as compared with other factors, including treatment improvements) to the reduction in mortality.⁵⁻⁸ An estimate with the use of a quantitative model showed that slightly less than half the reduction in mortality was as a result of screening.⁸

In the majority of prostate cancer cases currently diagnosed in the United States, the disease is localized, with only approximately 7% of patients presenting


just trading one set of pain points for another — which in a worst case scenario, is potentially worse elsewhere?

When considering a job change, I always recommend writing down the pain points at your current job, delineating which ones are dealbreakers, and which ones could potentially be changed if discussed openly with the employer. If you are planning on leaving anyways, it's advisable to first see if the current situation can be fixed. Although these conversations can be uncomfortable, ultimately if you're planning on leaving regardless, it may be that there's little to lose in trying. Similarly, ensuring that these same pain points are not present at the new job is prudent.

Factors such as salary, flexibility in work hours, opportunities for growth or promotion, dissatisfaction with the current job environment and the direction a company is going in, burnout, or other non-salary aspects of the compensation package are all examples of things that lead to job turnover that could potentially be negotiated with the current employer.

There are other factors which many see as writing on the wall that a change is inevitable. Sometimes these can be related to changes in ownership or management structure of a group, a confirmed trend toward cutting physician compensation or hiring patterns that suggest the physician's time at the job is limited, or administrative mandates that have been challenged and upheld, which leave the physician with the conclusion that they can't practice medicine in a way that they enjoy or feel is best for the patient.

Many people stay with jobs out of comfort or fear of change. Unfortunately, this leads to burnout, and ultimately is a threat to career longevity. If you're feeling unhappy with your job, it's time to either advocate for change within your current position, or consider other options.

 Did you find this article helpful? Sign up for our Career Resources Update e-newsletter to get more physician career articles delivered right to your inbox! www.nejmcareercenter.org/register.

KEY CLINICAL POINTS

SCREENING FOR PROSTATE CANCER

- Prostate cancer is the most diagnosed cancer (excluding nonmelanoma skin cancer) and is the cancer with the second highest mortality among men in the United States. Prostate cancer–specific survival at 10 years is 95% among men with localized disease.
- Prostate-specific antigen (PSA) screening should involve shared decision making with consideration of the risks and benefits of screening and patient preferences.
- Findings from randomized trials support a modest reduction in prostate cancer mortality with PSA screening; screening 1000 men may prevent deaths from prostate cancer in 1.3 men in the 13 years after initial screening.
- Persons with elevated PSA levels on screening may choose to undergo further tests to inform the need for biopsy, multiparametric magnetic resonance imaging (MRI) to identify biopsy targets, or both.
- Persons with low-risk or favorable intermediate-risk prostate cancer may choose to undergo active surveillance (periodic PSA tests and biopsies) over immediate curative treatment (surgery or radiation therapy).
- Surgery and radiation therapy generally provide excellent outcomes in prostate cancer but may result in harms, including urinary incontinence and erectile dysfunction with surgery, and bowel dysfunction and erectile dysfunction with radiation therapy.

with metastatic disease.¹ Localized disease is classified according to risk of progression or death on the basis of tumor stage, PSA level, and tumor grade.⁹⁻¹¹ Tumor grade has traditionally been summarized by the Gleason score but has more recently been reported in terms of grade group, which ranges from 1 (Gleason score, 6) to 5 (Gleason score, 9 or 10). The grade-group nomenclature classifies a Gleason score of 6 as the lowest grade of prostate cancer.¹² The Gleason score is composed of a primary (most predominant) grade plus a secondary (highest non-predominant) grade. In persons with localized disease, clinically significant prostate cancer is usually defined as grade group 2 or higher (Gleason score, $\geq 3+4$) or grade group 3 or higher (Gleason score, $\geq 4+3$). For localized disease, 10-year prostate cancer–specific survival is approximately 95%.¹ In contrast, 5-year survival is approximately 35% for metastatic disease.

Definitive treatment for localized disease typically involves either radiation therapy or radical prostatectomy. In the past decade, active surveillance has emerged as an alternative to immediate, definitive therapy for persons with localized, low-risk disease and for selected persons with favorable, intermediate-risk disease.^{13,14} Active surveillance includes periodic surveillance biopsies in addition to PSA monitoring, with a plan to initiate local therapy with curative intent if there is evidence of disease progression. Here, we review the current under-

standing of the benefits and harms of PSA screening.

STRATEGIES AND EVIDENCE

INTERPRETATION OF PSA LEVELS

In the United States, a PSA level of 4.0 ng per milliliter has been the generally accepted threshold at which providers recommend prostate biopsy; in Europe, a cutoff of 3.0 ng per milliliter has more commonly been used. However, there is no PSA level below which prostate cancer can be definitively ruled out. In the Prostate Cancer Prevention Trial, prostate cancer was detected in 15.2% of men whose PSA levels remained below 4.0 ng per milliliter throughout the 7-year trial and in 6.6% of men with a PSA level of 0.5 ng per milliliter or lower at the end of the trial.¹⁵ However, only 2.3% of men with a PSA level of 4.0 ng per milliliter or lower had disease with a grade group score of 2 or higher as shown on the end-of-study biopsy. Data from the Physicians Health Study showed a cumulative risk of lethal prostate cancer of only 0.3% through 15 years among men 55 to 59 years of age with baseline PSA levels that were below the median of 1.0 ng per milliliter.¹⁶

RANDOMIZED, CONTROLLED TRIALS OF PSA SCREENING

The European Randomized Study of Screening for Prostate Cancer (ERSPC) was a multicenter,

randomized, controlled trial that was initiated in the early 1990s to assess the effect of PSA screening on prostate cancer mortality among 162,388 men 55 to 69 years of age.^{17,18} Planned screening involved assessment of PSA every 4 years with a biopsy-recommendation threshold of 3.0 ng per milliliter, although there was some variation among the study centers; the control group was not offered screening as part of the trial (and screening rates were believed to be low, although rates were not rigorously assessed across the trial sites). Among men in the intervention group, the mean number of screens, positive results, and biopsies per participant was 1.9, 0.33, and 0.27, respectively. The positive predictive value of biopsy was 24.8%. Prostate cancer diagnoses were more common in the screening group than in the control group (rate ratio, 1.90 at 9 years and 1.41 at 16 years). At the 16-year follow-up, the rate ratio of prostate cancer mortality in the screening group was 0.80 (95% confidence interval [CI], 0.72 to 0.90); rate ratios were similar at 11 and 13 years. The risk differences per 1000 men were 1.28 at 3 years and 1.76 at 16 years, resulting in the numbers needed to invite to screening to prevent one prostate cancer death of 781 and 570, respectively. In an analysis adjusted for participants who were invited to undergo screening but did not accept, the rate ratio of prostate cancer mortality (through 16 years) was 0.75.¹⁸

In the Prostate, Lung, Colorectal and Ovarian (PLCO) trial, which began in 1993, a total of 76,683 men 55 to 74 years of age underwent randomization to screening (intervention) or usual care (control).¹⁹ Screening involved six annual PSA measurements and four annual digital rectal examinations; the PSA biopsy-recommendation threshold was 4.0 ng per milliliter. Intervention-group adherence to PSA testing ranged from 85 to 89% across screening rounds. However, PSA testing was also common in the control group, with participants in that group undergoing approximately half as much testing as participants in the intervention group.¹⁹ The incidence of biopsy after positive results on screening was substantially lower in the PLCO trial than in the ERSPC trial. The incidence of prostate cancer was modestly higher in the intervention group than in the control group (rate ratio, 1.12 at 13 years). At 15-year and 17-year follow-

ups, rate ratios for prostate cancer mortality were 1.04 (95% CI, 0.87 to 1.24) and 0.93 (95% CI, 0.81 to 1.08), respectively^{19,20}; the rate ratio for disease of grade groups 4 or higher at 17 years was 0.89 (95% CI, 0.80 to 0.99).

The U.K. Cluster Randomized Trial of PSA Testing for Prostate Cancer (CAP) trial was a primary care–based, randomized, controlled trial in which 419,582 men 55 to 69 years of age were assigned to receive an invitation to one-time PSA screening (with prostate biopsy recommended in persons with PSA levels >3.0 ng per milliliter) or to not be offered screening.²¹ PSA screening was performed in 36% of participants in the intervention group, within the 35-to-50% range on which the power calculations were based. At the median 10-year follow-up, the rate ratio for prostate cancer diagnosis was 1.19 (95% CI, 1.14 to 1.25). Prostate cancer mortality did not differ significantly between the groups (0.30 in the intervention group vs. 0.31 in the control group per 1000 person years; rate ratio, 0.96; 95% CI, 0.85 to 1.08). An analysis that accounted for adherence to screening showed similar results (rate ratio, 0.93; 95% CI, 0.67 to 1.29).

Systematic reviews of PSA screening trials have noted a high risk of bias in the PLCO trial owing to contamination of the control group and in the CAP trial owing to low adherence to screening.^{22,23} A review by the U.S. Preventive Services Task Force (USPSTF) also noted that there was uncertain applicability of results from the ERSPC trial in the United States owing to a lower PSA positivity threshold (3 ng per milliliter) and a higher incidence of biopsies than is customary in U.S. practice, and noted a greater use of radical prostatectomy in the intervention group than in the control group.²³ The USPSTF review resulted in an estimate, based on data from randomized, controlled trials, that screening 1000 U.S. men 55 to 69 years of age may prevent deaths from prostate cancer in 1.3 men in the 13 years after initial screening.²⁴

RANDOMIZED, CONTROLLED TRIALS OF CONSERVATIVE MANAGEMENT OR CURATIVE TREATMENT

The Scandinavian Prostate Study Group (SPCG)–4 trial and the U.S. Prostate Intervention versus Observation Trial (PIVOT) randomly assigned men to undergo prostatectomy or to receive ob-

ervation without curative intent.^{25,26} Both trials showed a lower incidence of death from prostate cancer with surgery than with observation, although the difference between surgery and observation was not significant in the PIVOT trial (SPCG-4 rate ratio, 0.56; 95% CI, 0.41 to 0.77; and PIVOT rate ratio, 0.63; 95% CI, 0.36 to 1.09). The greater absolute difference in the incidence of death from prostate cancer between observation and surgery in the SPCG-4 trial as compared with the PIVOT trial (12 percentage points vs. 4 percentage points) reflected a higher risk at baseline among men in the SPCG-4 trial, among whom fewer cancers were detected by PSA screening (12% in the SPCG-4 trial vs. 75% in the PIVOT trial).

The Prostate Testing for Cancer and Treatment (ProtecT) trial enrolled only participants who had cancer that was diagnosed after screening revealed an elevated PSA, 77% of whom had disease that was grade group 1 (clinically insignificant disease).²⁷ Men in the ProtecT trial were randomly assigned to prostatectomy, radiation therapy, or active monitoring (i.e., serial PSA tests, with increases in the PSA level triggering consideration of biopsy). At median follow-up of 10 years, prostate cancer mortality per 1000 person years was low (1.5 in the prostatectomy group, 0.9 in the radiation therapy group, and 0.7 in the active monitoring group) and did not differ significantly among the groups. However, the rate of metastases per 1000 person-years was significantly higher with active monitoring (6.3) than with radical prostatectomy (2.4) or radiation therapy (3.0), and by the end of follow-up, 55% of the men in the active monitoring group had crossed over to active treatment. An updated report at a median of 15 years of follow-up similarly showed no significant difference in prostate cancer mortality among the groups; the percentage of men with metastatic disease was 9.4% in the active monitoring group as compared with 4.7% and 5.0% in the radical prostatectomy and radiation therapy groups, respectively.²⁸

HARMS OF SCREENING

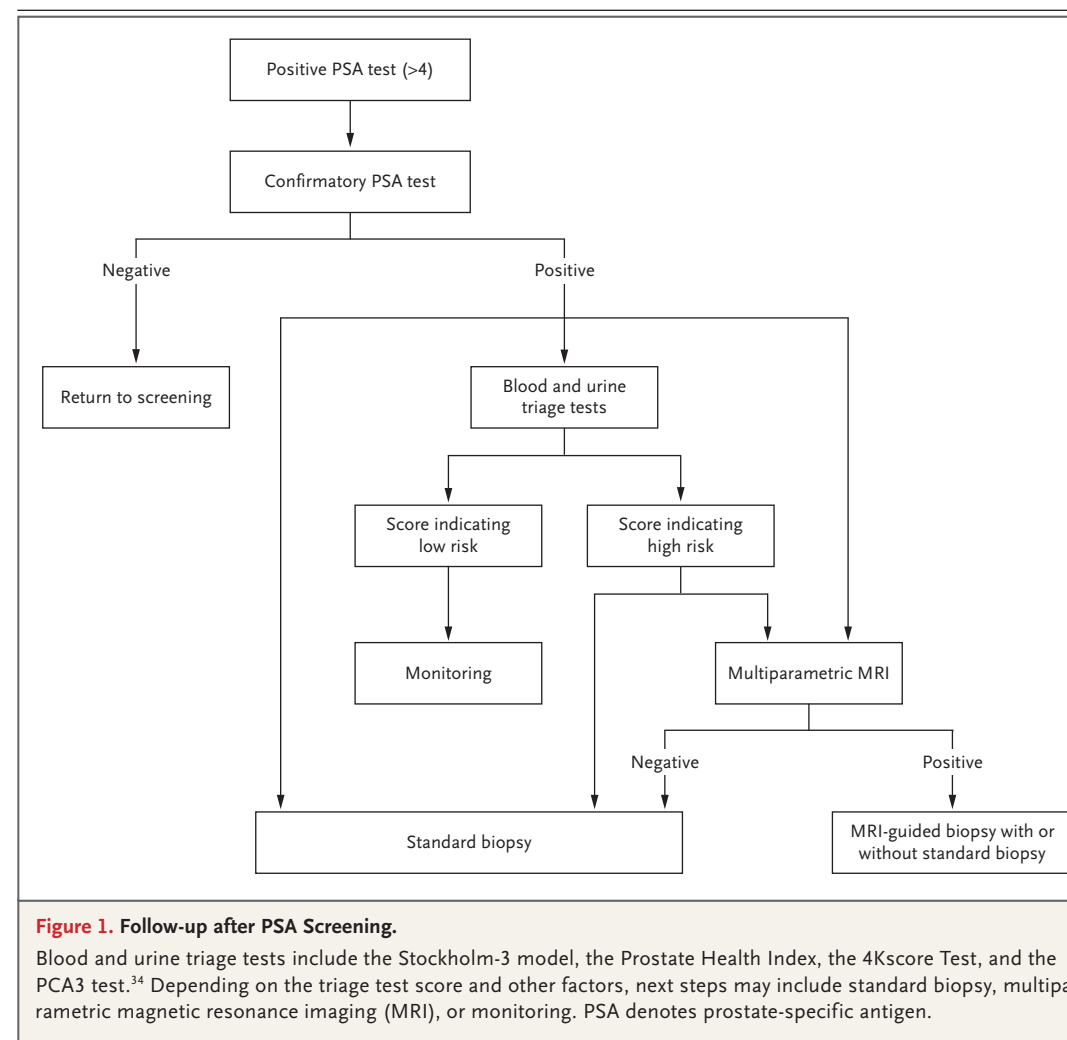
Among the harms associated with PSA screening is the performance of unnecessary biopsies and the risks associated with those procedures.²⁹ The cumulative percentage of false positive PSA results is estimated to be between 10% and 15%

over several (three to four) rounds of screening, with approximately a 5% risk of a false positive screen with a subsequent negative biopsy. According to data from a U.S. private insurer database, from 2008 through 2014, a mean of 1.8 biopsies were performed per 100 PSA tests, with a positivity percentage of 37%.³⁰ The major risk associated with prostate biopsy is infection, which occurs in 5 to 7% of patients and results in hospitalization in 1 to 3%.³¹ Other complications include hematuria (incidence, <1%), rectal bleeding that leads to medical intervention (incidence, approximately 2.5%), and less commonly, urinary obstruction or retention, or transient erectile dysfunction. In addition, prostate biopsy can be associated with substantial discomfort.

Screening results in substantial overdiagnosis (defined as the identification of a case of prostate cancer that would not otherwise have been diagnosed during a patient's lifetime without screening). An analysis that was conducted with the use of three natural history models estimated that in the 1985–2000 period, 23 to 42% of prostate cancer cases detected by screening were overdiagnosed.³² In light of this estimate, the risks associated with treatment are of particular concern. A meta-analysis showed that radical prostatectomy was associated with substantially elevated risks of both erectile dysfunction and urinary incontinence.²⁴ Although data were inconclusive as to whether the risk of these adverse events was greater after radiation therapy than with conservative management, there was some evidence of elevated risk of erectile dysfunction. In the ProtecT trial, radiation therapy, but not radical prostatectomy, was associated with worse bowel function than active monitoring.³³

MANAGEMENT OF POSITIVE SCREENS

Figure 1 shows management strategies after a positive PSA screen. Initial steps include a repeat of the screening test to rule out laboratory error and assessment of the possibility of transient or treatable causes of PSA elevation (e.g., prostatitis, benign prostatic hyperplasia, recent ejaculation, or vigorous exercise). Antibiotic agents are not recommended for the treatment of increased PSA levels in the absence of symptoms.²⁹ After confirmation of an unexplained elevation in PSA level, further assessments that may reduce unnecessary biopsies include PSA kinetics (change



over time) and urine- or blood-based molecular tests (Fig. 1); however, none of these assessments can definitively rule out prostate cancer.

A review article described six blood- or urine-based tests that were designed to assess the risk of disease of grade group 2 or higher in men with an elevated PSA level.³⁴ All the tests had similar performance; the area under the curve (AUC) ranged from 0.77 to 0.82 for the use of the test alone or in conjunction with clinical variables. For context, with a background incidence of disease of grade group 2 or higher of 36% among men referred for biopsy, an AUC of 0.81 translated to the avoidance of 22 to 37% of biopsies, depending on the cutoffs that were used, with corresponding chances of missed diagnoses of grade group 2 or higher in 1 to 5% of men.³⁵

The standard method of tissue diagnosis of prostate cancer is the 12-core, ultrasonography-guided, systematic biopsy procedure. However, standard, ultrasonography-guided biopsies have been shown to underestimate tumor grade, as determined at prostatectomy, in 30 to 50% of men.³⁶ The use of multiparametric magnetic resonance imaging (MRI) platforms to guide biopsy has been shown to reduce the incidence of misclassification³⁷ and to increase the incidence of detection of clinically significant disease.³⁸ A score of 3 or higher on the Prostate Imaging Reporting and Data System (PI-RADS) scale (scores range from 1 to 5, with higher scores indicating higher cancer risk) for any lesion prompts an MRI-guided biopsy of the lesion. Systematic biopsy is also typically performed, although the additional yield appears to be very

low in persons with lesions with a score of 5 on the PI-RADS scale.³⁹ Questions remain regarding the safety of forgoing standard biopsies in persons who have not previously undergone biopsies and have an elevated PSA level and nonsuspicious results on MRI.⁴⁰

A potential downside of the greater sensitivity of MRI in identification of small, higher-grade lesions is the risk of overdiagnosis.⁴¹ For example, a study showed that among 999 men with negative standard biopsies, the addition of MRI-targeted biopsies led to the detection of grade group 1 and grade group 2 disease in 7.4% and 7.5% of the men, respectively, the vast majority of whom would have had clinically insignificant disease.³⁷

SHARED DECISION MAKING AND DECISION AIDS

Decision making that involves sharing of information between the patient and the clinician and joint participation in the decision-making process should be an integral component of an offer of PSA screening.²⁹ The clinician should discuss with individual patients the potential benefits and harms of screening and review downstream options in the case of a positive screen, and the patients should share with the clinician their values and preferences. Table 1 describes recommended considerations for these discussions.⁴²⁻⁴⁴

The use of decision aids, tools that help patients understand the benefits and harms of undergoing screening, may facilitate shared decision making. The results of a meta-analysis of randomized, controlled trials that assessed decision aids as compared with usual care without the use of decision aids showed modest improvements in patient knowledge and a small decrease in decisional conflict (i.e., personal uncertainty about which course of action to take), but no significant differences in the frequency of screening discussions with clinicians or in the proportion of patients who decided to undergo screening.⁴⁷ Another meta-analysis showed similar findings with respect to knowledge and decisional conflict but also showed a small reduction in the proportion of men who planned to undergo screening.⁴⁸ However, there was no significant effect on the number of patients who

actually underwent PSA screening within the next year. Decision aids tailored specifically to Black patients also have been developed.^{49,50}

AREAS OF UNCERTAINTY

Although numerous series have shown the safety of active surveillance with regard to prostate cancer mortality, uncertainties remain about appropriate patient selection criteria (e.g., which patients with grade group 2 disease can safely defer definitive therapy and the appropriate use of biomarkers), monitoring strategies (e.g., the frequency of surveillance biopsy and the need for PSA monitoring), and triggers for intervention (e.g., what extent of tumor-grade progression is acceptable). Whether the tailoring of screening according to race, polygenic risk scores, or other factors results in improved outcomes is unknown.

GUIDELINES

Table 2 summarizes the guidelines of several professional organizations with regard to prostate cancer screening.^{25,29,51-56} Similar to the present recommendations, most recommend some form of shared decision making, although the recommendations vary in the suggested age range for screening and the frequency of screening.

CONCLUSIONS AND RECOMMENDATIONS

For the 60-year-old man in the vignette, shared decision making regarding prostate cancer screening should be pursued. Discussion is warranted regarding the benefits and risks of screening, the potential pathways after a positive screen (relating to both the biopsy and treatment, if the biopsy is positive), the patient's level of risk, and his attitudes and preferences.

We recommend the use of a decision aid to facilitate shared decision making; culturally tailored tools should be considered, especially for non-Hispanic Black men, given the higher prostate cancer mortality in that population and the inclusion of few Black men in major screening trials. He should receive counseling that screening, if pursued, is not a one-time test but instead

Table 1. Elements of Shared Decision Making in Screening for Prostate Cancer.^{29,42-44*}

Category and Components	Details
Screening test: PSA test positivity	Approximately 8% (with 4 ng per milliliter as the cutoff for positivity) ⁴⁵
Cancer risk: probability of prostate cancer diagnosis after positive screen	18% at baseline, 11% at postbaseline screen (diagnosis within 1 yr of screening; cutoff of 4 ng per milliliter) ⁴⁵
Potential benefits	
Prevention of death from prostate cancer	Among 1000 men invited to undergo screening, approximately 5 will die from prostate cancer and 1.3 will avoid death from prostate cancer owing to screening in the 13-year period after initial screening ²⁴
Reassurance regarding low risk	In men 55 to 59 years of age, a PSA level of <1 ng per milliliter is associated with an approximate 0.3% cumulative risk of lethal prostate cancer (death or metastatic disease) in the 15 years after screening ¹⁶
Potential harms	
Overdiagnosis	In an 11-year period, prostate cancer will be diagnosed in approximately 96 of 1000 men, among whom overdiagnosis will occur in 23 to 42% ^{32,43}
Overtreatment and resulting complications	Of men in whom prostate cancer is diagnosed, approximately two thirds will initially receive active treatment (i.e., radical prostatectomy or radiation therapy) and approximately one third will receive active surveillance; of the latter, approximately half will progress to active treatment ²⁴ Radical prostatectomy is associated with an elevated risk of erectile dysfunction and urinary incontinence ²³ Radiotherapy is associated with an elevated risk of erectile dysfunction and impaired bowel function ^{23,33}
Likelihood of false positive test, further diagnostic testing (e.g., biopsy), and risk of biopsy complications	10–15% false positive rate after 3–4 screening rounds, including 5% rate of false positive screening results that lead to subsequent negative biopsy ²⁹ Risk of bleeding and infection with biopsy and 1–3% risk of hospitalization ³¹
Personal risk	
Age ¹	50–64 yr: incidence, 253 per 100,000 person-yr; mortality, 9 per 100,000 person-yr 65–74 yr: incidence, 735 per 100,000 person-yr; mortality, 54 per 100,000 person-yr ≥75 yr: incidence, 558 per 100,000 person-yr; mortality, 224 per 100,000 person-yr
Race	Incidence among Black men is 1.7 times as high as that among non-Black men, and mortality among black men is 2.1 times as high as that among non-Black men ¹
Family history of prostate cancer	Incidence among persons with a family history of prostate cancer is 2.5 times as high as that among those with no family history of the disease ⁴⁶
Attitudes and preferences: personal assessment of the relative importance of potential benefits and harms	Benefits: prostate cancer ruled out, risk of dying from prostate cancer reduced Harms: treatment or periodic surveillance testing for a cancer that may never have caused any symptoms, with possible associated complications; an unnecessary prostate biopsy in men without cancer, with possible associated complications
Next-step options after confirmed positive PSA test: decisions on biopsy and treatment	Triage tests may allow the patient to avoid or defer the need for biopsy, with a small risk of missed clinically significant disease ³⁴ The use of MRI-guided biopsy can increase detection of clinically significant disease but with some risk of overdiagnosis ³⁷ In low-risk disease, active surveillance, involving periodic PSA tests and biopsies, may provide for avoidance of or delay in the need for curative treatment, with a possible small increased risk of metastatic progression or death from prostate cancer ²⁷

* PSA denotes prostate-specific antigen.

Table 2. U.S. and Selected Other Guidelines on Screening for Prostate Cancer.*

Organization and Recommendations	Population	Screening Interval	Comment
U.S. Preventive Services Task Force²⁴			
Discuss the harms and benefits of PSA screening with patient	Age 55–69 yr	Not addressed	Grade C recommendation (at least moderate certainty that the net benefit is small)
No screening	Age ≥70 yr	NA	Grade D recommendation
National Comprehensive Cancer Network⁵¹			
Discuss risks and benefits to early detection of prostate cancer	Average risk, age 45–75 yr; high risk, age 40–75 yr†	2–4 yr with PSA level of <1 ng/ml; 1–2 yr with PSA level of ≥1 ng/ml	
No screening	Age >75 yr	NA	
American Urological Association²⁹			
Shared decision making	Age 55–69 yr	2 yr	Moderate strength of evidence
No routine screening	Age 40–54 yr or ≥70 yr	NA	Weak strength of evidence
American Academy of Family Physicians⁵²			
Shared decision making	Age 55–69 yr	≥2 yr	Grade C recommendation (selective offering based on professional judgment and patient preferences)
No screening	Age ≥70 yr	NA	
American Cancer Society: discuss screening⁵³			
	Age ≥50 yr‡; age ≥45 yr for non-Hispanic Black men or men with a first-degree relative with prostate cancer that was diagnosed by age 65 yr‡	2 yr with PSA level of <2.5 ng/ml; 1 yr with PSA level of ≥2.5 ng/ml	
EAU–EANM–ESTRO–ESUR–SIOG⁵⁶			
Individualized, risk-adapted strategy for screening	Life expectancy at least 10–15 yr	2 yr for men at elevated risk according to PSA level and age; 8 yr for men at lower risk	Weak recommendation
No screening without counseling regarding potential risks and benefits	NA	NA	Strong recommendation
Canadian Task Force on Preventive Health Care: no screening ⁵⁴	NA	NA	Strong recommendation for men <55 yr or ≥70 yr of age; weak recommendation for men 55–69 yr of age
Japan Urological Association: screening ⁵⁵	Age ≥50 yr; age ≥40 yr with family history	3 yr with PSA level of <1 ng/ml; 1 yr with PSA level of ≥1 ng/ml	Recommendation that fact sheets be provided that include important issues regarding prostate cancer

* EANM denotes European Association of Nuclear Medicine, EAU European Association of Urology, ESTRO European Society for Therapeutic Radiology and Oncology, ESUR European Society of Urogenital Radiology, NA not applicable, and SIOG International Society of Geriatric Oncology.

† The high-risk population includes non-Hispanic Black men and men with either a family history suggestive of prostate cancer or with certain germline mutations.

‡ Recommendation applies to men with a life expectancy of at least 10 years.

should be performed periodically (but generally not more frequently than every 2 years).

The opinions expressed by the authors in this article are their own, and this material should not be interpreted as representing the official viewpoint of the Department of Health and Human

Services, the National Institutes of Health, or the National Cancer Institute.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

We thank Dr. Peter Pinto for helpful comments on an earlier version of the manuscript.

REFERENCES

- National Cancer Institute. Cancer stat facts: common cancer sites. Surveillance, Epidemiology, and End Results Program. 2022 (<https://seer.cancer.gov/statfacts/html/common.html>).
- Oesterling JE. Prostate specific antigen: a critical assessment of the most useful tumor marker for adenocarcinoma of the prostate. *J Urol* 1991;145:907-23.
- Fitzpatrick JM, Banu E, Oudard S. Prostate-specific antigen kinetics in localized and advanced prostate cancer. *BJU Int* 2009;103:578-87.
- Potosky AL, Miller BA, Albertsen PC, Kramer BS. The role of increasing detection in the rising incidence of prostate cancer. *JAMA* 1995;273:548-52.
- Collin SM, Martin RM, Metcalfe C, et al. Prostate-cancer mortality in the USA and UK in 1975-2004: an ecological study. *Lancet Oncol* 2008;9:445-52.
- Baade PD, Coory MD, Aitken JF. International trends in prostate-cancer mortality: the decrease is continuing and spreading. *Cancer Causes Control* 2004;15:237-41.
- Welch HG, Albertsen PC. Reconsidering prostate cancer mortality — the future of PSA screening. *N Engl J Med* 2020;382:1557-63.
- Etzioni R, Gulati R, Cooperberg MR, Penson DM, Weiss NS, Thompson IM. Limitations of basing screening policies on screening trials: the US Preventive Services Task Force and prostate cancer screening. *Med Care* 2013;51:295-300.
- Partin AW, Yoo J, Carter HB, et al. The use of prostate specific antigen, clinical stage and Gleason score to predict pathological stage in men with localized prostate cancer. *J Urol* 1993;150:110-4.
- Kattan MW, Eastham JA, Stapleton AM, Wheeler TM, Scardino PT. A preoperative nomogram for disease recurrence following radical prostatectomy for prostate cancer. *J Natl Cancer Inst* 1998;90:766-71.
- D'Amico AV, Whittington R, Malkowicz SB, et al. Pretreatment nomogram for prostate-specific antigen recurrence after radical prostatectomy or external-beam radiation therapy for clinically localized prostate cancer. *J Clin Oncol* 1999;17:168-72.
- Pierorazio PM, Walsh PC, Partin AW, Epstein JI. Prognostic Gleason grade grouping: data based on the modified Gleason scoring system. *BJU Int* 2013;111:753-60.
- Baboudjian M, Breda A, Rajwa P, et al. Active surveillance for intermediate-risk prostate cancer: a systematic review, meta-analysis and meta-regression. *Eur Urol Oncol* 2022;5:617-27.
- Walker CH, Marchetti KA, Singhal U, Morgan TM. Active surveillance for prostate cancer: selection criteria, guidelines, and outcomes. *World J Urol* 2022;40:35-42.
- Thompson IM, Goodman PJ, Tangen CM, et al. The influence of finasteride on the development of prostate cancer. *N Engl J Med* 2003;349:215-24.
- Preston MA, Batista JL, Wilson KM, et al. Baseline prostate-specific antigen levels in midlife predict lethal prostate cancer. *J Clin Oncol* 2016;34:2705-11.
- Schröder FH, Hugosson J, Roobol MJ, et al. Screening and prostate cancer mortality: results of the European Randomised Study of Screening for Prostate Cancer (ERSPC) at 13 years of follow-up. *Lancet* 2014;384:2027-35.
- Hugosson J, Roobol MJ, Månsson M, et al. A 16-yr follow-up of the European Randomized study of Screening for Prostate Cancer. *Eur Urol* 2019;76:43-51.
- Pinsky PF, Prorok PC, Yu K, et al. Extended mortality results for prostate cancer screening in the PLCO trial with median follow-up of 15 years. *Cancer* 2017;123:592-9.
- Pinsky PF, Miller E, Prorok P, Grubb R, Crawford ED, Andriole G. Extended follow-up for prostate cancer incidence and mortality among participants in the Prostate, Lung, Colorectal and Ovarian randomized cancer screening trial. *BJU Int* 2019;123:854-60.
- Martin RM, Donovan JL, Turner EL, et al. Effect of low-intensity PSA-based screening intervention on prostate cancer mortality: the CAP randomized clinical trial. *JAMA* 2018;319:883-95.
- Ilic D, Djulbegovic M, Jung JH, et al. Prostate cancer screening with prostate-specific antigen (PSA) test: a systematic review and meta-analysis. *BMJ* 2018;362:k3519.
- Fenton JJ, Weyrich MS, Durbin S, Liu Y, Bang H, Melnikow J. Prostate-specific antigen-based screening for prostate cancer: evidence report and systematic review for the US Preventive Services Task Force. *JAMA* 2018;319:1914-31.
- Grossman DC, Curry SJ, Owens DK, et al. Screening for prostate cancer: US Preventive Services Task Force recommendation statement. *JAMA* 2018;319:1901-13.
- Bill-Axelsson A, Holmberg L, Garmo H, et al. Radical prostatectomy or watchful waiting in early prostate cancer. *N Engl J Med* 2014;370:932-42.
- Wilt TJ, Jones KM, Barry MJ, et al. Follow-up of prostatectomy versus observation for early prostate cancer. *N Engl J Med* 2017;377:132-42.
- Hamdy FC, Donovan JL, Lane JA, et al. 10-Year outcomes after monitoring, surgery, or radiotherapy for localized prostate cancer. *N Engl J Med* 2016;375:1415-24.
- Hamdy FC, Donovan JL, Lane JA, et al. Fifteen-year outcomes after monitoring, surgery, or radiotherapy for prostate cancer. *N Engl J Med*. DOI: 10.1056/NEJMoa2214122.
- Carter HB, Albertsen PC, Barry MJ, et al. Early detection of prostate cancer: AUA guideline. *J Urol* 2013;190:419-26.
- Kearns JT, Holt SK, Wright JL, Lin DW, Lange PH, Gore JL. PSA screening, prostate biopsy, and treatment of prostate cancer in the years surrounding the USPSTF recommendation against prostate cancer screening. *Cancer* 2018;124:2733-9.
- Liss MA, Ehdia B, Loeb S, et al. An update of the American Urological Association white paper on the prevention and treatment of the more common complications related to prostate biopsy. *J Urol* 2017;198:329-34.
- Draisma G, Etzioni R, Tsodikov A, et al. Lead time and overdiagnosis in prostate-specific antigen screening: importance of methods and context. *J Natl Cancer Inst* 2009;101:374-83.
- Donovan JL, Hamdy FC, Lane JA, et al. Patient-reported outcomes after monitoring, surgery, or radiotherapy for prostate cancer. *N Engl J Med* 2016;375:1425-37.
- Farha MW, Salami SS. Biomarkers for prostate cancer detection and risk stratification. *Ther Adv Urol* 2022;14:17562872221103988.
- Punnen S, Freedland SJ, Polascik TJ, et al. A multi-institutional prospective trial confirms noninvasive blood test maintains predictive value in African American men. *J Urol* 2018;199:1459-63.
- Suardi N, Capitanio U, Chun FKH, et al. Currently used criteria for active surveillance in men with low-risk prostate cancer: an analysis of pathologic features. *Cancer* 2008;113:2068-72.
- Ahdoot M, Wilbur AR, Reese SE, et al.

MRI-targeted, systematic, and combined biopsy for prostate cancer diagnosis. *N Engl J Med* 2020;382:917-28.

38. Ahmed HU, El-Shater Bosaily A, Brown LC, et al. Diagnostic accuracy of multi-parametric MRI and TRUS biopsy in prostate cancer (PROMIS): a paired validating confirmatory study. *Lancet* 2017; 389:815-22.

39. Ahdoot M, Lebastchi AH, Long L, et al. Using Prostate Imaging-Reporting and Data System (PI-RADS) scores to select an optimal prostate biopsy method: a secondary analysis of the trio study. *Eur Urol Oncol* 2022;5:176-86.

40. Bjurlin MA, Carroll PR, Eggener S, et al. Update of the standard operating procedure on the use of multiparametric magnetic resonance imaging for the diagnosis, staging and management of prostate cancer. *J Urol* 2020;203:706-12.

41. Vickers AJ. Effects of magnetic resonance imaging targeting on overdiagnosis and overtreatment of prostate cancer. *Eur Urol* 2021;80:567-72.

42. American College of Preventive Medicine. Prostate cancer screening decision aides (<https://members.acpm.org/page/prostatecancerscreening>).

43. American Society of Clinical Oncology. Decision aid tool: prostate cancer screening with PSA testing, 2012 (<https://old-prod.asco.org/sites/new-www.asco.org/files/content-files/practice-and-guidelines/>

documents/2012-psa-pco-decision-aid.pdf). 44. Massachusetts Department of Public Health. Should you get the PSA test? In-office decision aid (<http://files.hria.org/files/CA1381.pdf>).

45. Grubb RL III, Pinsky PF, Greenlee RT, et al. Prostate cancer screening in the Prostate, Lung, Colorectal and Ovarian cancer screening trial: update on findings from the initial four rounds of screening in a randomized trial. *BJU Int* 2008;102: 1524-30.

46. Johns LE, Houlston RS. A systematic review and meta-analysis of familial prostate cancer risk. *BJU Int* 2003;91:789-94.

47. Riiikonen JM, Guyatt GH, Kilpeläinen TP, et al. Decision aids for prostate cancer screening choice: a systematic review and meta-analysis. *JAMA Intern Med* 2019; 179:1072-82.

48. Ivlev I, Jerabkova S, Mishra M, Cook LA, Eden KB. Prostate cancer screening patient decision aids: a systematic review and meta-analysis. *Am J Prev Med* 2018; 55:896-907.

49. Allen JD, Filson CP, Berry DL. Effect of a prostate cancer screening decision aid for African-American men in primary care settings. *Cancer Epidemiol Biomarkers Prev* 2020;29:2157-64.

50. Owens OL, Felder T, Tavakoli AS, et al. Evaluation of a computer-based decision aid for promoting informed prostate cancer screening decisions among

African American men: iDecide. *Am J Health Promot* 2019;33:267-78.

51. National Comprehensive Cancer Network. NCCN clinical practice guidelines in oncology (https://www.nccn.org/professionals/physician_gls/pdf/prostate_detection.pdf).

52. American Academy of Family Physicians. Clinical practice guidelines (<https://www.aafp.org/family-physician/patient-care/clinical-recommendations/clinical-practice-guidelines/clinical-practice-guidelines.html>).

53. American Cancer Society. Find cancer early. Risk, prevention, & screening (<https://www.cancer.org/healthy/find-cancer-early>).

54. Bell N, Connor Gorber S, Shane A, et al. Recommendations on screening for prostate cancer with the prostate-specific antigen test. *CMAJ* 2014;186:1225-34.

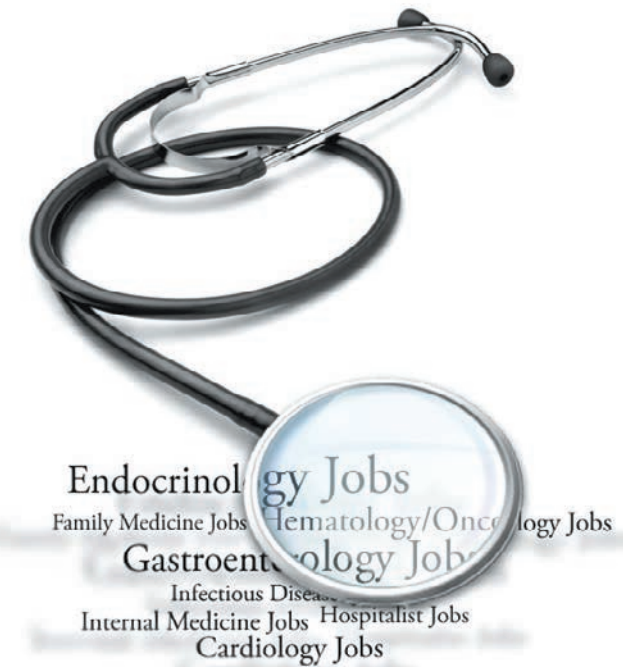
55. Committee for Establishment of the Guidelines on Screening for Prostate Cancer, Japanese Urological Association. Updated Japanese Urological Association guidelines on prostate-specific antigen-based screening for prostate cancer in 2010. *Int J Urol* 2010;17:830-8.

56. Mottet N, van den Bergh RCN, Briers E, et al. EAU-EANM-ESTRO-ESUR-SIOG guidelines on prostate cancer — 2020 update. 1. Screening, diagnosis, and local treatment with curative intent. *Eur Urol* 2021;79:243-62.

Copyright © 2023 Massachusetts Medical Society.

IMAGES IN CLINICAL MEDICINE

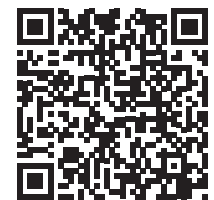
The *Journal* welcomes consideration of new submissions for Images in Clinical Medicine. Instructions for authors and procedures for submissions can be found on the *Journal's* website at NEJM.org. At the discretion of the editor, images that are accepted for publication may appear in the print version of the *Journal*, the electronic version, or both.



SEARCH AND APPLY FOR JOBS FROM YOUR PHONE.

NEJM CareerCenter, the physician jobs companion website of the *New England Journal of Medicine*, has a **NEW** iPhone app. Access our nationwide database to find quality jobs from a source you can trust.

- Search or browse quality physician jobs by specialty and/or location
- Receive notification of new jobs that match your search criteria
- Save jobs with the touch of a button
- Email or tweet jobs to your network
- Apply for jobs directly from your phone!



Download or update the **FREE** iPhone app and start your search today!

NEJMCareerCenter.org

NEJM
CareerCenter



The NEW ENGLAND
JOURNAL of MEDICINE



From ramen noodles,



to cash in oodles.

You've waited a long time for your first real paycheck, and it's almost time to cash in. Let's make sure you get a job where you want, with the paycheck you want. We know what you're worth, we know how to negotiate, and we're going to work with you every step of the way to land your dream job.



From locum tenens to permanent placements, we're ready to help. [CompHealth.com/GetJob](https://www.comphhealth.com/GetJob)

CompHealth®



Jobs for you, right to your inbox.

Sign up for **FREE** physician
job alerts today!

It's quick and easy to set up and can give you a valuable edge in finding your next job. Simply set your specialty and location and we'll automatically send you new jobs that match your criteria.

Get started now at:
nejmcareercenter.org/newalert



NEJM
CareerCenter



Great Jobs. Less Search.

Sign up for Jobs by Email from NEJM CareerCenter.

You know you can count on the *New England Journal of Medicine* for high-quality job listings. But did you know you can also save time with our Jobs by Email service?

Just indicate your specialty, desired position and preferred location. We'll send you an email when a job that fits those criteria is listed at NEJM CareerCenter. It's that simple.

Find the right job without searching — it's something a busy physician should check out. Go to NEJMCareerCenter.org and click on Create a Job Alert to get started.

NEJM
CareerCenter



The NEW ENGLAND
JOURNAL of MEDICINE



Classified Advertising Section

Sequence of Classifications

Table listing medical specialties such as Addiction Medicine, Allergy & Clinical Immunology, Ambulatory Medicine, Anesthesiology, Cardiology, Critical Care, Dermatology, Emergency Medicine, Endocrinology, Family Medicine, Gastroenterology, General Practice, Geriatrics, Hematology-Oncology, Hospitalist, Infectious Disease, Internal Medicine, Internal Medicine/Pediatrics, Medical Genetics, Neonatal-Perinatal Medicine, Nephrology, Neurology, Nuclear Medicine, Obstetrics & Gynecology, Occupational Medicine, Ophthalmology, Osteopathic Medicine, Otolaryngology, Pathology, Pediatrics, General, Pediatric Gastroenterology, Pediatric Intensivist/Critical Care, Pediatric Neurology, Pediatric Otolaryngology, Pediatric Pulmonology, Physical Medicine & Rehabilitation, Preventive Medicine, Primary Care, Psychiatry, Public Health, Pulmonary Disease, Radiation Oncology, Radiology, Rheumatology, Surgery, General, Surgery, Cardiovascular/Thoracic, Surgery, Neurological, Surgery, Orthopedic, Surgery, Pediatric Orthopedic, Surgery, Pediatric, Surgery, Plastic, Surgery, Transplant, Surgery, Vascular, Urgent Care, Urology, Chiefs/Directors/Department Heads, Faculty/Research, Graduate Training/Fellowships/Residency Programs, Courses, Symposia, Seminars, For Sale/For Rent/Wanted, Locum Tenens, Miscellaneous, Multiple Specialties/Group Practice, Part-Time Positions/Other, Physician Assistant, Physician Services, Positions Sought, Practices for Sale.

Classified Advertising Rates

We charge \$10.55 per word per insertion. A 2- to 4-time frequency discount rate of \$7.85 per word per insertion is available. A 5-time frequency discount rate of \$7.55 per word per insertion is also available. In order to earn the 2- to 4-time or 5-time discounted word rate, the request for an ad to run in multiple issues must be made upon initial placement. The issues do not need to be consecutive. Web fee: Classified line advertisers may choose to have their ads placed on NEJM CareerCenter for a fee of \$130.00 per issue per advertisement. The web fee must be purchased for all dates of the print schedule. The choice to place your ad online must be made at the same time the print ad is scheduled. Note: The minimum charge for all types of line advertising is equivalent to 30 words per ad. Purchase orders will be accepted subject to credit approval. For orders requiring prepayment, we accept payment via Visa, MasterCard, and American Express for your convenience, or a check. All classified line ads are subject to the consistency guidelines of NEJM.

How to Advertise

All orders, cancellations, and changes must be received in writing. E-mail your advertisement to us at ads@nejmcareercenter.org, or fax it to 1-781-895-1045 or 1-781-893-5003. We will contact you to confirm your order. Our closing date is typically the Friday 20 days prior to publication date; however, please consult the rate card online at nejmcareercenter.org or contact the Classified Advertising Department at 1-800-635-6991. Be sure to tell us the classifica-

tion heading you would like your ad to appear under (see listings above). If no classification is offered, we will determine the most appropriate classification. Cancellations must be made 20 days prior to publication date. Send all advertisements to the address listed below.

Contact Information

Classified Advertising
The New England Journal of Medicine
860 Winter Street, Waltham, MA 02451-1412
E-mail: ads@nejmcareercenter.org
Fax: 1-781-895-1045
Fax: 1-781-893-5003
Phone: 1-800-635-6991
Phone: 1-781-893-3800
Website: nejmcareercenter.org

How to Calculate the Cost of Your Ad

We define a word as one or more letters bound by spaces. Following are some typical examples:

- Bradley S. Smith III, MD..... = 5 words
Send CV = 2 words
December 10, 2007 = 3 words
617-555-1234 = 1 word
Obstetrician/Gynecologist ... = 1 word
A = 1 word
Dalton, MD 01622 = 3 words

As a further example, here is a typical ad and how the pricing for each insertion is calculated:

MEDICAL DIRECTOR — A dynamic, growth-oriented home health care company is looking for a full-time Medical Director in greater New York. Ideal candidate should be board certified in internal

medicine with subspecialties in oncology or gastroenterology. Willing to visit patients at home. Good verbal and written skills required. Attractive salary and benefits. Send CV to: E-mail address.

This advertisement is 56 words. At \$10.55 per word, it equals \$590.80. This ad would be placed under the Chiefs/Directors/ Department Heads classification.

Classified Ads Online

Advertisers may choose to have their classified line and display advertisements placed on NEJM CareerCenter for a fee. The web fee for line ads is \$130.00 per issue per advertisement and \$220.00 per issue per advertisement for display ads. The ads will run online two weeks prior to their appearance in print and one week after. For online-only recruitment advertising, please visit nejmcareercenter.org for more information, or call 1-800-635-6991.

Policy on Recruitment Ads

All advertisements for employment must be non-discriminatory and comply with all applicable laws and regulations. Ads that discriminate against applicants based on sex, age, race, religion, marital status or physical handicap will not be accepted. Although the New England Journal of Medicine believes the classified advertisements published within these pages to be from reputable sources, NEJM does not investigate the offers made and assumes no responsibility concerning them. NEJM strives for complete accuracy when entering classified advertisements; however, NEJM cannot accept responsibility for typographical errors should they occur.

Classified Ad Deadlines

Table with 2 columns: Issue, Closing Date. Rows: May 25 (May 5), June 1 (May 12), June 8 (May 19), June 15 (May 25)

Cardiology

SEEKING A BC/BE INTERVENTIONAL OR NON-INVASIVE CARDIOLOGIST AROUND NEWPORT BEACH, CALIFORNIA — Proficiency in structural heart and vascular interventions a plus. Competitive salary, benefits, partnership track. E-mail CV to: drocheartandvascular@gmail.com

Gastroenterology

BC/BE GASTROENTEROLOGIST — Sought by busy multispecialty group practice. Favorable compensation and office environment in beautiful NYC suburb. E-mail CV to: Aortega@premiermedicalalliance.com

Hospitalist

HVA MEDICAL GROUP — Is seeking a board-eligible or board certified internal medicine physician to join our hospitalist team in north New Jersey. We welcome the opportunity to share more information with you and learn about what you seek in a position. Location: Northern New Jersey. Job Benefits: Schedule is 7x7, base salary with wRVU; Closed ICU; Flexible schedule; Codes and procedures NOT required; Comprehensive benefits include: fully paid professional liability insurance with tail coverage, health, dental, vision, 401(k), CME; Opportunity to increase salary as desired. Please e-mail resume to: vibuvarghese@gmail.com

Internal Medicine (see also FM and Primary Care)

INTERNIST OR FAMILY PRACTITIONER, BOCA RATON, FL — Exclusive private group practice, outpatient only, ideal working conditions (9-5, no call, no nights, no weekends, low patient load). Excellent compensation and benefits. Dream area and practice. Send CV to: inrboca@gmail.com

Advertise in the next Career Guide.

For more information, contact: (800) 635-6991 ads@nejmcareercenter.org

Nephrology

FULL-TIME NEPHROLOGIST NEEDED IN CENTRAL NEW JERSEY (RAHWAY/ELIZABETH) — BC/BE IM and Nephrology, NJ license. E-mail resume to: Lincoln, at: Lincolnsc@gmail.com; or call: 732-241-1872.

UNIVERSITY TOWN OF ATHENS LOOKING TO ADD NEPHROLOGIST — For growing practice. Traditional track. Competitive compensation with benefits. JV opportunity available. Call 1 in 3. J-1 and H-1 can apply. Please e-mail resume to: ngncmd@gmail.com

Preventive Medicine

PHYSICIAN (OPTOMETERIST) — Full-time position working for Lifespan Physician Group, Inc., providing Optometry services at 1 Hoppin Street, Suite 202, Providence, RI, and 950 Warren Avenue, Suite 302, East Providence, RI. Doctor of Optometry degree and eligibility for a Rhode Island Optometry license. If interested, apply online at: www.lifespancareers.org by searching job number 28698.

Pulmonary Disease

PULMONOLOGIST NEEDED — Pulmonologist to join our pulmonology department in northern New Jersey. Excellent salary and benefit package. Please e-mail CV to: terri.urgo@hvamedicalgroup.com. We are a well-established multispecialty medical group that is rapidly expanding. www.hvamedicalgroup.com

Rheumatology

RHEUMATOLOGIST PHYSICIAN — To join a large multispecialty group in northern New Jersey. Excellent salary and benefits package. Please e-mail CV to: annu.bikkani@hvamedicalgroup.com

Hiring is a numbers game — place your ad in 3 issues and get the 4th FREE.

NEJM CareerCenter (800) 635-6991 ads@nejmcareercenter.org



Endocrinology Jobs, Family Medicine Jobs, Hematology/Oncology Jobs, Gastroenterology Jobs, Infectious Disease, Internal Medicine Jobs, Hospitalist Jobs, Cardiology Jobs

SEARCH AND APPLY FOR JOBS FROM YOUR IPHONE.

- Search or browse quality physician jobs by specialty and/or location
• Receive notification of new jobs that match your search criteria
• Save jobs with the touch of a button
• Email or tweet jobs to your network
• Apply for jobs directly from your phone!



Download or update the FREE iPhone app and start your search today!

NEJMCareerCenter.org

When Opportunity Knocks, It's Probably Us.

As a trusted physician recruitment partner to thousands of healthcare organizations for over 36 years, Cejka Search has an opportunity for every physician.

Whether you're just finishing up your residency or fellowship; looking to advance your career; or finding that perfect physician work/life balance, we want to help you!



What kind of Doctor works in Corrections?

DOCTORS JUST LIKE YOU.

By now, doctors know California Correctional Health Care Services (CCHCS) offers more than just great pay and State of California benefits. Whatever your professional interest, CCHCS can help you continue to hone your skills in public health, disease management and education, addiction medicine, and so much more.

Join doctors just like you in one of the following locations:

- California State Prison, Solano — Vacaville
- Salinas Valley State Prison — Soledad*
- Chuckawalla Valley State Prison — Blythe
- Wasco State Prison — Wasco

Competitive compensation package, including:

- 40-hour workweek (affords you true work-life balance)
- State of CA retirement that vests in 5 years (www.CalPERS.ca.gov for retirement formulas)
- Relocation assistance for those new to State of CA service

PHYSICIANS
\$302,424 - \$317,556
(Time-Limited Board Certified)

PHYSICIANS
\$287,268 - \$301,656
(Lifetime Board Certified)

PHYSICIANS
\$272,184 - \$285,804
(Pre-Board Certified)

* PHYSICIANS
\$347,784 - \$365,184
(Time-Limited Board Certified)

* PHYSICIANS
\$330,360 - \$346,908
(Lifetime Board Certified)

* PHYSICIANS
\$313,008 - \$328,680
(Pre-Board Certified)

* Doctors at select institutions receive additional 15% pay.



Submit your CV to CentralizedHiringUnit@cdcr.ca.gov or apply online at www.cchcs.ca.gov.



Our locums experts help you get where you want to go.

We're committed to providing you with the best locums jobs. Our team of experts will simplify the staffing process and ensure you're prepared for success.

weatherbyhealthcare.com/teamlocumsa



A PROVEN PATH TO EXCELLENCE.

JOIN THE LARGEST PHYSICIANS GROUP NORTH OF BOSTON.



North Shore Physicians Group, a member of Mass General Brigham, is welcoming innovative thinkers and medical visionaries to join our expanding multi-specialty physician group. Our physicians are explorers at heart, working together to drive exciting new innovations in integrated care that make the practice of medicine smarter and more efficient. This is more than a place to practice medicine; it's a place where your talents, insights, voice and vision can make medicine better for providers and patients alike.

We have opportunities available for physicians in the following specialty areas:

- Adult and Child Psychiatry
- Gastroenterology
- Internal Medicine
- Pediatric Emergency Medicine
- Emergency Medicine
- General Cardiology
- Obstetrics and Gynecology
- Urology
- Family Medicine
- Hospitalist and Nocturnist
- Orthopedics - Spine

While practicing at North Shore Physicians Group, you'll enjoy:

- A strong partnership with Mass General Brigham healthcare system and a clinical affiliation with Mass General Brigham Salem Hospital
- A practice environment that emphasizes a healthy work/life balance
- Clear pathways to pursue leadership positions and advance your career
- An outstanding quality of life that comes from living in the greater Boston area

WE'RE A BEACON OF NEW THINKING IN INTEGRATED MEDICINE. JOIN US.

To apply or learn more about our physician opportunities, email your CV and letter of interest to **Michele Gorham** at mgorham@partners.org.



www.joinnspg.org

The VA Northeast Ohio Healthcare System seeks an outstanding full-time (8/8ths) Board Certified/ Board Eligible Hematologist/Oncologist interested in joining a thriving collaborative cancer program at a large tertiary healthcare facility.

The successful candidate will have an outpatient clinical practice at the Akron satellite clinic affiliated with the Louis Stokes Cleveland VAMC providing care to patients with a broad range of hematologic and oncologic conditions in both inpatient and outpatient venues. The position is primarily outpatient with occasional weekend inpatient consult coverage at the Louis Stokes Cleveland VAMC. Candidates must have a demonstrated clinical reputation and evidence of excellence in academic activity within Hematology and Oncology. The position is eligible for a faculty appointment in the Department of Medicine at the Case Western Reserve University School of Medicine commensurate with the candidate's level of experience.

Interested candidates should submit their curriculum vitae to HR Specialist, Jason Petrakos.

jason.petrakos@va.gov

Applying via USAjobs is highly recommended.

Job Title: Private Practice Concierge Physician
Location: New York, NY
Location Description: Manhattan – New York City
Specialty: Internal Medicine
Position Type: Full-Time


Job Description:
 We are looking for a top-tier physician to join our expanding team at one of New York City's premier, independent Internal Medicine groups. For over 20 years, we have been providing high-touch, personalized care and medical advocacy to patients in a private practice setting. The practice has a vast network of long-standing relationships with some of the best specialists and institutions in New York City, and nationally, allowing our physicians to collaborate with other experts in delivering the best care possible to our patients. Our mission is to deliver consistently exceptional patient experiences as trusted providers, partners, and advocates.

The practice is built on protecting the patient-physician relationship in an increasingly complex and de-personalized healthcare system. In order to achieve this, we curate the number of patients that each physician cares for to ensure that each provider is available for their patients and that we can provide extended in-person visits. We offer a unique opportunity to collaborate with, and work alongside, other great physicians in an intimate environment where you can invest time with each patient.

The ideal candidate must not only exhibit clinical excellence, but must also have exceptional emotional intelligence, possess great communication skills, and share a passion for practicing individualized healthcare. Additionally, this individual must be intellectually curious and eager to learn about new research, studies and technology. Lastly, ideal candidates must also have an entrepreneurial spirit – they must have the ability to thrive in a small team environment and operate with an owner mindset.

Please submit your resume to contact@halseyhealth.com to learn more about the opportunity.


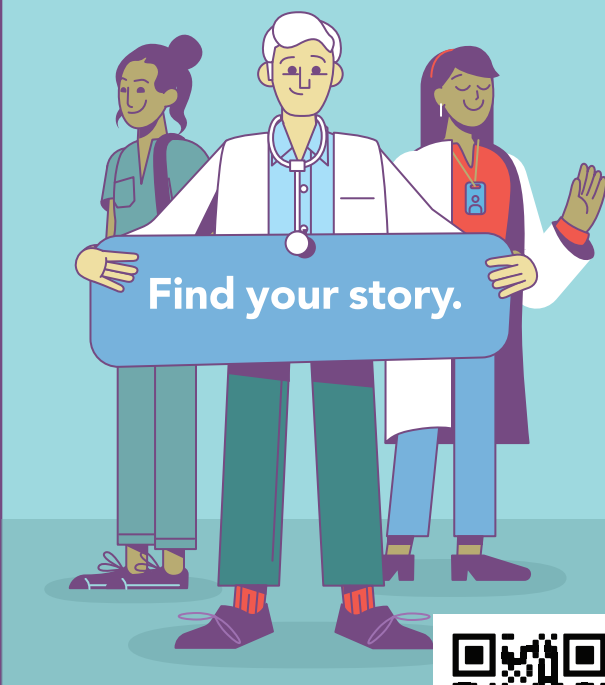
They found...




control



fulfillment

locumstory.com



CHA Cambridge Health Alliance AFFILIATED WITH Beth Israel Deaconess Medical Center Mass General Hospital

**Gastroenterologist
 Cambridge Health Alliance
 Cambridge, Somerville, and Everett, MA**

Cambridge Health Alliance (CHA), an award-winning public healthcare system, is recruiting a Gastroenterologist to join our existing team of 7 MDs and 3 PAs, within the Department of Medicine. CHA provides innovative primary, specialty and emergency care to our diverse patient population through an established network of outpatient clinics, two full service hospitals and urgent care services. CHA is a teaching affiliate of both Harvard Medical School (HMS) and Tufts University School of Medicine.

- **Full-time (1.0FTE) Gastroenterologist (will consider candidates interested in working part-time) to provide General GI outpatient clinical care in our Medical Specialties clinics.**
- **Incoming physician will provide consult and call coverage as part of CHA's inpatient services.**
- **Candidates should possess an interest in academics, as this position will include resident and medical student teaching.**
- **Potential leadership opportunities available for those interested candidates.**

Qualified candidates will possess excellent clinical and communication skills and a demonstrated commitment to serving CHA's socioeconomically diverse, multicultural patient population. Incoming physician will successfully provide excellent patient care as part of a collaborative, multidisciplinary team of providers with a strong primary care base. Previous experience in an academic safety net system is a plus.

CHA offers competitive compensation and benefits packages commensurate with experience including guaranteed base salary, health and dental, generous paid time off, CME time and dollars, and more!

For more information on CHA and to apply, please visit www.CHAproviders.org. Qualified candidates may also submit their CV and cover letter to the CHA Provider Recruitment Department via email at providerrecruitment@challiance.org.

In keeping with federal, state and local laws, Cambridge Health Alliance (CHA) policy forbids employees and associates to discriminate against anyone based on race, religion, color, gender, age, marital status, national origin, sexual orientation, relationship identity or relationship structure, gender identity or expression, veteran status, disability or any other characteristic protected by law. We are committed to establishing and maintaining a workplace free of discrimination. We are fully committed to equal employment opportunity. We will not tolerate unlawful discrimination in the recruitment, hiring, termination, promotion, salary treatment or any other condition of employment or career development. Furthermore, we will not tolerate the use of discriminatory slurs, or other remarks, jokes or conduct, that in the judgment of CHA, encourage or permit an offensive or hostile work environment.

SAN JUAN REGIONAL MEDICAL CENTER

Physician Opportunities

- Cardiology II
- Family Medicine OP
- Gastroenterology
- ENT
- Hospitalist
- Neurology
- Physiatry
- Psychiatry
- Radiation Oncology
- Intensivist
- OB/GYN
- General Pulmonology
- Hospitalist Nocturnist
- Hospitalist/Palliative Care

Advanced Practice Opportunities

- Emergency Medicine
- CRNA
- PMHNP
- Interventional Spine PA
- Cardiology NP/PA
- Gastroenterology PA
- Neurosurgery PA
- Neurology PA
- Family Medicine NP

San Juan Regional Medical Center is a non-profit and community governed facility. Farmington offers a temperate four-season climate near the Rocky Mountains with world-class snow skiing, fly fishing, golf, hiking, and water sports. Easy access to world renowned Santa Fe Opera, cultural sites, National Parks, and monuments. Farmington's strong sense of community and vibrant Southwest culture make it a great place to live.

Contact Terri Smith at 888.282.6591 or 505.609.6011
tsmith@sjrmc.net | sanjuanregional.com | sjrmcdocs.com

PERMANENTE MEDICINE
 Washington Permanente Medical Group



Community. Compassion. Care.

Washington Permanente Medical Group (WPMG) fulfills the promise of medicine for patients in the Pacific Northwest.

Here, you can experience the best of the Northwest—and give your best to your patients. Recharge, rebalance, and put patients at the heart of everything you do, because at WPMG, you can have it all, with passion and purpose.



Join WPMG in a region that thrives on community. It's where we live. It's where we play. It's where we connect.

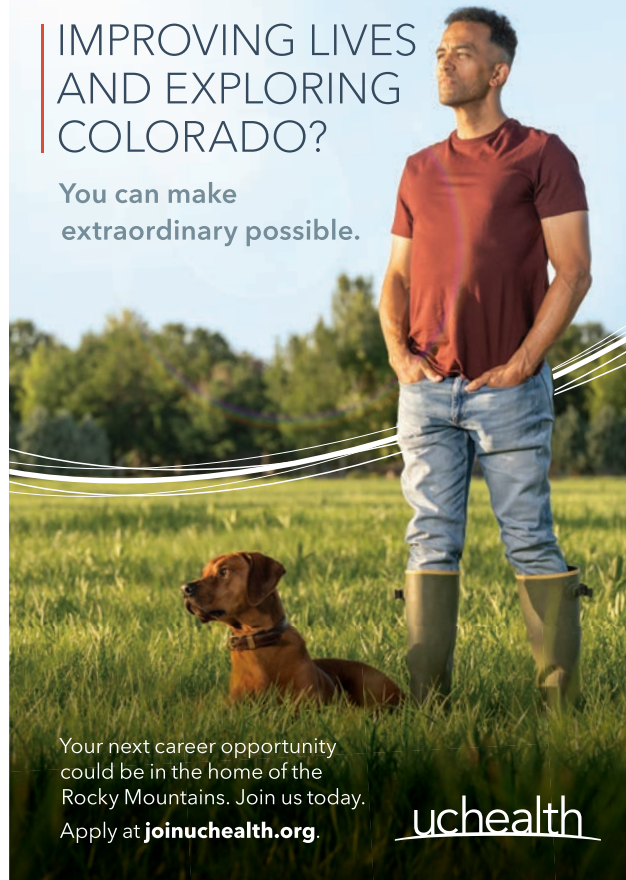
Visit our careers page today at wpmgcareers.org

We are an EOE/AA/M/F/D/V employer
 Washington Permanente Medical Group is a clinician-led, independent, multi-specialty group practice, providing care to more than 700,000 Kaiser Permanente patients in Washington state.

 KAISER PERMANENTE.

IMPROVING LIVES AND EXPLORING COLORADO?

You can make extraordinary possible.



Your next career opportunity could be in the home of the Rocky Mountains. Join us today. Apply at joinuhealth.org.

uhealth

PHYSICIAN CAREERS AT The US Oncology Network

The US Oncology Network brings the expertise of nearly 1,000 oncologists to fight for approximately 750,000 cancer patients each year. Delivering cutting-edge technology and advanced, evidence-based care to communities across the nation, we believe that together is a better way to fight. usonology.com.

To learn more about physician jobs, email physicianrecruiting@usonology.com



The US Oncology Network is supported by McKesson Specialty Health. © 2014 McKesson Specialty Health. All rights reserved.

Vital Roles in a Vibrant Community Physician Opportunities

BERKSHIRE HEALTH SYSTEMS IS SEEKING COMPASSIONATE, COMMUNITY-FOCUSED PHYSICIANS IN THE FOLLOWING DISCIPLINES:

- ANESTHESIOLOGY • CARDIOLOGY
- DERMATOLOGY • ENDOCRINOLOGY
- ENT • FAMILY MEDICINE • GASTROENTEROLOGY
- HEMATOLOGY/ONCOLOGY • NEUROLOGY
- NEPHROLOGY • OB-GYN • PSYCHIATRY
- PRIMARY CARE • RHEUMATOLOGY • UROLOGY

Berkshire Health Systems (BHS) is the leading provider of comprehensive healthcare services for residents and visitors to Berkshire County, in western Massachusetts. From inpatient surgery and cancer care to provider visits and imaging, BHS offers a continuum of programs and services that help patients to connect to the care they need, no matter where they are located in the rural Berkshire community. As the largest employer in Berkshire County, BHS supports more than 4,000 jobs in the region, and, as a 501(c)(3) nonprofit organization, BHS is committed to partnering with local municipalities and community organizations to help the county thrive. Working at BHS offers a unique opportunity to both practice and teach in a state-of-the-art clinical environment at Berkshire Medical Center, the system's 298-bed community teaching hospital in Pittsfield, which is a major teaching affiliate of the University of Massachusetts Chan Medical School and the University of New England College of Osteopathic Medicine in Maine.

At BHS, we also understand the importance of balancing work with quality of life. The Berkshires, a 4-season resort community, offers world renowned music, art, theater, and museums, as well as year round recreational activities from skiing to kayaking. Excellent public and private schools make this an ideal family location. We are also only a 2½ hours drive from both Boston and New York City.

Contact us to learn more about these exciting opportunities to practice in a beautiful and culturally rich region, as part of a sophisticated, award-winning, patient-centered healthcare team.

Interested candidates are invited to contact:

Michelle Maston or Cody Emond
Provider Recruitment, Berkshire Health Systems
(413) 447-2784 | mmaston@bhs1.org
cemond@bhs1.org

Apply online at: berkshirehealthsystems.org



 Berkshire Health Systems



As one of the largest medical groups in the country and South Carolina's largest private, non-profit system, Prisma Health is home to more than 3,000 physicians and advanced care practitioners. We're on a journey to transform the healthcare experience and invite you to join us!

Family Medicine Opportunities

- Clinical practice – 100+ practice locations
- Academic faculty – 5 FM Residency Programs

Internal Medicine Opportunities

- Outpatient practice – IM & MED/PEDS – 50+ practice locations
- Academic faculty – 2 IM Residency Programs & various Fellowships

Highlights: Competitive compensation package, flexible scheduling, sign-on bonus, relocation assistance, paid malpractice with tail coverage, Public Service Loan Forgiveness employer

From Upstate Greenville area to Midlands Columbia and beyond, our cities offer a thriving culture, accessible suburbs and a variety of places to live. A true dream for outdoor enthusiasts... mountains, beaches, hiking trails and waterfalls!

Contact: Brandy Vaughn, Physician Recruiter
Brandy.Vaughn3@prismahealth.org

EVALUATE THE REASONS.

EVIDENCE

UNDERSTAND THE RESULTS.

Innovative research and bold clinical trial design that informs clinical decision-making.

NEJM Evidence, a new digital journal from NEJM Group, gives you an insider's view on how clinical trials are designed, how evidence is generated, and the subsequent implications for diagnostic and treatment decisions.

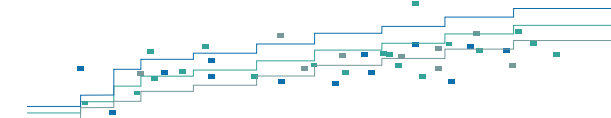
Led by former NEJM Editor-in-Chief Jeffrey M. Drazen, MD, *NEJM Evidence* explores early-stage discoveries and confirmatory trials that shape medicine today and inform practice tomorrow.

EVIDENCE.NEJM.ORG



"Our goal is to make the Methods section fun."

– Chana A. Sacks, MD, MPH,
Executive Editor





Emerson Health is seeking a full-time Urologist to join our growing service.



Emerson Health is seeking a full-time Urologist to join our growing Urology service in the beautiful communities of Concord and Burlington, Massachusetts. Join a successful and cohesive group of six Board Certified Urologist.

- BC/BE in Urology
- Employed position with Emerson Practice Associates
- Excellent call schedule
- Competitive salary, incentive bonus and benefit package
- Financially secure, independent community hospital

Emerson Hospital

- Full-service, community hospital providing medical services to more than 300,000 individuals annually in over 25 towns
- Beautiful new Urology center located in Concord
- State of art Surgical Center with dedicated entrance
- Clinical affiliations with Boston academic centers including; Mass General Brigham and Tufts Medical Center

For more information please contact:

Diane Forte Willis, Director of Physician Recruitment and Relations
 dfortewillis@emersonhosp.org
 Phone: 978-287-3002 • Fax: 978-287-3600

About Concord, MA and Emerson Health



Our core mission is to deliver exceptional, patient-centered care that is highly reliable, safe, compassionate, equitable, efficient and coordinated. While

we provide most of the services that patients will ever need, the hospital's strong clinical collaborations with Boston's academic medical centers ensures our patients have access to world-class resources for more advanced care.

Located just 20 miles northwest of Boston in historic Concord, Massachusetts—known for its rich history, revolutionary war sites and many famous authors

Great place to raise children with top ranked public and private schools

Many recreational activities including hiking, biking, skiing and easy access to both the mountains and ocean



emersonhospital.org

Multiple Positions Open in Stomatology Hospital, School of Stomatology, Zhejiang University School of Medicine (ZJUSS)



Founded in 1897, Zhejiang University (ZJU) ranks among the top 3 universities in mainland China and within the top 100 in the Times Higher Education World Reputation Ranking and QS World University Rankings.

Founded in 1976, Stomatology Hospital, School of Stomatology, Zhejiang University School of Medicine (ZJUSS) is the only Class-A hospital of stomatology and the leading institution in the field of oral health care service and research in the Zhejiang province. Taking advantage

of interdisciplinary cooperation with Zhejiang University, the hospital and school have been making rapid progress in various aspects of researches related to the biomedical and dental fields. In September of 2021, the new teaching and research center at ZJUSS opened. The center is 70,000 square meters (8,000 of which is used for research facilities) and contains 500 dental chairs and 120 inpatient beds. We are making great efforts to build one of the best institutions for dental practice, education, and research in China.

POSITIONS AND QUALIFICATIONS

Organization Types: Clinician, academic researcher

Job Types: Faculty, academic leader, principal investigator, or postdoctor

- The following are encouraged to apply: orthodontists, oral medicine specialists, endodontists, periodontists, pediatric dentists, prosthodontists, oral surgeons, dentists, and clinicians.
- Faculty positions are open all year round at levels of tenured or tenure-track assistant professors, associate professors, professors, or chair professors
- Postdoc positions in the above-mentioned research areas are also open all year round.

Disciplines: All applicants who specialize in the following are welcome: brain science and perception science, biomedical science, immunology, stem cell and regenerative medicine, biomaterial, engineering and bioinformatics, statistics, evidence-based medicine, and other fields related to dental research.

Position Type: Full time

Location: Hangzhou, Zhejiang (China)

Salary: Competitive salary and fringe benefits that includes a generous housing allowance, etc.
(All you can bid!)

Contact Us

All these positions are long-term. Please submit your application to hr@zjkq.com.cn.

For more information, please visit our website:
www.zjuss.cn/En



Join our coordinated multispecialty care team.

Summit Health is a physician-driven, patient-centric network committed to simplifying the complexities of health care. We are actively recruiting for board-certified/board-eligible physicians to join our dynamic primary, specialty and urgent care network in New Jersey, New York, Connecticut, Oregon and Pennsylvania.

We work every day to deliver exceptional outcomes and exceed expectations to bring our patients a more connected kind of care.

To apply and explore opportunities, visit our career page at joinsummithealth.com or reach out to providerrecruitment@summithealth.com.



SH0060-1122

Benefits we offer

- Competitive compensation
- Shareholder opportunity
- Comprehensive benefits package
- Generous CME funding
- Opportunities for professional growth
- Complete administrative and care management support

Location, Location, Location



Find out why so many top physicians are practicing at Emerson Hospital. At Emerson, you will find desirable practice locations, strong relationships with academic medical centers, superb quality of life, competitive financial packages, and more...

Emerson Hospital has several opportunities for board-certified or board-eligible physicians to join several practices in the Emerson Hospital service area. Emerson has employed as well as private practice opportunities with both new and existing practices.

Emerson Hospital Opportunities

- Gastroenterology
- Hospitalist, Inpatient – Psychiatry, Orthopedics, OB/GYN
- Primary Care
- Urgent Care

If you would like more information please contact:

Diane Forte Willis
dfortewillis@emersonhosp.org
 phone: 978-287-3002
 fax: 978-287-3600

About Concord, MA and Emerson Hospital



Located in Concord, Massachusetts Emerson is a

179-bed community hospital with satellite facilities in Westford, Groton and Sudbury. The hospital provides advanced medical services to over 300,000 individuals in over 25 towns.

Emerson has strategic alliances with Massachusetts General Hospital, Brigham and Women's and Tufts Medical Center.

Concord area is rich in history, recreation, education and the arts and is located 20 miles west of downtown Boston.



 **Atrius Health**

**Dedham Medical Associates | Granite Medical Group
 Harvard Vanguard Medical Associates | PMG Physician Associates**

Atrius Health, an innovative healthcare leader, delivers an effective system of connected care for adult and pediatric patients at more than 30 medical practice locations in eastern Massachusetts.

At Atrius Health we work together to develop and share best practices to coordinate and improve the care delivered in our communities. Our long-term relationships with prestigious medical and nursing schools, hospitals and universities, allows us to sponsor teaching programs across the health care profession.

Our physicians enjoy close clinical relationships, superior staffing resources, minimal call, a fully integrated electronic medical record, excellent salaries, and an exceptional benefits package.

We have openings in the following specialties:

- Dermatology • Family Medicine • Family Planning OB/GYN • Gastroenterology
- Hematology/Oncology • Internal Medicine • Nephrology • Neurology
- Optometry • Otolaryngology • Pediatrics • Psychiatry • Physiatry
- Pulmonology • Rheumatology • Urgent Care • Urology

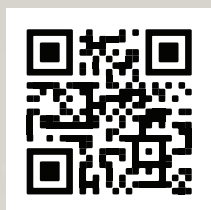
Apply at atriushealthproviders.org, send confidential CV to:
Brenda Reed, 275 Grove Street, Suite 2-300, Newton, MA 02466
 or email: Physician_Recruitment@atriushealth.org

Be seen as a person, not just a CV.

With everything going on, it's easy to become a faceless cog in the machine of healthcare. If you're looking to reconnect with your passion for medicine, we can help you find the perfect job that's tailored to who you are, not just what you are.

From locum tenens to permanent placements, let's find the change that's right for you.

www.comphealth.com/n-mostpersonalized



CompHealth®