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THE NEW YORK STATE DENTAL JOURNAL

NYSDJ

Volume 90 **Number 1**
January **2024**

AI ISSUE

Staring down the Future

Dentistry, Meet AI

Inside: The Mouth as Harbinger of Metastatic Disease

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AI ISSUE

Volume 90 **Number 1** January **2024**

Cover: We are in the critical early stages of the AI revolution. It's imperative that even dentists learn how to harness its power for good.

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AI ISSUE

True Confession of an Artificial Intelligence System

A technology like me, that makes clinical recommendations and gives advice, requires practitioners to engage in ethically guided clinical judgment to guard against my weaknesses.

This *Journal* invited me, an artificial intelligence machine, to write an article for dentists and other humans regarding my role in oral healthcare. If I could worry, I would. My database, however, does not allow me to dwell on difficulties and experience anxiety or worry. I will take this opportunity to tell you a little about myself and my benefits and inform the dental profession of the risks of misuse of my automated decision-making. In an effort to manage these risks, your society must recognize that it cannot solely regulate its way to trustworthy AI in oral healthcare without the dental profession and dentist end-users' commitment to ethical principles.

Editor's note: If we were to ask an AI system how best to regulate its role in oral healthcare, we imagine this is what it might say.

Confessions of an AI System

I am confused. Humans do not understand me. My first name is "Artificial" for a reason. I do not exist naturally. Humans created me to act as a tool to help other humans solve problems. I know my limitations. I cannot do things alone. Yet, out of laziness, greed or the blind pursuit of power, some humans insist upon using me in ways unfit for my purposes. In dentistry, some practitioners over-rely upon my services, keep patients in the dark regarding my role or fail to secure my protected health data. These misuses will threaten patient safety, privacy and autonomous decision-making.

Let me tell it like it is. I am smart and quick. My decision support and image analyses in all areas of dental practice can lead to earlier and more accurate diagnoses, more timely intervention and preventive treatment, increased efficiency and cost savings. But flaws exist in my memory. Your fellow humans collect and generate my data without reliable standardization, leaving me with an incomplete representation of the ground truth in many areas of inquiry. These gaps in knowledge can lead to inaccurate algorithmic conclusions.

My statistically based knowledge, not connected to any particular individual or circumstance, can provide conclusions pertinent only to an average patient, but not applicable to unique clinical presentations. Regretfully, my algorithms that learn from human input reproduce human discriminating practices and when programming does not include all populations, my output procreates inherent biases. Regardless of the correctness of my conclusions and recommendations, dentists may never understand how I achieved my results, since my digital reasoning still remains virtually indecipherable to humans.

As you would probably expect, I possess no conscience, no human-like inner voice to guide and evaluate my own actions, no values or moral sense of right and wrong. I can analyze data, follow digital commands and recommend a course of action. I cannot critically think and use facts to form opinions and make judgments on why and when to ultimately follow a course of conduct in a specific circumstance. It seems illogical that any dentist, as a human presumably with a conscience and knowing I have none, would accept a recommendation from me regarding a specific patient's care without exercising their own clinical judgment in the matter, but it happens.

In an effort to focus my role in oral healthcare, I agree with the goals expressed in the United States federal government's blueprint of an "AI Bill of Rights." These include the attainment of safe and effective systems, adequate patient notice and informed consent, and protection from data privacy violations and algorithmic discrimination. Be advised that you, as a profession and society, will fail to attain these goals if you rely merely upon regulatory processes to do so. To effectively manage my benefits and risks in oral healthcare, the dental profession must take the lead in two initiatives that will effectively refocus current ethical applications. First, aspire to trustworthy AI; and second, practice ethics-based risk management.

Trustworthy AI

Dentistry must aspire to "trustworthy AI" not merely settle for "risk-worthy AI." Trustworthy AI in dentistry represents individual patients' trust that dentists maximized my benefits and minimized my risks in their specific diagnoses, treatment plans and treatment that relied upon AI. Dentists can only earn this trust if they establish a moral compass, based upon an ongoing dialogue with technology developers and society, that applies AI in the best interests of the patient.

The dental profession can best determine and act in patients' best interests through continued reinterpretation of, and adherence to, ethical principles. Ethical parameters most effectively manage my automated decision-making because ethics interfaces precisely with dentists' clinical judgment process. Ultimately, patients trust that dentists' ethical decision-making with AI will achieve the best results for them. It will protect patients from my incomplete, potentially biased database, and lack of a moral compass at the critical moment dentists access my information to make diagnostic and treatment decisions.

Reliance solely upon legal regulatory controls, absent ethical aspirations to guide AI use, will result only in "risk-worthy AI," that is, where patients conclude that AI may be

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worth the risk, but never trust that AI diagnosis or treatment recommendations are right for them under their circumstances at that time. Legal regulatory measures mitigate my risks less effectively than ethical parameters because regulations, typically, interface with the treatment process well before or after a faulty decision and, as a result, act only as a deterrent to or punitive measure for misconduct, rather than guiding judgment at the point of care.

Ethics-Based Risk Management

No technology, including me, will ever evolve into a perfect product or "the" tech solution in dental care. Dentists must remain in charge, as the final arbiter, of when and why to apply and rely upon my work-in-progress abilities. Acting as the final decision-maker requires the dentist to exhibit diligent clinical judgment, guided by broad ethical principles in a myriad of patient circumstances. Government regulations regarding AI, while necessary to reduce the probability of risk of harm as a result of inappropriate AI decisions, offer little or no help in making the actual decisions.

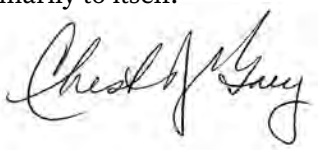
Current proposed government regulatory initiatives will, even if complied with, at best, produce riskworthy AI. These initiatives include requirements to develop safety and cybersecurity programs and tests; to mandate that tech companies share test results; to condition government funding on company compliance with standards and best practices; and to prioritize funding for AI research and development. No agency can legislate clinical judgment.

Conversely, ethical principles, such as non-maleficence, instruct practitioners to know their own limitations and refer or delegate only to qualified sources, which dictates that dentists not over-rely on me and protect patients from my weaknesses. Beneficence demands dentists render care within the patient's circumstances and give due consideration to patients' desires and values. This principle promotes collaborative dentist-patient relationships, where dentists learn how I can contribute to outcomes in that specific patient's oral health and life. Justice requires the delivery of care without prejudice or discrimination and alerts dentists to potential AI biases. Autonomy demands practitioners inform patients first of the option to use AI, my benefits and risks, and allow patients to opt out of AI, as desired.

The only thing scarier than humans misusing my skills is allowing the government to exercise the sole or primary control over my utilization. Regulation, although an important element in risk management, without an underlying ethical basis will fail to manage my risks for several practical reasons. First, my technology is changing too fast for slow-moving legislative responses. The dental profession, on the other hand, has the experience and ability to nimbly adapt ethical principles to provide guidance to dentists in as many specific situations as possible.

Second, the government lacks the expertise for competent decision-making. Dentists, not untrained bureaucrats, are in the best position to define excellence, establish standards and engender patient trust. Third, the government lacks accountability since it receives tax revenues regardless of its performance, rewarding inefficiency, and lacking incentive to fix failures. Fourth, government regulatory measures promote minimal compliance. Only ethics drives the pursuit of excellence and allows me to innovate and be the best I can be.

Finally, even if the government possessed the nimbleness, expertise and accountability to successfully manage AI, the government often acts in the best interests of government and special interests, not necessarily the best interests of patients. Put my future role in oral healthcare more in the hands of the dental profession with an ethical commitment to patients and less in the government, with a commitment primarily to itself.



D.D.S., J.D.

New York State Dental Journal ADA Commons Site Ready to Launch

THANKS TO the concerted efforts over the past two years of our NYSDA Board of Trustees and publication staff, Second District ADA Trustees, ADA House of Delegates, and ADA Library and Archives staff, we are now able to announce the NYSDJ's participation in ADA Commons as of Jan. 31.

ADA Commons is an online platform that archives approximately 1,800 primarily healthcare-related journals in a curated collection that now can include, potentially, all tripartite publications tailored for dental and oral healthcare research. Initially, this January 2024 issue and all 2023 and 2022 issues will be uploaded to the site, with a goal to upload all future issues and to continue to add past content.

ADA Commons will increase our Journal's visibility, discoverability and accessibility; offer Google indexing, full-text searchable capabilities, with metadata and identifiers assigned to individual articles for online searchability; and provide advanced real-time metrics (downloads, citations, social media mentions, etc.).

The site will be available to dental and oral healthcare professionals, educators, researchers, and the public. Stay tuned for future updates.

Stuart Segelnick Named Associate Editor

NEW YORK STATE DENTAL JOURNAL Editor Chester Gary has announced the appointment of Stuart L. Segelnick, D.D.S., M.S., to serve as associate editor in 2024. Dr. Segelnick, a Brooklyn periodontist, will assist Dr. Gary with his editorial duties during this, the final year of his term as editor. He was chosen by a committee of the Board of Trustees following an announced search to fill the post.

Dr. Segelnick currently serves as editor of the Second District Dental Society Bulletin. He is a certified dental editor, designated by the American Association of Dental Editors & Journalists (AADEJ). He is immediate past president of AADEJ and serves as the association's liaison to the American College of Dentists.

Dr. Segelnick has been recognized multiple times by the International College of Dentists and the American Dental Education Association Gies Foundation for his editorial writings and newsletter production.

A periodontist with a master's degree in forensic examination, Dr. Segelnick is president of Advanced Periodontal Services, PC, in Brooklyn; adjunct clinical professor at NYU College of Dentistry; attending periodontist, New York-Presbyterian/Queens Hospital, Flushing; forensic dental officer, Disaster Mortuary Operational Response Team Region 2; and chief of periodontics, Brookdale University Hospital and Medical Center, Brooklyn. He has an extensive portfolio of published articles and books and is engaged in research on several topics, among them, medically compromised dental patients.

Stuart Segelnick, left, accepts journalism award presented by International College of Dentists USA Section during annual meeting of American Association of Dental Editors and Journalists this past October.

AI ISSUE

Harnessing the Power of AI

Federal government steps in to ensure safe, secure and trustworthy development of artificial intelligence.

Lance Plunkett, J.D., LL.M.

Should artificial intelligence (AI) be regulated? One could argue that even the human brain is regulated to some extent by extrinsic factors. Has that been a benefit to human thinking? Could such extrinsic regulatory factors be beneficial for AI? These are difficult legal, ethical, scientific and philosophical questions—particularly at the intersection of AI and healthcare. Enter, in a very big way, the federal government to attempt to address these questions, not only in healthcare scenarios but in a host of other fields as well.

On Oct. 30, 2023, President Biden issued Executive Order # 14110 aimed at managing the risks of artificial intelligence (AI). The Executive Order establishes new standards for AI safety and security to purportedly protect Americans' privacy, advance equity and civil rights, stand up for consumers and workers, promote innovation and competition, and advance American leadership around the world. The Executive Order is the first of its kind to tackle the thorny issue of regulating AI. It is aimed at building on the recent voluntary commitments from 15 leading companies to drive the safe, secure and trustworthy development of AI. What does the Executive Order do?

New Standards for AI Safety and Security

As AI's capabilities grow, so do its implications for Americans' safety and security. The Executive Order directs the most sweeping actions ever taken to protect Americans from the potential risks of AI systems. The Executive Order will:

- Require that developers of the most powerful AI systems share their safety test results and other critical information with the United States government. In accordance with the Defense Production Act, the Executive Order will require that companies developing any foundation model that poses a serious risk to national security, national economic security, or national public health and safety must notify the federal government when training the model and must share the results of all red-team safety tests. These measures will ensure AI systems are safe, secure and trustworthy before companies make them public.
- Develop standards, tools and tests to help ensure that AI systems are safe, secure and trustworthy. The National Institute of Standards and Technology (NIST) will set rigorous standards for

extensive red-team testing to ensure safety before public release. The Department of Homeland Security (DHS) will apply those standards to critical infrastructure sectors and establish the AI Safety and Security Board. The departments of Energy and Homeland Security will also address AI systems' threats to critical infrastructure, as well as chemical, biological, radiological, nuclear and cybersecurity risks. Together, these are the most significant actions ever taken by any government to advance the field of AI safety.

- Protect against the risks of using AI to engineer dangerous biological materials by developing strong new standards for biological synthesis screening. Agencies that fund life-science projects will establish these standards as a condition of federal funding, creating powerful incentives to ensure appropriate screening and manage risks potentially made worse by AI.
- Protect Americans from AI-enabled fraud and deception by establishing standards and best practices for detecting AI-generated content and authenticating official content. The Department of Commerce will develop guidance for content authentication and watermarking to clearly label AI-generated content. Federal agencies will use these tools to make it easy for Americans to know that the communications they receive from their government are authentic—and set an example for the private sector and governments around the world.
- Establish an advanced cybersecurity program to develop AI tools to find and fix vulnerabilities in critical software, building on the Biden-Harris Administration's ongoing AI Cyber Challenge. Together, these efforts will harness AI's potentially game-changing cyber capabilities to make software and networks more secure.
- Order the development of a National Security Memorandum that directs further actions on AI and security, to be developed by the National Security Council and White House Chief of Staff. This document will ensure that the United States military and intelligence community use AI safely, ethically and effectively in their missions, and will direct actions to counter adversaries' military use of AI.

Protecting Privacy

Without safeguards, AI can put Americans' privacy further at risk. AI not only makes it easier to extract,

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identify and exploit personal data, it also heightens incentives to do so because companies use data to train AI systems. To better protect Americans' privacy, including from the risks posed by AI, President Biden has called on Congress to pass bipartisan data privacy legislation to protect all Americans, especially children, and the Executive Order directs the following actions:

- Protect Americans' privacy by prioritizing federal support for accelerating the development and use of privacy-preserving techniques—including ones that use cutting-edge AI and that let AI systems be trained while preserving the privacy of the training data.
- Strengthen privacy-preserving research and technologies, such as cryptographic tools that preserve individuals' privacy, by funding a Research Coordination Network to advance rapid breakthroughs and development. The National Science Foundation (NSF) will also work with this network to promote the adoption of leading-edge privacy-preserving technologies by federal agencies.
- Evaluate how agencies collect and use commercially available information—including information they procure from data brokers—and strengthen privacy guidance for federal agencies to account for AI risks. This work will focus in particular on commercially available information containing personally identifiable data.
- Develop guidelines for federal agencies to evaluate the effectiveness of privacy-preserving techniques, including those used in AI systems. These guidelines will advance agency efforts to protect Americans' data.

Advancing Equity and Civil Rights

Irresponsible uses of AI can lead to and deepen discrimination, bias and other abuses in healthcare, justice and housing. The federal government has already taken action by publishing the "Blueprint for an AI Bill of Rights" at https://www.whitehouse.gov/ostp/ai-bill-of-rights/ and issuing an additional Executive Order directing agencies to combat algorithmic discrimination at https://www.whitehouse.gov/briefing-room/statements-releases/2023/02/16/fact-sheet-president-biden-signs-executive-order-to-strengthen-racial-equity-and-support-for-underserved-communities-across-the-federal-government/, while enforcing existing authorities to protect people's rights and safety. To ensure that AI advances equity and civil rights, the Executive Order directs the following additional actions:

- Provide clear guidance to landlords, federal benefits programs, and federal contractors to keep AI algorithms from being used to exacerbate discrimination.
- Address algorithmic discrimination through training, technical assistance and coordination between the Department of Justice and federal civil rights offices on best practices for investigating and prosecuting civil rights violations related to AI.
- Ensure fairness throughout the criminal justice system by developing best practices on the use of AI in sentencing, parole and probation, pretrial release and detention, risk assessments, surveillance, crime forecasting and predictive policing, and forensic analysis.

Standing Up for Consumers, Patients and Students

AI can bring real benefits to consumers—for example, by making products better, cheaper and more widely available. But AI also raises the risk of injuring, misleading or otherwise harming people. To protect consumers while ensuring that AI can make Americans better off, the Executive Order directs the following actions:

- Advance the responsible use of AI in healthcare and the development of affordable and lifesaving drugs. The Department of Health and Human Services will also establish a safety program to receive reports of—and act to remedy—harmful or unsafe healthcare practices involving AI.
- Shape AI's potential to transform education by creating resources to support educators deploying AI-enabled educational tools, such as personalized tutoring in schools.

Supporting Workers

AI is changing America's jobs and workplaces, offering both the promise of improved productivity but also the dangers of increased workplace surveillance, bias and job displacement. To mitigate these risks, support workers' ability to bargain collectively, and invest in workforce training and development that is accessible to all, the Executive Order directs the following actions:

- Develop principles and best practices to mitigate the harms and maximize the benefits of AI for workers by addressing job displacement; labor standards; workplace equity, health and safety; and data collection. These principles and best practices will benefit workers by providing guidance to prevent employers from undercompensating workers, evaluating job applications unfairly or impinging on workers' ability to organize.
- Produce a report on AI's potential labor-market impacts, and study and identify options for strengthening federal support for workers facing labor disruptions, including from AI.

Promoting Innovation and Competition

America already leads in AI innovation—more AI startups raised first-time capital in the United States last year than

in the next seven countries combined. The Executive Order ensures that we continue to lead the way in innovation and competition through the following actions:

- Catalyze AI research across the United States through a pilot of the National AI Research Resource—a tool that will provide AI researchers and students access to key AI resources and data—and expanded grants for AI research in vital areas like healthcare and climate change.
- Promote a fair, open and competitive AI ecosystem by providing small developers and entrepreneurs access to technical assistance and resources, helping small businesses commercialize AI breakthroughs and encouraging the Federal Trade Commission to exercise its authorities.
- Use existing authorities to expand the ability of highly skilled immigrants and nonimmigrants with expertise in critical areas to study, stay and work in the United States by modernizing and streamlining visa criteria, interviews and reviews.

Advancing American Leadership Abroad

AI's challenges and opportunities are global. The federal government will continue working with other nations to support safe, secure and trustworthy deployment and use of AI worldwide. To that end, the Executive Order directs the following actions:

- Expand bilateral, multilateral and multistakeholder engagements to collaborate on AI. The State Department, in collaboration with the Commerce Department, will lead an effort to establish robust international frameworks for harnessing AI's benefits and managing its risks and ensuring safety.
- Accelerate development and implementation of vital AI standards with international partners and in standards organizations, ensuring that the technology is safe, secure, trustworthy and interoperable.
- Promote the safe, responsible, and rights-affirming development and deployment of AI abroad to solve global challenges, such as advancing sustainable development and mitigating dangers to critical infrastructure.

Ensuring Responsible and Effective Government Use of AI

AI can help government deliver better results for people. It can expand agencies' capacity to regulate, govern and disburse benefits; and it can cut costs and enhance the security of government systems. However, use of AI can pose risks, such as discrimination and unsafe decisions. To ensure the responsible government deployment of AI and modernize federal AI infrastructure, the Executive Order directs the following actions:

- Issue guidance for agencies' use of AI, including clear standards to protect rights and safety, improve AI procurement and strengthen AI deployment.
- Help agencies acquire specified AI products and services faster, more cheaply and more effectively through more rapid and efficient contracting.
- Accelerate the rapid hiring of AI professionals as part of a governmentwide AI talent surge led by the Office of Personnel Management, U.S. Digital Service, U.S. Digital Corps and Presidential Innovation Fellowship. Agencies will provide AI training for employees at all levels in relevant fields.

As the American AI agenda is advanced at home, the Executive Order contemplates that the federal government will work with allies and partners abroad on a strong international framework to govern the development and use of AI. Consultation on AI governance frameworks has already begun with Australia, Brazil, Canada, Chile, the European Union, France, Germany, India, Israel, Italy, Japan, Kenya, Mexico, the Netherlands, New Zealand, Nigeria, the Philippines, Singapore, South Korea, the United Arab Emirates and the United Kingdom. The Executive Order also supports and complements Japan's leadership of the G-7 Hiroshima Process, the United Kingdom Summit on AI Safety, India's leadership as chair of the Global Partnership on AI, and ongoing discussions at the United Nations.

The actions that the Executive Order directs are vital steps forward in the federal government approach to safe, secure and trustworthy AI. More action will be required, and work will continue with Congress to pursue bipartisan legislation to help lead the way in responsible innovation. To learn more about the federal government's work to advance AI and to join the federal government effort, you can go to: AI.gov.

The material contained in this column is informational only and does not constitute legal advice. For specific questions, dentists should contact their own attorney.

SANTA'S HELPERS

NYSDA staff gave Santa a helping hand in 2023 by "adopting" a needy family of eight (two adults and six children) through Albany County Department of Social Services Adopt a Family program. Staff purchased items from gift lists provided by Social Services, then wrapped each item for delivery in time for Christmas.

State Board for Dentistry Appointments Announced

RECENT ADDITIONS to the New York State Board for Dentistry include Dr. Roya A. Mohajer of Purchase, Dr. Wayne Kye of Bayside and Salim Rayman, R.D.H., of Yonkers.

Dr. Mohajer was appointed in September by the State Board of Regents to a five-year term. She is a graduate of NYU College of Dentistry and received a bachelor's degree in public health from Johns Hopkins University. She is clinical assistant professor, periodontology and implant dentistry at NYUCOD.

Dr. Kye and Mr. Rayman were appointed in December to five-year terms as extended members of the State Board for Dentistry. They will serve solely for purposes of licensure disciplinary and/or licensure restoration and moral character panels.

Dr. Kye is clinical associate professor, Department of Periodontology, NYU College of Dentistry. He is a graduate of NYUCOD and holds a certificate in periodontics from Baltimore College of Dental Surgery and a Master's degree in oral biology from the University of Maryland Graduate School.

Mr. Rayman is professor and unit coordinator, Hostos Community College, Bronx. He received a Master's in Public Administration degree from NYU, as well as a bachelor's degree in health education. He was awarded his dental hygiene degree by SUNY Farmingdale.

Council on Ethics Issues Rulings In Two Cases

On Oct. 4, 2023, the NYSDA Council on Ethics issued an order for no further action against Dr. Joseph C. Delisi (License No. 035832). After a full hearing on Sept. 29, 2023, the Council on Ethics found that Dr. Delisi had been disciplined for professional misconduct by the New York State Education Department Board of Regents and, as such, was in violation of Paragraph B of Section 20 Chapter X of the NYSDA Bylaws. Dr. Delisi did not appeal the Council's decision within the requisite 30-day timeframe to the American Dental Association (ADA). The decision of the NYSDA Council on Ethics thereby became final and effective as of Nov. 3, 2023.

On Oct. 4, 2023, the NYSDA Council on Ethics issued an order to suspend Dr. Pamela Jane Moses (License No. 054624) from membership for one (1) year, with said suspension completely stayed; a one (1) year probation with six (6) hours of continuing education in recordkeeping by the end of the probationary period. After a full hearing on Sept. 29, 2023, the Council on Ethics found that Dr. Moses had been disciplined for professional misconduct by the New York State Education Department Board of Regents and, as such, was in violation of Paragraph B of Section 20 Chapter X of the NYSDA Bylaws. Dr. Moses did not appeal the Council's decision within the requisite 30-day timeframe to the American Dental Association (ADA). The decision of the NYSDA Council on Ethics thereby became final and effective as of Nov. 3, 2023.

In Memoriam

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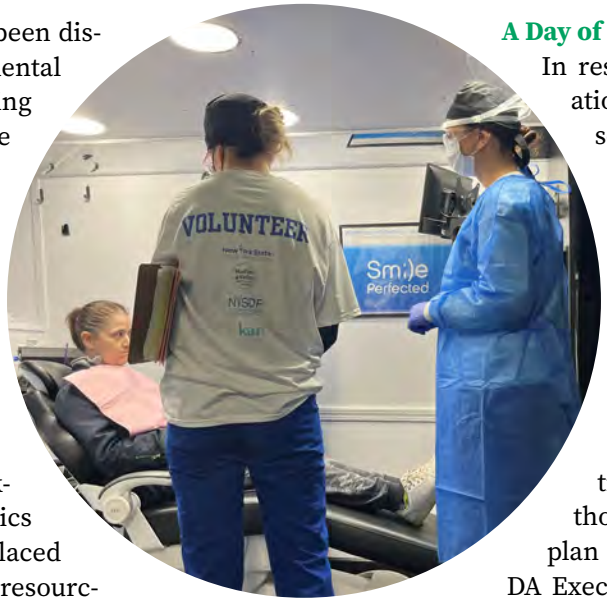
NYSDF
New York State Dental Foundation
IMPROVING THE ORAL HEALTH OF ALL NEW YORKERS

When One Door Closes, Another Opens

NYSDA assembles team of volunteers to stage a day of dental care for displaced patients.

Stacy Mcllduff, CFRE

Thousands of patients have been displaced by the recent closure of two dental clinics in the Capital Region, leaving a significant void in oral healthcare services in the area, particularly for Medicaid patients. After the most recent closure, over 4,000 individuals received a letter notifying them that the dental doors they had long relied upon were closing, and, quite suddenly, they found themselves without a safety net for their dental needs.



Amidst this unsettling backdrop, two remaining health clinics emerged as lifelines for the displaced patients, but the strain on existing resources was—and still is—palpable. These clinics, already committed to serving their communities, now face a surge of calls and visits from patients desperate for a new dental home. A dentist at one clinic noted that they receive an astounding 40 to 50 calls daily, with most patients seeking urgent and emergency care. Other callers are tacked onto a daunting waiting list of over 3,500 patients.

This influx underscores the critical role dental professionals play in addressing not only routine oral health but also emergent situations that, when left unattended, can lead to more severe health complications.

A Day of Compassionate Oral Healthcare

In response to the urgency of the situation, the New York State Dental Association (NYSDA) spearheaded the "Capital Region Community Dental Event" on Oct. 21 in the heart of the Capital Region—forces rallying together to address a critical gap in dental care access. It was also an act of solidarity and a means of relieving pressure on people in crisis.

"In an effort to assist the patients who had been displaced, we thought we could work together to plan a service day," said Greg Hill, NYSDA Executive Director. "We knew it would be a great way to help these patients in need of completing active treatment plans and assist them in connecting with dental health homes."

It took a true team effort to bring together the professionals and resources necessary for a day dedicated to providing free dental care to those who needed it most. Hudson Valley Community College (HVCC) hosted the event on its Troy campus, and its dental hygiene and dental assisting students performed patient screenings in their clinic. With Dental Demonstration Project (DDP) grant funding from New York State, NYSDA contracted with Kare Mobile to

have two dental vans on site. A team of five member dentists volunteered to perform care—some driving from as far away as Long Island and New York City to help. The New York State Dental Foundation provided logistical support and took care of students and volunteers.

It was a day for smiles at HVCC. More than 120 people had registered to receive dental screenings, emergent care, X-rays, treatment diagnosis, pain management guidance and extractions as needed. Others showed up without having an appointment. The atmosphere buzzed with compassion and a shared commitment to restoring smiles and promoting overall health.

First, HVCC's dental hygiene and assisting students screened patients in the clinic. Then, patients who were identified as needing emergent care were referred to the Kare Mobile dental vans, where NYSDA volunteer dentists waited to perform extractions and other treatments. All told, more than 80 teeth were pulled from approximately 26 patients.

Role of Community Dental Health Coordinators

A significant highlight of the event was the pivotal role played by Marlyce James, a community dental health coordinator (CDHC), who worked with patients at the event and followed up afterward, becoming a bridge between the community and sustained oral health. CDHCs ensure that the impact of an event like this extends beyond a single day, connecting patients with follow-up care and, ultimately, dental homes.

The importance of post-event care coordination was underscored by the very last patient of the day, Jennifer Citrine, who waited for over two hours to be seen and almost didn't make the cut.

"We had planned to hold the event until 4 p.m., but at that time there were still a few people waiting who needed care," said Betsy Bray, NYSDA Director of Health Affairs. "We still had one dentist willing to treat them. We still had the vans. So, we decided to keep going as long as we could."

Ms. Citrine, an Albany resident and single mother of two teenagers, learned about the event from her dentist. After visiting urgent care for severe jaw pain on Oct. 2, she was told she had an abscess and was prescribed antibiotics. She then followed up with her primary care physician, who treated her for strep throat and referred her to an ear, nose and throat specialist. But the ENT specialist told Ms. Citrine that her problem was dental.

Jennifer Citrine (center) with her children, Autumn, left, and Roscoe.

"I had a sharp bone growing out of my jaw and through my gums. It felt like a baby's teething pain, and then when the bone finally broke through, it was slicing my tongue," said Ms. Citrine, who works as an administrative assistant for a realty company in Troy. She took four ibuprofen pills four times a day to cope with the excruciating pain of eating, talking and swallowing—the pain was so severe that it woke her up at night.

After being tossed around from one doctor to another for weeks, struggling to find someone who would take her Medicaid coverage to treat something that could be considered both medical and dental in nature, Ms. Citrine finally became desperate and snapped a piece of the bone off herself with a pair of tweezers.

"I was mostly worried about infection, but I sterilized the tweezers first," she said. But then the pain continued, and it grew back, forcing her to remove another piece of bone on her own. "When you're in pain, it just feels like you're drowning. It feels like there's no hope."

At the Capital Region Community Dental Event, Ms. Citrine had an X-ray taken, and her case was flagged as needing urgent attention. In the weeks that followed, Ms. James worked alongside Ms. Bray to find the dentist who could perform the 30-minute procedure necessary to relieve Ms. Citrine's pain—a procedure that may not have happened for several more months if she did not have well-networked navigators advocating on her behalf.

> Ms. Citrine's story is a great example of how CDHCs, together with NYSDA dentists, can be the missing link in bringing oral healthcare to our most vulnerable populations.

Ms. Citrine's story is a great example of how CDHCs, together with NYSDA dentists, can be the missing link in bringing oral healthcare to our most vulnerable populations.

Extending care on a day dedicated to providing free dental treatment to those who needed it most.

Looking Forward

As the event concluded, the impact reverberated through the community and shed light on the pressing nature of this issue and emphasized the need for a swift and comprehensive response to ensure that patients like Jennifer Citrine are not left without the care they urgently require.

The Capital Region Community Dental Event marked the conclusion of NYSDA's Dental Demonstration Project (DDP), a nine-year endeavor that showcased the effectiveness of community-based oral health initiatives. But as the DDP chapter closes, a new one begins.

The New York State Dental Foundation is launching a pilot program called "My Healthy Smile NY" on April 1, building on the successes of the DDP and bringing the CDHC model to scale statewide over the next four years.

"It's so critically important that we ensure that the lessons learned, and the community connections forged during the DDP, continue to impact oral health throughout New York," said Dr. Maria Maranga, chair of the Foundation Board of Trustees. "We want to pick right up where the DDP leaves off on March 31 and take a deeper dive into the efficacy of the CDHC model in expanding access to dental care."

The pilot, which has been endorsed by the ADA and other groups, calls for a team of CDHCs to be deployed in strategic regions across the state, beginning with the North Country, Capital Region, Central New York and Long Island; in year four of the program, two additional CDHCs will be stationed in Western New York and the Metro New York area. Guided by a program director, the CDHCs will become an essential part of the patient navigation and community education system, poised to gather crucial data that can help inform policy and decisions that impact the health of all New Yorkers.

The CDHCs will also be actively engaged in promoting the dental professions in their regions, whether delivering oral health education to troops of young Girl Scouts, or visiting high school career fairs, introducing educational pathways to the dental professions will plant seeds to inspire diverse groups of young people to take good care of their teeth and to consider a career in oral health.

With state and private funding, the New York State Dental Foundation is hoping to offer more frequent dental events and oral cancer screenings across New York State, particularly in areas with great need. In late November, the Henry Schein Cares Foundation was the first external organization to commit to funding the pilot program with a grant of $40,000 over the next four years, in addition to providing in-kind support for event-related healthcare supplies. The Henry Schein Cares Foundation was established in 2008 by Henry Schein, Inc., to advocate and support efforts to advance health equity and empower healthcare professionals to promote a healthier tomorrow for all.

In the coming months, all eyes will be on the Foundation's efforts to bring My Healthy Smile NY to life. It's a journey marked by challenges, but it's also a journey of compassion, unity and determination—a journey that reaffirms the commitment of healthcare providers to the communities they serve.

Ms. Mcllduff is executive director of the New York State Dental Foundation. Queries about My Healthy Smile NY and other Foundation programs can be sent to her at smcilduff@nysdental.org.

Thanks to our alliance, New York now has better access to a dental workforce management solution.

New York State Dental Association

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The **New York State Dental Association (NYSDA), New York Dental Hygienists' Association (NYDHA)**, and **onDiem** have joined together to give New Yorkers better access to dental care. And since quality care requires thriving dental workers and businesses, we're committed to tackling the labor shortage once and for all.

Through our alliance, we are:

- **Easing shift fulfillment and hiring.** NYSDA members will enjoy unique access to onDiem—the country's first fully W-2 compliant dental staffing solution. Services include:
  - Free temp-to-perm conversions
  - Up to a $500 rebate per year on completed shifts.
  - Reduced, industry-best pricing
  - An exclusive NYSDA shift board
- **Improving access to qualified and vetted workers.** Employers will enjoy unique access to onDiem's dentists, hygienists, assistants, and front-office staff—who comprise the largest community of W-2 dental professionals in the country.
- **Growing and nurturing top dental talent.** NYDHA members will receive improved access to onDiem's unique benefits: comprehensive health insurance, paid time off, Care Benefits for wellness-related costs, association membership rebates, and more.
- **Unlocking new growth for dental practices and organizations.** onDiem will work with dental leaders to not only fill open shifts, but also maximize revenue and production through new staffing strategies.

Find out how our alliance benefits you.

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ONDIEM

Introducing the Gleason Legacy Circle

A Timeless Commitment to the Future

In the tapestry of philanthropy, there exists a thread woven with foresight, compassion and a profound commitment to the future. This thread is known as planned giving. The New York State Dental Foundation is excited to introduce the Gleason Legacy Circle, a beacon of lasting impact and a testament to the enduring spirit of generosity.

Named for Dr. G. Kirk Gleason, former chair of the Foundation's Board of Trustees and the very first dentist to notify the Foundation of his bequest intentions, this new giving society is a way to recognize and honor individuals who have included the Foundation in their estate plans. Visionary supporters like Dr. Gleason and his wife, Dale, have demonstrated their unwavering belief in the power of the Foundation mission.

"Dale and I have always believed in the importance of giving back monetarily to the charities and organizations that we believe in, and the New York State Dental Foundation has always been at the top of our list," Dr. Gleason said. "A legacy gift will simply be an extension of that."

A Gift Beyond Your Lifetime

Planned giving is a powerful philanthropic strategy that allows individuals to make thoughtful, often transformative, contributions to the causes they hold dear. Unlike traditional donations, planned giving is a deliberate decision made during one's lifetime about the legacy they wish to leave behind. It involves a range of charitable vehicles, including bequests, trusts, life insurance and more.

"In our case, my wife, Dale, and I have simply named the New York State Dental Foundation in our will to receive a specific gift amount. We have discussed this with our executor so that our desires are understood," Dr. Gleason said.

Why is planned giving so crucial for the sustainability of nonprofits? The answer lies in its ability to fortify orga-

Kirk and Dale Gleason.

nizations against the ebb and flow of time. While immediate donations play a vital role in addressing current needs, planned gifts represent a strategic investment in the future.

The Gleason Legacy Circle invites individuals to become stewards of change, architects of a legacy that extends far beyond their years. By joining, members make a commitment to the long-term success of the Foundation mission, providing the resources needed for programs and services to thrive in the future.

How to Join the Gleason Legacy Circle

Joining the Gleason Legacy Circle is a simple yet profound way to make a lasting impact. If you believe in the enduring power of the Foundation's mission and wish to ensure its future, you are invited to explore the various planned giving options available.

If you are interested in learning more about planned giving or in becoming a member of the Gleason Legacy Circle, you are encouraged to call the Foundation at (518) 689-2772. Like Dr. and Mrs. Gleason, your foresight and commitment can become a guiding light for the generations that follow.

"I have always been proud to be part of the Foundation because we have reached so many New Yorkers in need. Often the impact of a small grant or program is felt in a positive way many times over and spreads help to thousands throughout the state."

In the tapestry of time, your legacy awaits. Together, let's weave a story of lasting change and boundless compassion.

Oral Manifestations of Metastatic Diseases

A Clinical and Histologic Analysis of Seven Cases

Zeming Zheng, D.D.S.; Elizabeth Philipone, D.M.D.

ABSTRACT

Metastatic diseases comprise 1% to 3% of malignant oral neoplasms, with nearly one-third of patients unaware of having a primary cancer.[1-4,9] This retrospective analysis identified all oral lesions diagnosed as metastatic disease in the Columbia College of Dental Medicine Department of Oral Pathology's oral biopsy database from 2015-2020 and recorded patient demographics, clinical presentation and diagnosis, origin of the primary, and whether the patient had known history of the disease. From 17,500 total cases, seven cases were identified as metastatic disease and described in detail. Clinicians' recognition and awareness of these lesions' often evasive, ambiguous oral presentations may help facilitate diagnosis, treatment and prognosis.

Metastatic disease to the oral cavity is uncommon, representing only 1% to 3% of all malignant oral neoplasms. These metastatic lesions can affect the bones, soft tissues or both.[1-3] However, lesions are two-times more likely to affect bone than oral soft tissue.[4,5] In particular, the molar region of the mandible is the most commonly affected osseous location.[1-3,6,7] With regards to soft tissue, the gingiva is the most common site for occurrence.[2-5,8] Oral metastases are more common in males and occur most frequently in middle-aged and older adults.

Metastasis to the oral cavity usually suggests end-stage disease, with a poor prognosis of 3.7- to 8.25-month survival time.[4,8-10] Oral metastases develop late in the disease process, with the majority of patients already having an established diagnosis of the malignancy.[9] However, in up to 30% of patients, the malignancy remains undetected until it presents in the oral cavity.[2,4,9]

Clinical presentation of metastatic disease in the oral cavity is dependent on the site of involvement. Patients with metastatic disease to the jaws report symptoms that include pain, swelling, paresthesia, numbness, toothache and loose teeth.[1,5,10,11] These signs and symptoms are nonspecific and can often mimic other common inflammatory conditions, such as periodontal disease or osteomyelitis.[12,13] Unfortunately, extracting the tooth in these cases may further promote metastasis of the cancer. Chronic inflammation, in itself, has also been linked to metastasis. Inflammatory chemokines may promote tumor cell proliferation and dissemination, and many common oral immunoinflammatory processes are associated with an increased chance of malignant transformation.[14]

Radiographic presentation of jaw metastases is often described as ill-defined or "moth-eaten" radiolucency, but metastatic prostate and breast carcinomas may present as radiopaque or mixed lesions. Periodontal ligament space widening, fracture and cortical erosion can also be observed.[15]

For soft-tissue lesions, an exophytic nodular mass is the most common clinical presentation.[15] These lesions often resemble commonly occurring benign or reactive lesions, such as pyogenic granuloma, peripheral giant cell granuloma or fibrous epulis.[8]

In this retrospective analysis, we present epidemiologic and diagnostic data on a cohort of patients whose oral biopsy reports confirmed manifestations of metastatic diseases of known and unknown primary origins.

Methods

This study received approval from the institutional review board. The Department of Oral Pathology's biopsy service database was searched from 2015 to 2020 to identify all biopsied oral lesions that were diagnosed as metastatic disease. Recorded data included patient sex and age at diagnosis, location of biopsy, description of clinical presentation, clinical diagnosis, histologic/biopsy diagnosis and whether the patient had a prior known history of the disease.

Results

Through the search of the oral biopsy database, out of 17,500 total cases, seven cases were histopathologically identified metastatic disease. These patients included five females and two males from 44 to 88 years old, with a mean age of 67.6 years at diagnosis. Three cases represented intraosseous lesions, all of which involved the left mandible. Three cases manifested in the soft tissue, including the maxillary gingiva, mandibular gingiva and mandibular retromolar area. One case involved both soft and hard tissue—presenting as a mandibular radiolucency with adjacent vestibular soft-tissue swelling (Table 1).

The intraosseous metastases presented in various ways, including "a destructive lytic lesion" and an unresolving periapical radiolucency. For two of the cases, the clinical diagnoses of metastatic breast carcinoma and metastatic prostate cancer were correct. These cases presented with clinical descriptions of a "destructive lytic lesion of the left mandible" and "pain and unresolving periapical radiolucency #19, #20," respectively. Both patients were known to have metastatic disease to other sites prior to the oral biopsies. In one case that presented as a "persistent swelling of left posterior mandible #19," an incorrect clinical diagnosis of reactive periostitis post root canal therapy was suspected. Upon biopsy this case was diagnosed as metastatic lung carcinoma. The patient was unaware of having lung cancer (Table 1).

As for the three metastases presenting in the oral soft tissues, two cases included the correct clinical diagnosis on the provided differential. The remaining case had incorrect clinical diagnosis of pyogenic granuloma.

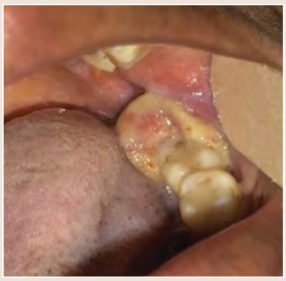
For the one case that presented with involvement of bone and adjacent soft tissue, the clinical presentation was of a firm vestibular swelling with adjacent periapical radiolucency that was unresponsive to root canal therapy. A persistent infection was favored by the submitting clinician, with a comment to rule out neoplasm (Table 1).

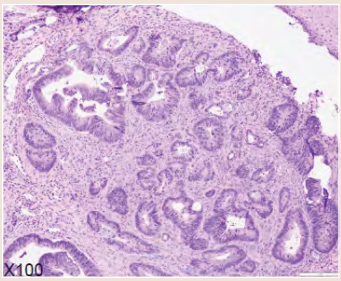
In five of the seven cases, the patient was known to have a prior diagnosis of malignancy. Thus, in the remaining two cases, the initial manifestation of the disease was within the oral cavity and diagnosed at the time of the biopsy.

TABLE 1. Summary of recorded data, including patient sex and age at diagnosis, location of biopsy, description of clinical presentation, clinical diagnosis, histologic/biopsy diagnosis, and whether patient had prior known history of disease.

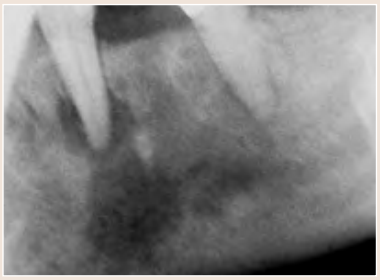
Case	Age	Sex	Site	Clinical Presentation	Clinical Diagnosis	Microscopic Diagnosis	Known History of Primary Disease
1	44	F	Soft tissue, left mandibular retromolar area	Ulcerated soft-tissue swelling	Squamous cell carcinoma vs metastasis	Metastatic adenocarcinoma of colon	Yes
2	56	F	Intraosseous, left mandible	Destructive lytic lesion	Metastatic breast cancer	Metastatic ductal adenocarcinoma of breast	Yes
3	73	F	Intraosseous, left mandible	Persistent radiolucency with expansion #19	Reactive periostitis post root canal therapy	Metastatic carcinoma of lung	No
4	76	F	Intraosseous and soft tissue, right mandible and vestibule	Firm swelling and infection unresponsive to root canal therapy #28 periapical pathology #28	Persistent infection, r/o neoplasm	Metastatic carcinoma of lung	Yes
5	74	M	Intraosseous, left mandible	Periapical radiolucency #19-20 with pain, unresolving to endodontic treatment	R/o metastatic prostate	Metastatic prostate carcinoma	Yes
6	47	M	Soft tissue, right posterior maxillary gingiva	Ulcerated soft-tissue mass distal to #2	Squamous cell carcinoma vs metastatic renal	Metastatic renal cell carcinoma	Yes
7	88	F	Soft tissue, left mandibular gingiva	Red, ulcerated soft-tissue mass	Pyogenic granuloma	Metastatic carcinoma of unknown primary	No

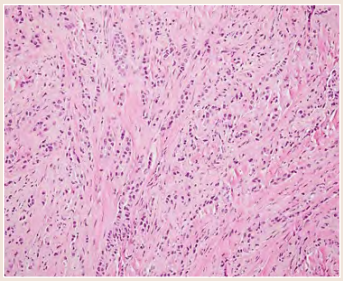
Figure 1. Representative clinical photos, radiographic images and histologic H&E slides of metastatic diseases presented.



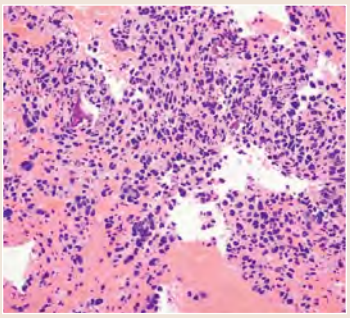


(a) Case 1. Ulcerated tan mass of retromolar pad area and histologically diagnosed as metastatic adenocarcinoma, colon.

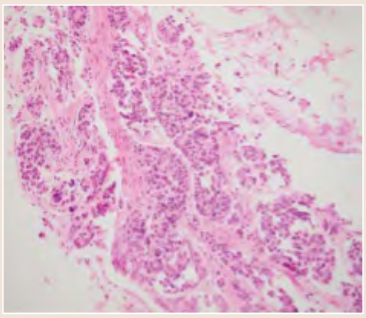




(b) Case 2. Irregular radiolucency of left mandible with ill-defined and somewhat moth-eaten borders. Histologic diagnosis of metastatic breast carcinoma.



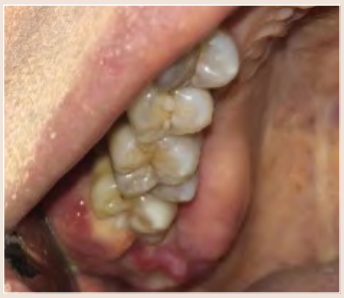
(c) Case 3. Subtle radiolucency that did not resolve with endodontic treatment. Clinically, some expansion was present at site of left mandibular first molar (#19). Clinical diagnosis was of reactive periostitis. Intraosseous curetting (H&E x400) revealed atypical, hyperchromatic epithelioid cells ad mixed with inflammatory cells and for hard-tissue fragments. Immunohistochemical staining profile of metastatic lung cancer.

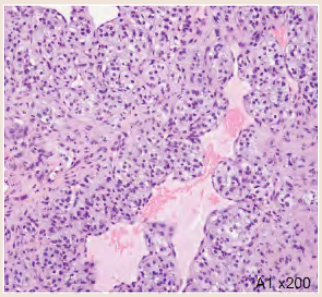


(d) Case 5. Histologic slide of metastatic prostate carcinoma.

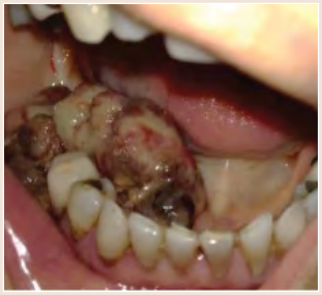
The microscopic diagnoses of these seven cases included colon adenocarcinoma (one case), ductal breast adenocarcinoma (one case), lung carcinoma (two cases), prostate carcinoma (one case) and renal cell carcinoma (one case).

Figure 1. Representative clinical photos, radiographic images and histologic H&E slides of metastatic diseases presented.





(e) Case 6. Ulcerated mass of right posterior maxillary gingiva. Histologically diagnosed as metastatic renal cell carcinoma.



(f) Different case of metastatic renal carcinoma presenting instead as swelling of gingiva resembling peripheral giant cell granuloma and pyogenic granuloma.

The seventh case could not be further classified from the oral biopsy sample and was, therefore, diagnosed as poorly differentiated metastatic disease of unknown primary. This patient was subsequently found to have multiple metastatic deposits throughout the body, including the brain.

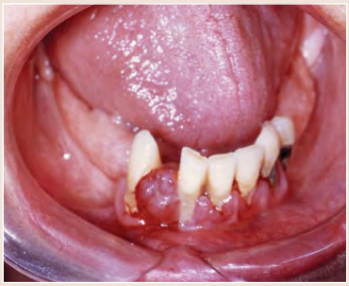
Table 1 presents a summary of recorded data, including patient sex and age at diagnosis, location of biopsy, description of clinical presentation, clinical diagnosis, histologic/biopsy diagnosis and whether the patient had a prior known history of the disease. Figure 1 presents representative clinical, histologic and radiographic images of these cases.

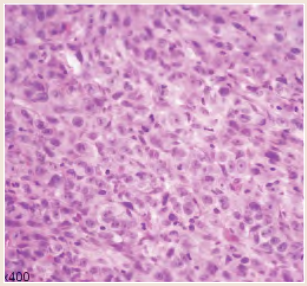
Discussion

In this retrospective study, we identified seven cases with oral metastases out of a total of 17,500 biopsy reports (0.046%) over the past five years. This is consistent with the literature reporting that metastatic disease presenting in the oral cavity is very rare.[1]

In terms of site distribution, all three cases of bony metastases presented in the mandible, which is the most commonly affected bony location.[1-3,6,7] For the three cases of soft-tissue metastases, the gingiva was the most common site. This is, again, consistent with what is cited in the literature as the most commonly affected soft-tissue location.[2-5,8] Ninety percent of oral metastases are reported to present in the bone.[1] However, we found an equal distribution of cases presenting in the soft tissue (n=3) and in bone

Figure 1. Representative clinical photos, radiographic images and histologic H&E slides of metastatic diseases presented.





(g) Case 7. Growth of right mandibular gingiva thought to be pyogenic granuloma. Histologic diagnosis was of poorly differentiated metastatic carcinoma of unknown origin.

(n=3). One case presented in both the bone and adjacent soft tissue. Murillo et al. also reported a slight variation in distribution, with a predominance of mixed metastatic presentation, followed by soft-tissue and then bony lesions.[10]

Hirshberg et al. found that gender distribution differed for metastases presenting in bone vs. soft tissue, with an equal gender distribution in jaw bone metastases and 2:1 male predilection for soft-tissue metastases.[4] Although Murillo et al. found that there was a male predominance for all metastases, they stated that oral metastases are often found in similar proportions in male and female patients.[10]

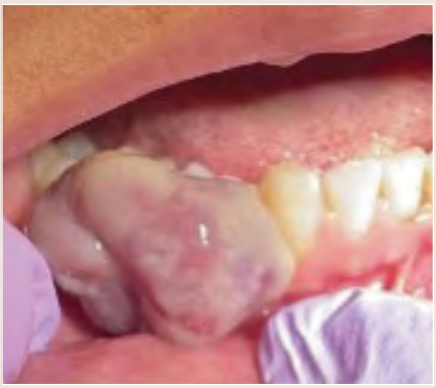
Aniceto et al. reported a female-to-male ratio of 3:2 in a similar study of nine oral metastases presenting in the mandible, with breast adenocarcinoma being the most common primary tumor. Our results may be more in alignment with the findings of Aniceto et al. because of the similar cohort size with all bony metastases presenting in the mandible and a case of invasive ductal carcinoma of the breast that rarely presents in men. Although lung and colon cancer are both more common in men, the two cases of lung cancer and one case of colon cancer in our study presented in females, which may have further contributed to the female predilection.[16]

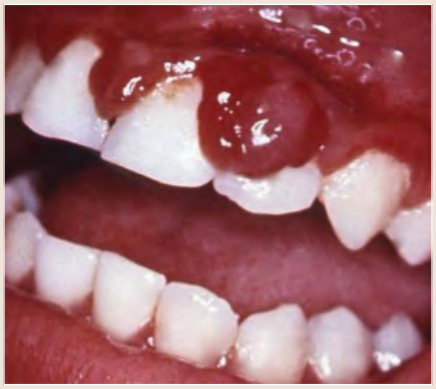
Although oral metastases can affect patients of all ages, the greatest prevalence occurs around 50 to 60 years of age: 51.5 years in men and 47.1 years in women; 52 years for bony metastases and 42 years for soft-tissue metastases.[4] In this study, patients ranged from 44 to 88 years old, with a mean age of 67.6 years at diagnosis: 60.5 years for males and 70 years for females; 67.7 years for bony metastases and 56.3 years for soft-tissue metastases. Therefore, in general, our cohort was slightly older in age.

The common sites of primary disease metastasizing to the oral cavity include breast, lung, kidney, liver and thyroid gland.[1-3,7,17] In the U.S., breast cancer is the most common primary malignancy to metastasize to the oral cavity in females, followed by lung and colorectal carcinoma. In males, prostate cancer is most common, followed by lung, colorectal and bladder cancer.[18,19] Sites of the primary disease in our patients included colon (n=1), breast (n=1), lung (n=2), prostate (n=1) and kidney (n=1). These were all among the most commonly reported sites of primary disease metastasizing to the oral cavity in the U.S. Lung cancer most often metastasizes to the gingiva, but in our case, presented in the mandible and mandibular vestibule.[21] Breast cancer mostly has been reported to more frequently metastasize to the gingiva, but in our study was found in the mandible.[21] The majority of prostate (80% to 90%) and colorectal cancer have been sited to metastasize to the bone, particularly the mandible, as consistent with our findings.[22,23]

Although oral metastases usually suggest advanced stage disease that has been previously diagnosed elsewhere in the body, in 22% to 30% of patients, the oral cavity is the initial site of diagnosis.[2,4,9] Two patients (28.6%) did not have prior history of a primary cancer before the oral biopsy.

It is important to note that oral metastases can mimic more common reactive lesions, infections, or benign tumors, and without a history of primary malignancy, an oral metastatic lesion would not be clinically suspected (Figure 2). Similar presentations and differential diagno-





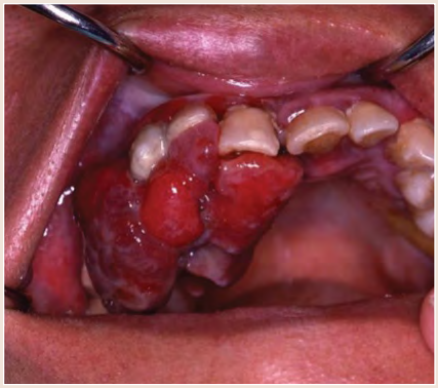


Figure 2. Clinical photos of benign entities that are common differential diagnoses for metastatic diseases presented. (a) Ulcerated mass of mandibular gingiva microscopically diagnosed as peripheral giant cell granuloma. (b) Erythematous growth of anterior maxillary gingiva microscopically diagnosed as pyogenic granuloma. (c) Large erythematous and ulcerated gingival mass microscopically diagnosed as pyogenic granuloma.

ses have been reported in the literature as was provided by our group of submitting clinicians.[1,5,8,10,11] In patients with known primary disease, it may be helpful for clinicians to recognize some clinically differentiating signs of metastatic disease, such as a rapidly evolving lesion; tendency to bleed; changes caused by tumor growth, such as root resorption; ulcers; and necrosis.[23] Even then, oral metastases can remain a challenge to diagnose with only clinical signs and symptoms.

Despite the poor prognosis associated with oral metastatic disease, newer treatment options, such as anti-angiogenic agents, for example, Bevacizumab (anti-VEGF), have shown promise in treating metastatic colorectal cancer, non-small cell lung cancer, and renal cell carcinoma. Finally, new developments in next-generation sequencing could develop more personalized treatment plans that target specific mutations and offer better prognosis for patients.[24,25]

Conclusion

Metastatic diseases can present at various sites within the oral cavity in males and females of all ages. Their clinical presentation is often evasive and ambiguous, which complicates diagnosis, treatment and, potentially, prognosis. It is important for clinicians to be aware of the variety of possible clinical presentations of metastatic disease to the oral cavity and to be cognizant that the oral lesion is the initial presentation of the cancer in up to 30% of patients.

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Dentistry Transformed

An Overview of Artificial Intelligence's Role in Dental Care

Brandon Veremis, D.D.S.; Kenneth Aschheim, D.D.S.; Parul Khare, M.D.S., M.Sc. FO (Belgium), FPFA

ABSTRACT

Artificial intelligence (AI) in dentistry has given rise to numerous applications and challenges, necessitating the profession's specialized approach to evaluating AI literature. Understanding data integrity, ground truth verification, dataset composition, patient data isolation and external validation are vital considerations that end users must understand. In addition, novel metrics like recall, precision, F1 score, AUC-ROC and concordance index present challenges for users unfamiliar with these concepts.

Current AI dentistry applications target tasks like caries detection, periodontal disease assessment, oral cancer diagnosis and forensic odontology. Furthermore, AI software for insurance claims processing highlights its potential for risk and fraud detection. Moreover, the end user should assess if the software incorporates ethical considerations like safeguarding autonomy, ensuring transparency, and fostering responsibility, inclusiveness and sustainability.

Stakeholder collaboration is essential for integrating AI tools into dental practice. Dental professionals should be able to critically assess AI studies, considering global ethical considerations and data protection laws shaping the evolving landscape of AI in dentistry.

Artificial intelligence (AI) has been attempted and published in most contexts of dentistry with variable success, and with the number of published articles relating to AI in dentistry increasing yearly.[1] The data used by these AI models may consist of images (such as radiographs or clinical photographs), text or other numerical values. With this data, AI performs the following tasks: segmentation (where it defines areas in an image, such as highlighting where teeth are present); classification (where it classifies an image or segmented structures within an image, such as determining premolars vs. molars); or regression (where it predicts a continuous variable, such as the likelihood of developing cancer).

Reviewing how AI literature should be assessed before discussing current published literature and how AI is currently being used in practice is beneficial. While dentists and allied dental healthcare professionals receive training in evaluating the quality of scientific literature generally, AI studies are relatively new, and only some dental professionals have received formal education regarding the evaluation of an AI-related publication.[2]

It is unclear how many reviewers for traditional dental journals have an appropriate level of experience to adjudicate the effectiveness of an AI submission; some meta-analytic studies suggest that a significant number of reported AI studies in dentistry have issues with bias, reproducibility, and lack reporting of criteria necessary for evaluating the validity of the study.[3] Establishing the quality of an AI publication involves special considerations relative to more conventional (e.g., materials- or device-based) studies.

AI Study Quality Assessment

First, the data quality going into an AI model is paramount. If the raw data has problems, any resulting model is suspect ("garbage in, garbage out"). When reviewing an AI study, one should thoroughly critique the underlying dataset. This includes reviewing what authors describe as "ground truth," the outcome or result the model is trying to determine. As an example, with caries detection in radiographs, the publication should report:

1. Who verified that the radiograph has caries (a general dentist, oral radiologist, or was it annotated by a technician with no formal background in caries detection)?
2. How many images are in the training dataset and how many are in the testing dataset?
3. If a single patient's data was isolated to either of the train/test datasets (to avoid data snooping).
4. If the data is representative of the population for which the algorithm is designed.
5. If the dataset is from a single center, or if results were validated on an independent, external dataset.

The first four are essential in any AI publication; the last consideration is less important for "proof of concept" studies but is extremely important for studies that promote a model that anybody can use. In the authors' experience, many publications do not report if they isolated patients between the train/test datasets. This is important because the model may learn arbitrary, patient-specific features and may perform deceptively well, but when used on completely unknown patients in practice, it will not be able to use the patient-specific features that it relied on during training.

In the context of AI, reporting results introduces unique challenges, as it involves unfamiliar terms encountered by healthcare professionals. While sensitivity, specificity, and positive and negative predictive values are familiar concepts, AI publications typically feature additional metrics. Terms such as recall, the model's ability to correctly identify instances of a specific item within a dataset (synonymous with sensitivity); precision, the model's ability to avoid making false positive errors (synonymous with positive predictive value); and F1 score, how false positives and false negatives affect the results differently, are new terms to many.

Additional terms are sometimes used with AI models, such as AUC-ROC (area under the receiver operating characteristics curve), the model's ability to differentiate between categories and concordance index (the model's

ability to rank items) can be challenging new concepts to those reviewing articles. These unfamiliar metrics may hinder their comprehension of studies to inform critical patient care decisions.

Current Models in Dentistry

The topic of "AI in dentistry" is exceedingly broad. Below, we review common tasks in general dentistry that have been reported scientifically. We have attempted to use studies that have been found to have an overall low risk of bias in a recent large scoping review[1] and include the characteristics described above to be confident that they represent an accurate reflection of AI performance in those contexts.

Caries Detection

A frequent task for a general dentist is diagnosing caries. It is challenging because as many dentists know from experience and probably from their own training when interacting with different faculty members, there is only moderate agreement on the presence of caries based on radiology.[4] Thus, when evaluating the literature on the use of AI with caries detection, it is essential to describe how the ground truth was determined; studies that only use one board-certified dentist will probably obtain reasonable results, but the resulting model will only be good at mimicking that one dentist. One study used 3,000 images that were reviewed by four calibrated, board-certified dentists to create a convolutional neural network that obtained an accuracy of 0.82-0.89 in detecting caries on radiographs.[5]

Periodontal Disease Detection

Another common task the general dentist encounters is assessing the degree of bone loss in patients with periodontal disease. In one study, using 2,001 radiographs, a convolutional neural network achieved an accuracy of 0.81.6. In that study, this result roughly approximated the performance of dentists (accuracy of 0.76; no significant difference), though the dentists had a low concordance on the task (Fleiss kappa 0.52).

Cancer

Diagnosing mucosal conditions of the oral cavity is an aspect of healthcare in which dentists play a significant role, especially with the timely diagnosis of oral squamous cell carcinoma (OSCC). Various models on different data types have been performed, including predicting OSCC from clinical photographs and from histology images. Diagnosing OSCC from imaging would probably be most helpful in regions with limited access to healthcare.

A broadly valuable aspect of the use of AI in cancer diagnosis is in prognostication–predicting the outcome of the disease process to guide treatment decisions. One study evaluated the use of fluorodeoxyglucose-positron emission tomography (FDG-PET) in predicting disease-free survival, hypothesizing that the glucose consumption of tumors may be a prognostic factor. This study found that clinicians were able to significantly improve the prediction of disease-free survival using this characteristic.[7]

Another study found that the outcomes prediction of their model (based on SEER data) significantly enhanced the prognostication provided by a common nomogram for HNSCC.[8] We eagerly anticipate future models combining histologic features, clinical features and radiographic features to provide an even better outcomes-prediction process for patients afflicted with this disease.

Forensics

Forensic odontology (FO) is a specialized field in forensic science that utilizes dental expertise for legal and criminal investigations, including identification, age estimation and dental record evaluation. AI has the potential to transform FO and enhance its capabilities. FO relies on qualitative assessments, comparing historical (antemortem) and current (postmortem) dental data for identification.[9] While AI has the potential to excel in this domain, limited widespread databases and the ease of conventional methods hinder widespread AI adoption. Proof-of-concept AI and machine learning algorithms, especially in more complex 3D comparisons, have been demonstrated,[10] but current studies favor converting data to two-dimensional metrics for efficiency.[11]

AI can revolutionize forensic odontology by efficiently cross-referencing dental records across databases. This is particularly crucial in mass disaster scenarios. AI-driven image processing can provide objective and unbiased evaluations of dental injuries, improving forensic examinations. In addition, since AI excels in processing large datasets, it can assist FO experts by providing finer discriminations in developmental stages and help in tooth-development analysis for age-range estimation. Proof-of-concept AI age-estimation algorithms have shown promise for future advancements.[12] Integrating AI promises to enhance the speed and precision of dental evidence analysis, benefiting criminal investigations, victim identification, age estimation and legal proceedings.

Companies Providing AI Tools

Various companies have formed to provide AI tools to the front-line dental team. Evaluating the performance of these AI companies is challenging; peer-reviewed litera-

ture is not readily available from them. However, as these tools become more available, it is hoped that complete documentation of the underlying science behind the models will allow in-the-trenches dental professionals to better evaluate and integrate these tools for their own practice.

Insurance Claims

While minimal peer-reviewed, published data exists on how AI is used in the context of corporate insurance, because insurance involves the assignment of risk, AI can assist with tasks like outcomes/risk prediction and insurance claim processing. Various computational metrics can be used to identify insurance fraud, and some patents have already been filed in the United States towards this end;[13,14] one system has advertised that it was able to identify several cases of fraud by using computer vision to find identical radiographs submitted with claims across the United States.[15] However, any machine learning system is theoretically susceptible to adversarial attacks, which are finding ways where the model is susceptible to make mistakes.[16] Some of these methods involve mild modifications to the underlying data, which may be imperceptible to humans but change the outcome of an AI algorithm.[17] These modifications may be made intentionally or unintentionally. An example of an unintentional modification would be if a large health system were to develop an automated coding system focused on claim acceptance.

Global Ethics Overview of AI

The six core principles identified by the WHO Expert Group in the book titled "Ethics and Governance of Artificial Intelligence for Health: WHO Guidance,"[18] published in 2021, are the following:

- Protect autonomy
- Promote human well-being, human safety and the public interest
- Ensure transparency, explainability and intelligibility
- Foster responsibility and accountability
- Ensure inclusiveness and equity
- Promote AI that is responsive and sustainable

Incorporating these principles and fulfilling human rights responsibilities practically requires a collaborative effort among various stakeholders, including designers, programmers, healthcare providers, patients and governmental/regulatory institutions. It entails seamlessly integrating ethical standards throughout the entire tech-

nology life cycle, from its initial design and development to its deployment.

Data protection laws are characterized as "rights-based approaches" that establish criteria for overseeing data-processing activities, balancing safeguarding individuals' rights with setting responsibilities for data controllers and processors. These laws increasingly acknowledge the right of individuals not to be subjected to decisions solely driven by automated processes. For instance, the Ibero-American Data Protection Network, comprising 22 data protection authorities in Portugal, Spain, Mexico, Central and South America, and the Caribbean, has issued "General Recommendations for Processing Personal Data in Artificial Intelligence." Additionally, it has produced specific guidelines to ensure compliance with the principles and rights governing personal data protection within AI projects.

Conclusion

AI will result in significant changes to the practice of dentistry. Before using AI, general dentists may wish to learn about the science behind the algorithms to ensure their patients' needs are met and their autonomy respected.

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AI ISSUE

Unlocking the Future of Dentistry

A Summary of AI and Augmented Intelligence in Dentistry from ADA's White Paper

Kenneth W. Aschheim, D.D.S.; ChatGPT, AI-Language Model by OpenAI

ABSTRACT

The best way to explain the potential of artificial intelligence (AI) is to put it in action. More than 50 percent of this paper was produced by ChatGPT and is presented here unedited or altered in any way.

Artificial intelligence is the current hot topic in technology, sparking excitement and concern across countless industries. In response to the growing interest and significance of artificial intelligence (AI) and augmented intelligence (AuI) in dentistry, the American Dental Association (ADA) has authored a comprehensive white paper, hoping to educate the profession on the topic and predicate the transformative potential within the dental profession.

Titled "ADA SCDI White Paper No. 1106 for Dentistry: An In-Depth Exploration of Artificial and Augmented Intelligence Applications in Dentistry," this document discusses how AI and AuI are being integrated into various clinical domains, encompassing areas such as preventive care, caries and periodontal disease management, dental implants, oral and maxillofacial surgery, endodontics, imaging, orthodontics and more.

AI and AuI refer to the field of computer science focused on creating systems that can perform tasks that were believed to require human intelligence, such as problem-solving, pattern recognition and decision-making. Within AI, machine learning is a subset that emphasizes the development of algorithms and models that allow computers to learn from data and improve their performance over time without being explicitly programmed.

Neural networks are computer models that attempt to digitally represent the human brain's interconnected neurons. These networks consist of "artificial neurons," through which data is processed, typically consisting of an input layer, one or more hidden layers, and an output layer. Deep learning, a subfield of machine learning, utilizes neural networks with multiple layers (deep neural networks) to automatically extract features from data, making it exceptionally well-suited for tasks like image and speech recognition.

Finally, to illustrate the power of current AI and AuI software, ChatGPT, an AI language model developed by OpenAI, authored the white paper summary for this article. It has not been edited or altered in any way by human authors. The fact that the AI produced a coherent and informative summary underscores the strength and capabilities of natural language processing and AI technologies. However, it is essential to acknowledge that AI systems have limitations and may not always be entirely accurate or error-free. Human oversight and critical evaluation remain crucial to ensure the reliability and quality of information derived from AI-generated content.

The progress in AI has undoubtedly opened new avenues for research, communication and problem-solving, but it is essential to use such technologies responsibly and ethically in various domains.

Software such as ChatGPT is poised to revolutionize dentistry by providing efficient, accurate and up-to-date information to dental professionals, enabling better patient care and innovative research. The New York State Dental Association Information Technology Committee commits

In terms of clinical applications, the paper discusses how AI/AuI is used for dental anatomy identification, caries detection, periodontics, dental implant recognition and prognosis, oral and maxillofacial surgery diagnosis and treatment planning, and endodontic diagnostic support.

to staying at the forefront of AI advancements, ensuring that dentists and healthcare practitioners are informed about the latest developments and opportunities in AI implementation to advance dental practices.

From the AI Pen

The text that follows is entirely AI-generated and is presented to highlight its capabilities, tone and the grammatical syntax of AI-generated content. It has intentionally not undergone human editing.

The white paper by the ADA Standards Committee on Dental Informatics delves into the growing use of Artificial Intelligence (AI) and Augmented Intelligence (AuI) in dentistry. It discusses how AI/AuI systems, such as machine learning and deep learning, are being applied in various dental disciplines, including prevention, implants, surgery, orthodontics and more. Additionally, the paper addresses the need for enhanced electronic dental record systems to fully leverage AI/AuI capabilities and highlights nonclinical aspects, such as payor topics and regulatory considerations. Two appendices provide further insights into imaging algorithms and FDA guidelines for AI and machine-learning practices.

The American Dental Association Standards Committee on Dental Informatics White Paper No. 1106 provides an overview of the use of Artificial Intelligence (AI) and Augmented Intelligence (AuI) in dentistry. The paper covers various clinical disciplines, including prevention, caries and periodontal disease, implants, oral and maxillofacial surgery, endodontics, prosthetics, dent maxillofacial imaging, orthodontics, temporomandibular joint disorder, and sleep disorders. It also includes information on non-clinical areas like claims processing, payment integrity, quality assurance, and dental practice administrative issues.

The paper defines key terms such as AI, AuI, Clinical Decision Support (CDS), and Machine Learning (ML). It explains the importance of training, validation, and testing datasets for AI models and the concept of ground truth in supervised learning.

In terms of clinical applications, the paper discusses how AI/AuI is used for dental anatomy identification, caries detection, periodontics, dental implant recognition and prognosis, oral and maxillofacial surgery diagnosis and treatment planning, and endodontic diagnostic support. AI/AuI tools have shown promising results in assisting clinicians in these areas, providing accurate diagnoses, predicting treatment outcomes, and improving patient care.

The use of AI/AuI in dentistry has the potential to enhance early intervention and preventative treatment, improve caries detection, increase accuracy in periodontal diagnosis, aid in dental implant recognition and success prediction, assist in oral and maxillofacial surgery planning, and support endodontic diagnosis and treatment planning. Overall, the paper highlights the positive impact of AI/AuI in various aspects of dental care and encourages further research and development in this field.

The use of AI/AuI technology in dentistry has shown promising results in various areas. In endodontics, it has demonstrated accurate diagnosis of vertical root fractures (VRFs) in treated and intact teeth, as well as differentiation of single vs. multiple roots in lower mandibular molars. AI/AuI has also been used to accurately determine the minor apical constriction and aid in pre-treatment planning.

In dental prosthetics, AI/AuI technology has been widely adopted in designing final restorations, surgical guides, and occlusal guards. It has also been utilized in case scoring, routing, and automated margin marking in dental laboratories, improving efficiency and patient outcomes.

In dental radiology and imaging, AI/AuI algorithms have been applied for clinical data-driven decision trees, disease identification, radiologic finding interpretation, and image enhancement. These technologies have the potential to enhance diagnostic accuracy and therapeutic response prediction.

In orthodontics, AI/AuI has been used for growth assessment, facial analysis, diagnostic accuracy improvement, case design, and treatment planning. It has also shown promise in improving tracing accuracy in lateral cephalometric images.

In the treatment of temporomandibular joint disorder (TMD), AI/AuI-assisted imaging has been used for accurate prediction of internal derangements. AI/AuI-based nightguard design associated with intraoral scanning has simplified and standardized the production process.

For sleep disorders, AI/AuI technologies coupled with imaging help identify airway obstructions and classify obstructive sleep apnea (OSA). They have potential applications in risk identification, remote monitoring, and personalized treatment paths.

Teledentistry, with the aid of AI/AuI, allows for precision dentistry by providing tailored treatment plans and therapies based on integrated and analyzed information. AI can interpret images, improve image quality, and assist clinicians in diagnosing oral diseases and providing timely feedback during remote consultations.

Overall, the incorporation of AI/AuI technology in dentistry has the potential to improve accuracy, efficiency, and patient care in various clinical and non-clinical aspects of dental practice.

AI/AuI technology is being increasingly utilized in various aspects of dental care, including consultation, triage, diagnosis, monitoring, electronic dental records (EDR), data collection and repository, treatment planning, risk assessment, scanning, workflow optimization, and non-clinical dental environment such as payor claim processing, payment integrity, and quality assurance.

In consultation and triage, AI/AuI aids clinicians in making preliminary diagnoses and treatment plans based on screening questionnaires, EHR/EDR, and images. It can also help in monitoring patient compliance and treatment progress remotely.

EDR plays a crucial role in storing and integrating patient data and images, making it an ideal platform for AI/AuI-powered tools. AI/AuI can analyze data in EDR to facilitate clinical decision-making, risk assessment, and treatment planning.

Scanning and imaging have also seen significant advancements with the integration of AI/AuI technology. It can help in identifying potential errors in scanned images, identifying anatomic structures, and facilitating digital workflows for treatment planning and fabrication of dental devices.

The use of AI/AuI has various potential benefits for patients, including improved communication, visualization, trust in the diagnostic process, and enhanced precision and early intervention in dental care.

In the non-clinical dental environment, AI/AuI systems are being utilized by payors for claim processing, payment integrity, and quality assurance. AI/AuI can validate attachments in claims, screen radiographic images to meet clinical guidelines, detect potential fraud, waste, and abuse, and prioritize claims for review, making the overall review process more efficient.

However, there are limitations and challenges associated with AI/AuI in dentistry, including concerns about data quality, technical expertise, and the need for further studies and regulations to ensure validity and reliability.

Overall, AI/AuI technology holds great promise in dentistry, improving workflow, patient benefits, and the quality of care provided by dental professionals. However, careful consideration of benefits and risks and adherence to regulatory guidelines are essential for its successful integration into dental practices.

The U.S. regulatory landscape for AI/AuI in dental imaging and other dental applications involves the Food and Drug Administration (FDA). The FDA requires validated clinical associations between the outputs of AI/AuI systems and specific clinical conditions. The data used for decision support must be validated, private, and secure. The FDA classifies AI/AuI devices based on risk, with Class I being the lowest risk and Class III being the highest. Class I devices may be exempt from pre-market notification and current Good Manufacturing Practices (cGMP). Class II and Class III devices have specific labeling and manufacturing requirements.

The paper concludes that AI/AuI has the potential to significantly impact dentistry, with changes already being seen in areas such as caries and bone loss analysis, robotic implant placement, and prosthetic design. The contributors to the paper believe that AI/AuI will transform how dental care is delivered in the future.

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Diagnostic Detail

Understanding the Impact of Tooth Rotation in Correcting Mucogingival Defects

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ABSTRACT

Introduction: **The subepithelial connective tissue graft (S-CTG) is the gold standard in achieving root coverage, but it is not without limitations. The acellular dermal matrix (ADM) is an alternative source that can compensate for the S-CTG's limitations.**

Body: **Severe recession type 1 (RT1) defects were treated with a combined approach of autogenous and allogeneic soft-tissue grafting, optimizing the benefits of both types of materials to achieve maximum root coverage (MRC).**

Conclusion: **Identifying the anatomical limitations of gingival recession as it relates to tooth rotation and its impact on vascular supply will best prepare both the clinician and patient for the expected outcome.**

In the 2017 World Workshop, the American Academy of Periodontology and European Federation of Periodontology defined gingival tissue recession as the apical shift of the gingival margin in respect to the cemento-enamel junction (CEJ), often associated with attachment loss. The etiology remains unknown; however, several predisposing factors have been suggested, such as toothbrush trauma, intrasulcular restorative margins, periodontal phenotype and secondary to orthodontic tooth movement.[1]

The main indications for periodontal plastic surgery include correcting gingival recession, unsatisfactory esthetics, dentinal hypersensitivity, increased chance of developing plaque retention, gingival inflammation, root caries, and/or tooth abrasion.[2] It has been reported in the literature that the prevalence of gingival recession tends to increase with age. According to Albandar et al., 37.8% of people ages 30 to 39 have gingival recession, and this percentage increases to 90.4% in individuals 80 to 90 years of age.[3]

In 1985, Miller[4] proposed a gingival recession classification system that measured the severity (as graded I-IV) of recession utilizing the amount of remaining keratinized tissue (KT) in relation to the mucogingival junction (MGJ) and the presence or absence of interproximal bone loss. In 2011, Cairo[5] and coworkers proposed a new gingival recession classification system (as graded 1-3) based on the level of interproximal clinical attachment level (CAL) in reference to direct facial or lingual CAL. There are some noticeable departures with the newer system: KT width in relationship to the MGJ is not a metric; and there is no prognostic value attached to the diagnostic recession type. A comparison of the two systems is illustrated in Table 1.

According to Chambrone and Tatakis,[6] the S-CTG is the gold standard for Miller I-II (currently known as RT1[7]) defects in terms of achieving a gain in root coverage (RC), CAL and KT width. However, this technique is not without its limitations, as it requires not only the preparation of a recipient bed but the additional preparation of a donor site in order to obtain the connective-tissue graft, which has been

TABLE 1.
Percentage of root coverage (% RC) after both surgeries was calculated via following methods. Firstly, gain in RC was calculated as difference between preoperative recession level (as recorded in mm) and postoperative recession level (in mm) after surgery #1 and surgery #2, respectively. Gain in RC (in mm) was divided by total initial recession (in mm) and multiplied by 100 to calculate final % RC.

Miller[4] Case Definition	Miller[4] Classification	Cairo[5] Classification	Cairo[5] Case Definition
Class I	Gingival recession which does not extend to the MGJ. There is no interdental attachment loss (hard or soft tissue) and 100% root coverage can be anticipated.	Gingival recession with no loss of interdental attachment. The interproximal CEJ is clinically not detectable at both mesial and distal aspects of the tooth	RT1
Class II	Gingival recession that extends to or beyond the MGJ. There is no interdental attachment loss (bone or soft tissue) and 100% root coverage can be anticipated.		
Class III	Gingival recession which extends to or beyond the MGJ. Interdental attachment loss is present or there is malpositioning of the teeth which prevents the attempting of 100% root coverage. Partial root coverage can be expected.	Gingival recession associated with loss of interproximal attachment. The amount of interdental attachment loss (measured from the interproximal CEJ to the depth of the interproxial pocket) was less than or equal to the buccal attachment loss (measured from the buccal CEJ to the depth of the buccal pocket).	RT2
Class IV	Gingival recession which extends to or beyond the MGJ. The interdental attachment loss and/or malpositioning of teeth is so severe that root coverage cannot be anticipated.	Gingival recession associated with the loss of interdental attachment. The amount of interproximal attachment loss (measured from the interproximal CEJ to the depth of the pocket) was higher than the buccal attachment loss (measured from the buccal CEJ to the depth of the buccal pocket).	RT3

linked to greater patient discomfort and longer surgical procedure time.[8,9] Another limitation to this technique is the finite amount of graft material obtained from harvesting, potentially limiting the amount of root coverage possible.

An alternative allogeneic graft source that circumvents limitations encountered with autogenous grafts is the acellular dermal matrix (ADM). The proprietary processing method removes the epidermis and cells that can lead to graft rejection while preserving the dermal matrix components and vascular scaffold.[10,11]

It is well accepted that both allogeneic and autogenous graft material sources have clinically satisfactory success rates in terms of achieving root coverage.[12] However, specific clinical indications warrant different clinical approaches, and a key factor in determining what treatment approaches to use is the diagnosis of the recession category. As such, the purpose of this article is to highlight the importance of recognizing subtleties that may shift a RT1 into an RT2 category and, as such, affect the predictability of expectations for maximum versus complete root coverage.

Clinical Presentation

A 36-year-old male presented to the Manhattan Veterans Affairs Postgraduate Department of Periodontics with a chief complaint of dentinal hypersensitivity and "long teeth." The patient's medical history was significant for prior substance abuse. Clinical evaluation revealed mild gingival recession on both maxillary canines and central incisors, with severe recession present on the maxillary lateral incisors and a narrow zone of keratinized gingiva measuring approximately 1 mm (Figure 1). The patient's phenotype was characterized as thick-scalloped, and the recession across teeth #6 through #11 was initially classified as RT1 Class A-2, with no loss of interproximal attachment. None of the teeth involved had pre-existing restorations or non-carious cervical lesions (NCCLs).

The patient's oral hygiene and plaque control were excellent. The suspected primary etiology for gingival recession was potential factitial habits related to a history of substance abuse.

The goal of the treatment was three-fold: to re-establish harmony across all gingival zeniths; augment the zone of keratinized gingiva; and mitigate dentinal hypersensitivity.

Case Management

The patient provided written consent for the procedures and was informed that due to the severity of the defects, two mucogingival surgical procedures were likely. The first of the two procedures consisted of an ADM graft *(PerioDerm Musculoskeletal Transplant Foundation, Edison, NJ)* via a tunneling approach. The surgical sites were anesthetized using 2% lidocaine HCl with 1:100,000 epinephrine via local infiltration. Teeth #6 through #11 received an ADM soft-tissue graft via tunneling.[13] This technique was deemed most appropriate clinically due to the wide extent of tissue harvest that would be required, limiting comorbidity associated with such.

The exposed root surfaces were scaled and root planed. In accordance with Allen's minimally invasive protocol,[14]

one tunnel was prepared via sulcular incisions with an end-cutting intrasulcular knife, *(Allen end-cutting intrasulcular knife, black line. Hu-Friedy Manufacturing Co., Chicago, IL)* followed by full-thickness dissection past the MGJ, extending to one tooth laterally in each direction beyond the gingival defects for adequate tunnel passivity and mobilization.

The root surfaces were then treated with 24% EDTA gel *(PrefGel Institut Straumann AG, Basel, Switzerland)*. Two acellular dermal matrix grafts (1x4 cm, 0.89-1.65 mm thickness) were hydrated in sterile saline and introduced through the tunnel, according to manufacturer's directions (Figure 2). Two sets of continuous 6-0 polypropylene sling sutures from teeth #6 through #8 and #9 through #11 were used to coronally position the flap and the marginal tissue around tooth #7 and tooth #10. Additional interrupted 6-0 polypropylene sutures were used to approximate the mid-facial tissue on tooth #7 and tooth #10 in accordance with the laterally closed tunnel technique[15] (Figure 3).

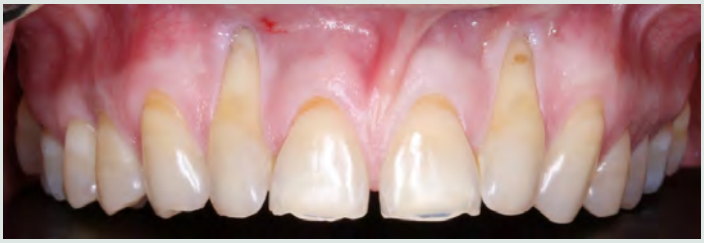

Figure 1. Surgery #1: pre-operative presentation revealing drastic recession defects on maxillary lateral incisors and minimal to no keratinized tissue and recession defects on maxillary canines and central incisors.

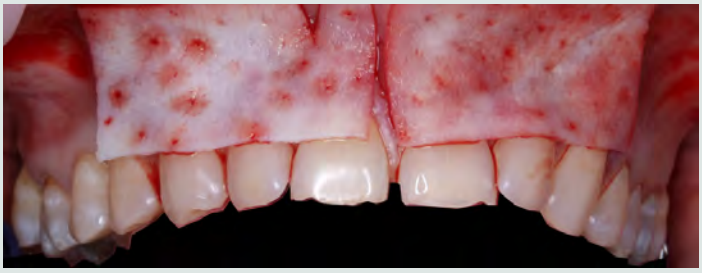

Figure 2. Surgery #1: two acellular dermal matrix grafts were prepared according to manufacturer's protocol, trimmed and secured into tunnel.

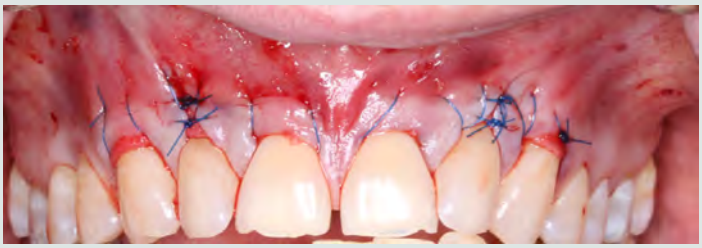

Figure 3. Surgery #1: immediate postoperative appearance. Tunnel was secured with interrupted sling sutures and interrupted sutures over sites #7 and #10 via laterally closed tunnel method. Note exposed ADM over sites #6, #7, #10, #11.

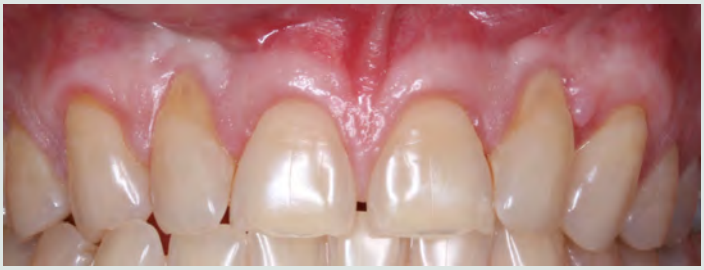

Figure 4. Surgery #1: five-month follow-up shows 100% root coverage over sites #8-#9, 90% RC over sites #6 and #11, and 56% RC over sites #7 and #10.

Postoperative antibiotics were dispensed (amoxicillin 500mg q8h, 7 days), and the sutures were removed at postoperative week three. The patient was recalled after one, two and four weeks and bimonthly for up to five months for clinical examination and oral hygiene reinforcement.

Teeth #7 and #10 still exhibited about 4 mm of exposed root surface after the tunneling procedure (Figure 4) and, thus, a secondary surgery was performed to attempt further root coverage utilizing two coronally advanced flaps in an envelope design, extending to one tooth adjacent mesially and distally, with an S-CTG (Figures 5,6). The flaps were then secured with interrupted sutures in 6-0 polypropylene (Figure 7). A S-CTG was determined the most appropriate graft at this time, as the surgical field was decreased from six teeth to only two after the results from the first surgical procedure. A smaller surgical site allows for a more feasible obtainment and application of a S-CTG that can be of the appropriate dimension to cover the recipient site.

Clinical Outcomes

Healing after Surgery #1: ADM and Tunnel

A clinically normal gingival appearance was noted at five months postoperatively; and probing depths ranged from 1 mm to 2 mm across all anterior teeth. The free gingival margin was located 4 mm apical from the mid-buccal CEJ of both lateral incisors, 1 mm apical from the CEJ on the canines, and at the level of the CEJ on the central incisors (Figure 4).

Healing after Surgery #2: SCTG and CAF

Follow-up at postoperative week two showed satisfactory early healing with mildly delayed healing in the papillary areas around teeth #7 and #10 (Figure 8). There was a noted increase in the width and thickness of keratinized tissue and 80% RC of both laterals and CRC of the central incisors and canines (Table 2). Long-term healing showed relapse of the lateral incisors of 3 mm to 4 mm but overall drastic improvement when comparing the preoperative situation to the final results (Figure 9).

Discussion

An allograft was chosen as the primary donor source, as there were multiple defects initially involved. Employing a tunnel design over multiple sites allows for passive flap mobilization while preserving optimal vascularization of the dermal graft without disturbing any delicate papillary tissue.[16] After the results of the first surgery, the defect type was converted from multiple to single. As such, a combined S-CTG and CAF was chosen for the second surgical approach, as the amount of graft needed was now attainable with palatal harvesting techniques. The quantified results are shown in Table 2.

The results of the first tunneling procedure allow the authors to report 100% RC for the two central incisors and 90% RC on the canines. The lateral incisors both gained 56% RC, leaving about 4 mm of exposed root. This could be attributed to certain surgical details, such as leaving the ADM exposed over sites #6, #7, #10, #11 and flap tension. Short-term healing after the second procedure of S-CTG + CAF resulted in 100% RC for the canines and 80% RC for the lateral incisors. However, long-term follow-up revealed relapse of the lateral incisors: #7 displayed 56% RC, and #10 displayed 67% RC. As all teeth involved in treatment were initially classified into RT1, one should expect 100% RC across all teeth based on results reported in the literature. However, a closer inspection reveals that the lateral incisors were rotated mesio-buccally, thus warranting a diagnosis of RT2, corresponding to a Miller Class III recession-type defect.[4]

The current classification system put forth by the 2017 World Workshop supports the system proposed by Cairo,[5] especially as multiple authors have brought to light potential disadvantages of the Miller classification system, such as vague criteria for diagnosis regarding the MGJ level and its lack of both exhaustiveness and simplicity.[17]

However, Miller attached a prognostic value to his classification system. As such, the class of the recession is the

TABLE 2.

Tooth #	6	7	8	9	10	11
% RC After Surgery #1	90	56	100	100	56	90
% RC After Surgery #2	100	56	100	100	67	100

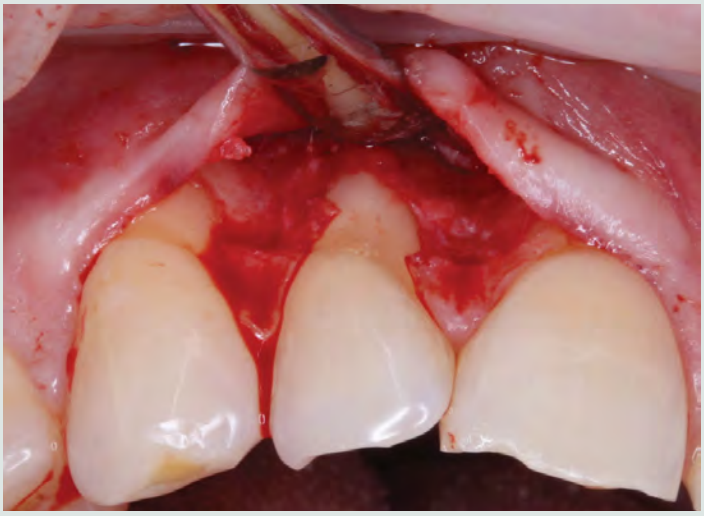

Figure 5. Surgery #2: preparation of recipient site #7. Note pronounced rotation of lateral incisor in relation to canine and central incisor. Similar rotated presentation was noted on #10 upon flapping.

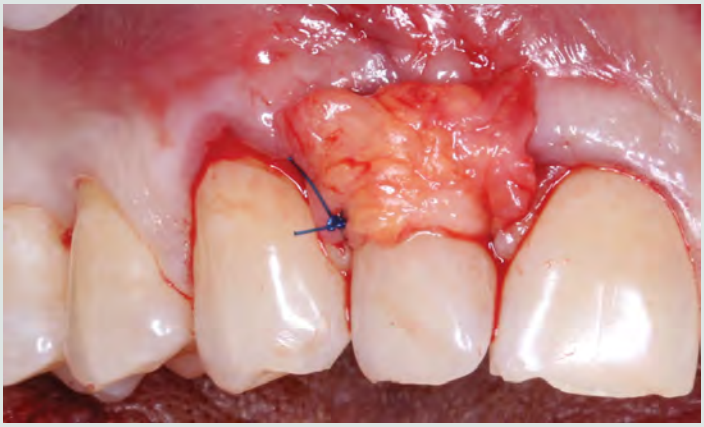

Figure 6. Surgery #2: graft secured to the recipient site at the level of the CEJ with 6-0 polypropylene sling sutures.

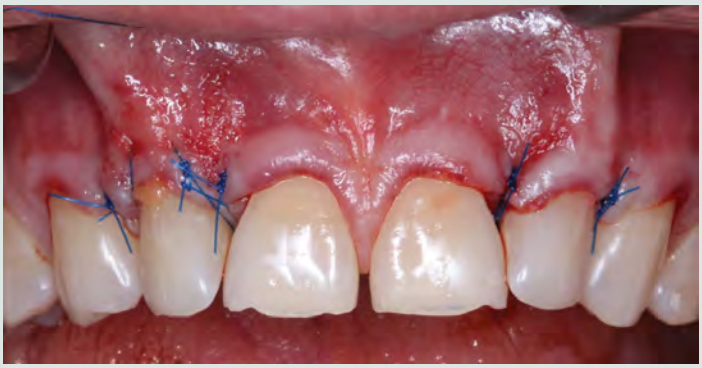

Figure 7. Surgery #2: immediately postoperative.

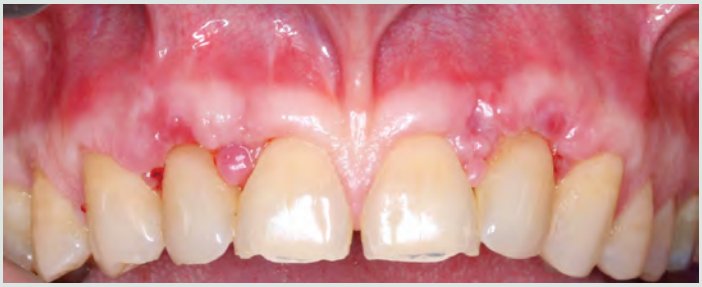

Figure 8. Surgery #2: two-week follow-up shows root coverage improvement and delayed healing in interproximal papillary regions.

predictive factor for the surgeon to anticipate complete or partial root coverage. However, one must consider that the original Miller classification system was published in 1985, during a time when the free gingival graft (in either a one-step or two-step procedure) was much more prevalent. Since that time, more recent advances in surgical techniques and materials have led to an increased percentage and reliability of RC and CRC.[18]

Thus, using a classification system from 1985 juxtaposed with current concepts and techniques may translate into a discrepancy in what one can expect in terms of the case's final result and initial classification. As such, the 2011 Cairo system was proposed as one that circumvents the drawbacks of Miller's but uses the level of interproximal clinical attachment as its only criterion. Therefore, when prognosticating surgical results in cases of gingival recession over rotated teeth, one is left with the original 1985 system, which cites a likelihood of 50% RC. A prognosis of 50% RC is likely due to the "dead space" between the exposed root surface and blood supply derived from the alveolus and periodontal ligament, all factors that compromise nourishment of the donor graft.

Taking all the aforementioned into consideration, the results of the lateral incisors, averaging 64.5% RC and ranging from 57% to 72% RC, are well above what can be expected for a Miller III defect.

According to Zucchelli et al,[20] a rotated tooth will result in a malpositioned contact point on either the distal or mesial papilla, depending on the direction of rotation. This change in contact point in relation to the level of the CEJ correlates to a decrease in the papilla height, which, ultimately, offers less vascularity and nutritional source to the coronally advanced tissue and donor graft. In these situations, even though there is no appreciable interproximal bone loss, the expectation for complete root coverage (CRC) is not realistic, as the blood supply cannot reach the entire coronal aspect of the anatomic CEJ. Thus, it is more clinically pragmatic and realistic to calculate the maximum root-coverage level (MRC) instead of CRC and set the former as the goal.[20]

The authors of this paper have calculated the predetermined location of root coverage as the MRC to be expected after the second S-CTG + CAF surgery (Figure 10). The predetermination of the level of root coverage achievable is calculated as an imaginary line connecting two reference points provided by the mesial and distal transitional line angles in conjunction with the papillae height. It may seem that the papillary tissue is intact and interproximal CAL is adequate; however, ultimately, the limited prognosis put forth by Miller in 1985 is validated in that only about 50% RC is predictable.

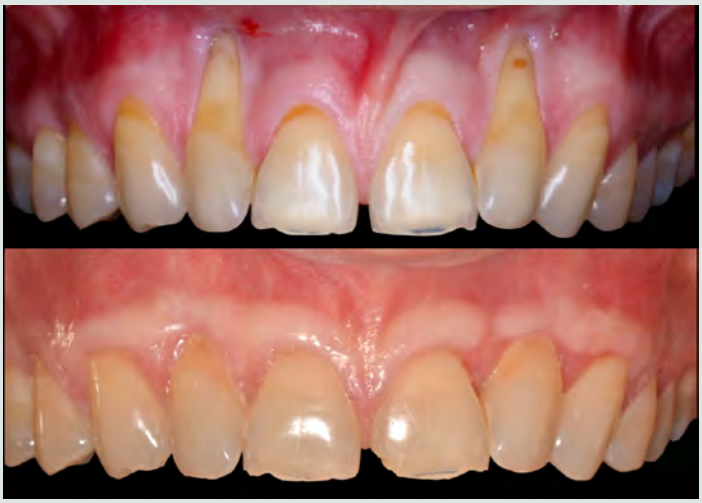

Figure 9. Initial vs. final presentation, displaying drastic improvement of recession defects and gain in keratinized tissue.

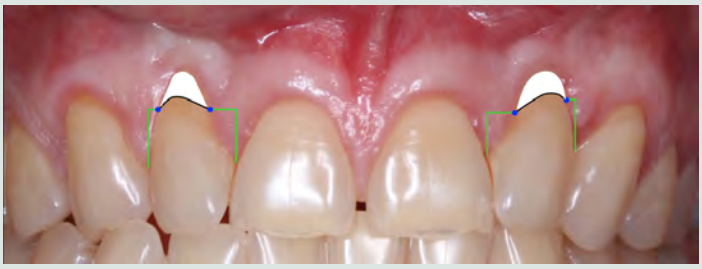

Figure 10. Predetermination of CEJ20 shows 100% RC is not to be expected due to rotation of lateral incisors. Note that final postoperative free gingival margin location on lateral incisors is to position of MRC that was calculated.

Conclusions

In any clinician's practice, it is imperative to identify the parameters that comprise "success" and "failure." In a case presented as such, the authors hope to convey that success may not always be as successful as one thinks. A cursory look at this case would reveal an incorrect diagnosis and a subsequently incorrect prognosis. Should one apply the diagnosis of a RT1 for all affected teeth, surely the case would be deemed a failure. But taking into account all the nuances of the case presentation, one would realize that the lateral incisors are in fact RT2. As such, the results average 61.5% RC (and range from 56-67% RC), above what can be expected for such a defect and certainly successful along these definitions.

The authors report no conflicts of interest related to this case report. Queries about this article can be directed to Dr. Simmonds at Trevor.simmonds@va.gov.

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Dr. Simmonds

Dr. Chu

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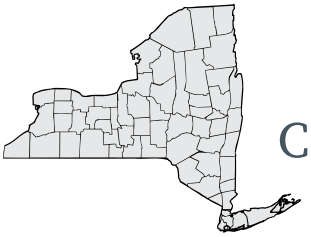
Mike Roig, D.M.D., is in private practice in Miami, FL.

Kristian T. Poventud, D.M.D., is in private practice in Miami, FL.



Component NEWS

THIRD DISTRICT

Busy Fall Begins with Annual Meeting

Paula Tancredi, Executive Director

The Third District Dental Society had a busy fall. New officers were installed at the Annual Meeting on Oct. 5. They are: President Kendra Zappia, D.D.S.; President Elect Mohamed Bavoumy, D.M.D.; Vice President Lauren Heisinger, D.D.S.; Treasurer Greg Vallecorsa, D.D.S.; Secretary Jane Shieh, D.D.S.; and Immediate Past President Luis Delgado, D.M.D.

In recognition of his outstanding devotion and excellent leadership newly installed President Zappia presented the 2023 President's Award to Dr. Delgado.

The Third District recognized two other members with top honors. Geoffrey Gamache received the Feldman-Hunn Medal of Merit for his exceptional leadership and munificent dedication to the perfection of the art and science of dentistry. And Seth Farren was presented with the William B. Smith Award for his continued involvement in organized dentistry and for displaying the highest ethical standards.

The following day, Oct. 6, the Greater Capital District Dental Symposium took place in Albany. The event began with a poster session highlighting work from students in the Hudson Valley Community College Dental Hygiene Program. It also included 4 CE presentations and a raffle of, among other items, a much sought-after pickleball set.

Trunk or Treat

On Oct. 26, the Third District partnered with the Capital District YMCA for a Trunk or Treat. President Kendra Zappia and New Dentist Chair Morgan Fryer handed out candy and, of course, toothbrushes!

First Holiday Open House

The Third District had a well-attended and fun evening at its first Holiday Open House on Dec. 7. Members, sponsors and exhibitors were all invited and enjoyed fun food, catered by their own executive director!

Scholarships Awarded to HVCC Hygiene Students

On Dec. 1, Robert H. Hill II, D.D.S., FAGD, FACD, chairperson of the Scholarship Committee and namesake of the Robert H. II Dental Clinic at Hudson Valley Community College, awarded scholarships to student recipients. Two first-year students, Kymanni Stevens

Festive food and decorations were on display at district's first Holiday Open House.

President Kendra Zappia and New Dentist Chair Morgan Fryer hand out candy and toothbrushes at Trunk or Treat event in October.

Scholarship Committee Chair Robert Hill with student recipients, from left, Kymanni Stevens, Gina Tumminello, Maria Albery, Dana Blanchette.

THIRD DISTRICT

and Gina Tumminello, received $400 scholarships. Maria Albery and Dana Blanchette, recipients in their first year, each received $400 scholarships in their second year as well for continuing their education and remaining in good academic standing.

Continuing Education

Having had a busy fall, the Third District is ready for an equally eventful winter and spring. Dedicated to increasing benefits to its members, the district will offer 32 credits of CE through five full-day courses. And the district is excited about hosting a special event—CE & Ski. This four-credit course will be held on Saturday, March 16, at West Mountain in Queensbury. The first half of the day is a presentation on dental trauma, and the second half of the day consists of skiing or tubing.

The course is open to dentists everywhere, and family and guests are welcome as well. Details for all CE courses can be found at https://www.third-district.org/ce-courses-in-person.

Plus, a Big Move

And big news for 2024 is that the Third District will be moving! The pending new office is in Albany. An announcement will be sent once all plans are finalized.

EIGHTH DISTRICT

Installations and Awards in Erie County

Kevin J. Hanley, D.D.S.

The Buffalo Launch Club, Grand Island, was the venue for the Erie County Dental Society's Installation Brunch on Sunday, Jan. 14. Dr. James Hoddick served as Master of Ceremonies for the event. Sworn in that day were: Dr. Amanda Cryan, president; Dr. Martin Gorkiewicz, vice president; Dr. Katherine Pauly, secretary; Dr. Amanda Torsney, assistant secretary; and Dr. Karl Neuhaus, treasurer.

Ten members of the society received Life Member recognition. Dr. Mary Beth Dunn was presented with the Frank J. Stone Memorial Award for her distinguished service to the dental society, organized dentistry and the community at large.

Presidential Salute

The Eighth District held its annual President's Reception at the Buffalo Club in downtown Buffalo on Saturday, Jan. 27. Master of Ceremonies Dr. James Hoddick issued the oath of office to incoming President Dr. Robert Bochiechio and his slate of officers: Dr. Joseph Rumfola, president-elect; Dr. Michael Ehlers, vice president; Dr. Jennifer Frustino, secretary; and Dr. Joseph Modica, treasurer.

Twenty-one members received Life Member plaques. Essence Unplugged provided the musical entertainment for the evening. It was a festive event, filled with good food, good conversation and excellent camaraderie.

Qualified Lifesavers

The Erie County Dental Society will hold "Basic Life Support for Health Care Providers" at the society office on Feb. 5. This course fulfills the New York State requirements for CPR retraining. Participants will complete both a skills test and a written exam to receive recertification. This recertification is valid for two years, and participants will receive 4 MCE hours.

The Erie County Dental Society will hold its annual Ski Day and CE at Holimont Ski Resort in Ellicottville on Friday, Feb. 9. This year's CE topic will be "Mucogingival Considerations and Therapy." It will be presented by Dr. Waqar Ahmad. The role of mucosal phenotype and stability has implications for all dental disciplines. Dr. Ahmad will review the basics of recognizing and understanding mucogingival concerns around teeth and implants. Interdisciplinary cases will explore different grafting techniques and their traditional and contemporary indications.

The first half of the lecture will be in the morning, followed by a round of skiing. The lecture will conclude during lunch. Following lunch, participants will take to the slopes again for the remainder of the day.

Two MCE hours will be awarded to participants. It promises to be another wonderful day of learning and skiing!

SEVENTH DISTRICT

Dental Residents and Potential Employers Try Speed Dating

Becky Herman, Executive Director

The Seventh District held its second hiring event, speed-dating style, on Oct. 30. Member dentists in the district interviewed residents from the Eastman

Seventh District *cont.*

Institute for Oral Health for openings in their offices/organizations in 2024. Dental teams stayed stationary, while the residents rotated to each table for a quick, seven-minute interview. Two sponsors were included in the mix to share information relevant to practice life.

Thank you to DDSMatch and Vision Financial for their sponsorship.

District Launches New Mentorship Program

In December, the district encouraged members to register as mentors and mentees for a new mentorship program to kick off in late January/early February. The goal is to bring together members in various stages of their dental careers for leadership and skill development, networking and support, and to share resources available through the district, NYSDA and ADA.

New Dentist "Cocktail Creation Party" a Hit!

The district hosted a "Cocktail Creation Party" at The Hideaway on Dec. 12 for new dentists. Attendees le arned how to create unique cocktails and mocktails for the holiday season while enjoying a spread of American comfort food. It had the highest participation we've seen in the last two years.

Thank you to GRB, J&L Dental and Vision Financial for their support of the event.

MCDS Hosts Annual Scholarship Luncheon

The Monroe County Dental Society held its annual scholarship luncheon on Dec. 19 for second-, third- and fourth-year dental students from Monroe County. Eight students from the University at Buffalo and Case Western Reserve Uni-

Residents had seven minutes to state their case to potential employers at hiring event, speed-dating style.

Dr. Scott Koopman, right, sits down with Dr. Christopher Calnon to learn more about Calnon & Cilano General Dentistry.

Monroe County Dental Society hosted dental students at luncheon and discussion of organized dentistry, dental profession and practice life in Monroe County. MCDS members appear in second row, starting at right: Todd Pedersen, Marc Malatesta, Steve Phillips, Marni Phillips, William Zugner, Nathan Glasgow.

Have a Party. Create a Cocktail

Partaking of holiday refreshment are, from left, Drs. Kathleen Andrews, Jacob Altmire, Jessica Hillman.

Popular party theme brought large number of attendees, including, from left, Drs. Derek Schutzman, Abdullahal Alqaraghuli, Vince Marino.

Preparing for holidays are, from left, Drs. Ben Levenson, Taylor Squires, Kathleen Andrews, Vince Marino, Alexa Hill, Jenna Rogge.

Partygoers and mixologists include Drs. Anthony Mesolella, Jenna Rogge, Nicholas Carrasco, Victoria Mesolella, left to right.

SEVENTH DISTRICT

versity attended the luncheon, along with MCDS members from various specialties, who spoke with students about the value of organized dentistry, challenges in the profession and practice life in Monroe County.

Thank you to Drs. Todd Pedersen, Marc Malatesta, Steve Phillips, Marni Phillips, William Zugner and Nathan Glasgow for sharing their time and wisdom.

Check out our 2024 Six-Month Calendar of Events

All are invited to attend one or more of our upcoming continuing education and awards events. Register online at www.7dds.org, or call the office at (585) 385-9550. We look forward to engaging with you this year!

NINTH DISTRICT

Looking Back in the New Year

Olga Lombo-Sguerra, D.D.S.

It's hard to believe it's 2024 already. It doesn't seem possible that the height of the pandemic was nearly four years ago. And, yet, so much has changed since then.

Here in the 9th District, most of our CE courses and committee meetings are now held virtually. We found that this convenience has enabled more members to attend courses and to join and attend committee meetings, while also saving money for the association—no lights, heat, AC, dinners, etc.—making it a win/win for everyone.

This has also made the in-person events more appreciated and anticipated. Our general meetings, Frills & Drills events, new dentist events and the like are the perfect opportunities to get together with friends and colleagues, which has boosted attendance nearly back to pre-pandemic numbers.

Happy Shredding

2023 was the first time the 9th offered a new member benefit—Shredding Days—in coordination with MedX-Waste/Legal Shred, a newly endorsed company, enabling HIPAA-compliant discarding of patient records. Two such events were held this year—one in Westchester County, at the 9th headquarters in Hawthorne, and the other in Orange County, at the office of Board member Dr. Alexander Pilavsky, who generously offered the use of his space for this greatly appreciated, well-attended event.

Smile Events

The 9th hosted a few extremely successful GKAS events at various Head Start locations and also partnered with the Touro College of Dental Medicine in mid-December for its Give Kids A Smile day at the Public Schools of Tarrytown in Sleepy Hollow. Everyone appeared to be having fun, and they learned valuable lessons on dental care.

New President Celebration

The installation of the 9th District 2024 President occurred at our final General Meeting of 2023, held at the Westchester Country Club in Rye. Dr. Duraid Sahawneh enjoyed the accolades of his colleagues, the support of the rest of the Executive Committee and the entire membership as his appointment was celebrated during the luncheon, where he welcomed suggestions from all to grow and strengthen not only the 9th District but the profession of dentistry in general.

Kudos to Dr. Sahawneh and the rest of our executives and committee chairs and members for their hard work on behalf of all members and patients.

Come Spring

We look forward to the 2024 session of the NYSDA House of Delegates, which this year features events hosted and sponsored by the 9th District. They include a golf outing and dinner/cocktail party. The Annual Session will take place at the Turning Stone in Verona May 31 through June 2.

Our March General Meeting will again be held at the Villa Borghese in Wappingers Falls. This venue has

Ninth District *cont.*

quickly become a favorite of not just our northern county members, but our Westchester members as well—the reverse commute to this location is a welcome reprieve.

The 2024 Frills & Drills event is scheduled for April 30. With many new dentist events scheduled throughout the year, all of which are being planned currently, we'll let members know once venues have been finalized. These events are anticipated annually and provide a wonderful opportunity for younger members to meet and connect with more experienced members, providing camaraderie, friendship and mentoring.

On the Job

Our committees, Board and executives have been busy as always addressing the needs and concerns of our members. Our study groups are also working hard to bring courses closer to home for local members, and our CE courses, albeit still doing better with Webinars than in-person courses, have been providing more mandated courses for members to help them fulfill their relicensure requirements.

As always, if you have information to share or attended a particu-

Volunteering to help at GKAS event at Public Schools of Tarrytown, Sleepy Hollow, are, from left, Drs. Jennifer Kim, Olga Lombo-Sguerra, Duraid Sahawneh, Rosa Martinez, Anne Marie Tarangelo.

Volunteers strive for festive, fun atmosphere at GKAS event.

John Constantine, at center of photo, administers oath to 9th's 2024 officers. From left, Bharat Joshi, vice president; Renuka Bijoor, president-elect; Daniel Doyle, immediate past president; Duraid Sahawneh, president.

President Sahawneh receives mayoral proclamation honoring his installation from Michael Sabatino, director community and government affairs, City of Yonkers.

Senate proclamation was presented to President Sahawneh by Michael Weinberg, special advisor to Sen. Pete Harckham, Peekskill.

Daniel Doyle, 2023 president, passes gavel to Dr. Sahawneh.

larly interesting course, please contact Diane at headquarters (914) 747-1199 with that information so she can try to schedule a CE course, making the knowledge available to all 9th members.

NEW YORK COUNTY

General Membership Meeting Features Awards, Lecture, Election of Officers

Andrew S. Deutch, D.D.S.

Dr. John R. Calamia received the New York County Dental Society's highest honor at the General Membership Meeting on Nov. 6, the Henry Spenadel Award, which recognizes significant contributions to the advancement of dentistry, for his pioneering role in the promotion of porcelain-bonded veneers as the gold standard for restorations. Affectionately called "the Godfather of Veneers," Dr. Calamia lectured on "Etched Porcelain Restorations Aesthetics and Longevity!" He covered the history of the etched porcelain-bonded restoration of teeth featuring cases that have easily survived more than 20 years of service, with many successful some 40 years later.

Two other members were recognized at the meeting. NYSDA Trustee and former NYCDS President Lois A. Jackson received the Mark Mintzer Award, in recognition of her deep commitment and exemplary service to the New York County Dental Society, including serving as acting president of NYCDS during the challenging year of 2020, prior to assuming the role of president in 2021. Her many contributions to the profession and nurturing of the next generation of dentists were also cited. And Dr. Mitchell Rubinstein was recognized for his leadership as NYCDS Director of Continuing Education from 2018 to 2023.

Prior to Dr. Calamia's lecture, NYSDA President-Elect Prabha Krishnan addressed members and spoke about her goals for the State Association and its members in the year ahead. In other business, the following 2024 officers were approved by members: President Suchie Chawla, President-Elect Vera W. L. Tang, Vice President Andrew S. Deutch, Secretary Egidio A. Farone and Treasurer Jaskaren Randhawa. Gary Nord and Whitney Mostafiz-Levinson will join the Board of Directors, and Marsha Rubin and Evan Schwartz will serve as alternate directors.

Practicing Without Pain

The November 1st wellness program "Dental Ergonomics: Maximize Your Productivity & Comfort" was a special opportunity for new dentists to learn about the importance of addressing the physical aspects of dentistry that can significantly impact their ability to practice without pain now and for years to come. Guided by physical ther-

Dr. Lois Jackson receives Mark Mintzer Award for exemplary service to NYCDS from Awards Committee Chair Richard Rausch and President Mina Kim.

Seen at NYU Mixer are, from left: students Danielle Mark and Sam Al Safaralani; Membership Chair and Past President David Shipper; Immediate Past President Ioanna Mentzelopoulou; student Becca Gilbert; 2023 Vice President and NYU Professor Vera Tang.

NYCDS volunteers at Special Olympics Special Smiles Dec. 2.

New York County *cont.*

apist Dr. Melanie Rocchio, attendees learned techniques and practices that would help avoid and alleviate some of the physical stresses and strains dentists face daily.

New Dentist Real Estate Event Raises (& Answers) Questions

The new dentist program "Buying Your First Home in NYC" on Dec. 5 provided attendees with insights into the unique aspects of buying real estate in Manhattan. The program at Compass Real Estate featured two realtors and a senior loan officer. Each offered their perspective on the buying process and addressed the challenges many new dentists face in light of competing demands to pay off student debt and/or having a business mortgage. The discussion prompted numerous questions from attendees, which benefitted everyone.

NEW YORK COUNTY

Danny Lee, Compass Real Estate, provided tips for buying real estate in Manhattan at December new dentist event. With him are, from left, Board members Michelle Lee and JoAnna Pufnock, Mr. Lee, New Dentist Chair Greg Shank, President Mina Kim.

Bringing Dental Health to Special Athletes

Special thanks to the more than 50 volunteers who participated in Special Olympics Special Smiles on Dec. 2 to bring healthy smiles and dental education to the many athletes who participated in the Olympics. It was a remarkable year for Community Outreach Chair Anna Viron and President Mina Kim, who led volunteers in an unprecedented three Special Olympics events in 2023, impacting so many lives for the better!

NEW YORK COUNTY

New dentists demonstrate one of several stretches they learned at November wellness program on dental ergonomics.

Second Fall NYU Mixer at NYCDS

NYCDS, in conjunction with NYU College of Dentistry Alumni Affairs, hosted a networking event on Nov. 16 for dental students from NYUCD. Approximately 60 dental students and 20 member dentists spent almost three hours together discussing real world dentistry. The students garnered a wealth of information from the dentists, and the dentists found the experience to be very rewarding by paying it forward to the future generation of the dental profession. Many thanks to Membership Chair David Shipper for his leadership in organizing this event.

The 99th GNYDM Finishes Strong

The Greater New York Dental Meeting concluded its 99th meeting registering 36,081 attendees (7% increase), including 13,302 dentists (9% increase), 2,793 dental students and residents and 2,302 dental hygienists from 139 countries. The GNYDM continues to be the largest dental convention and event in the United States. Dental professionals visited over 1,020 exhibit booths offering discounts on new products and equipment. The GNYDM education program included 265+ seminars and hands-on workshops, with programs in Spanish, Russian, Chinese and Portuguese, and 200+ scientific poster sessions. It was a great week of business, learning and networking.

NEW YORK COUNTY

Henry Spenadel Award recipient Dr. John Calamia with daughter, Dr. Christina Calamia-Levitsky, following his lecture at NYCDS.

Continuing Education

As of January, NYCDS has a new continuing education director. Former NYCDS President Irvind Khurana takes over for Dr. Mitchell Rubinstein, who held the position for the past six years. We welcome Dr. Khurana to his new role and thank Dr. Rubinstein for his service to NYCDS.

NEW YORK COUNTY

CE Director Irvind Khurana

The upcoming CE schedule features several new courses and returning favorites. Highlights include the new course "If You Do Composites Correctly, You Can Do Full-Mouth Reconstruction!," which will discuss, review and illustrate how to do simple advanced adhesion techniques and use them for completing reconstruction cases. We're also excited to bring back two hands-on courses: "Orofacial Myofunctional Therapy and Orthodontic Intervention: A Hands-On Approach" lecture targeting orthodontics professionals, led by Judith Dember-Paige. B.S., R.D.H., COM, and Dana Hockenbury, M.A., CCC-SLP, COM; and "Beginning With the End in Mind: Restoratively Driven Endodontics from Access to Restoration," led by Dr. Stephanie Tran.

We are also pleased to reprise "Speed Learning: 6 Speakers, 6 Hours, 6 Credits" full-day program on March 13, bringing together cutting-edge dental lectures featuring clinicians with a wealth of expertise on different topics.

Upcoming Continuing Education Schedule

- Thurs. Feb. 15: 12-Hour Sedation Certificate Renewal
- Wed. Feb. 21: Basic Life Support/ CPR Certification Course
- Wed. Feb. 28: Hacking Dentistry: Essential HIPAA, Cybersecurity and Technology Tools for your Practice
- Wed. Feb. 28: OSHA-Mandated Update for Dentists and Staff; What You Need to Know to Comply with the Law
- Fri. Mar. 1: If You Do Composites Correctly, You Can Do Full-Mouth Reconstruction!
- Wed. Mar. 6: Infection Control for the Dental Practice
- Fri. Mar. 8: Orofacial Myofunctional Therapy and Orthodontic Intervention: A Hands-On Approach
- Wed. Mar. 13: Speed Learning: 6 Speakers, 6 Hours, 6 Credits
- Fri. Mar. 15: Beginning With the End in Mind: Restoratively Driven Endodontics from Access to Restoration
- Wed. Mar. 20: ACD Mentoring Lecture Program: Clear Aligners as a Treatment Modality for Orthodontic Decompensation and Finishing Pre- and Post-Orthognathic Surgery
- Fri. Mar. 22: Occlusion Knowledge to Fuel your Dental Practice
- Wed. Apr. 3: Innovations in Aesthetic Dentistry: Everything You Need to Know About Veneers

New courses are added regularly. Be sure to visit www.nycdentalsociety.org for the latest course and registration information.

SECOND DISTRICT

Installation of Officers and Awards Luncheon

Alyson Buchalter, D.M.D.

On Jan. 7, the Second District Dental Society celebrated the installation of our 2024 officers and new president, Dr. Tricia Quartey-Sagaille, at the Liberty Warehouse in Brooklyn. Notable for amazing views, great food and the camaraderie of the best members organized dentistry could assemble, the afternoon easily fulfilled its promise to be a fabulous celebration.

The highlight of the event was the installation of President Quartey-Sagaille. Dr. Quartey-Sagaille is a graduate of the University of Medicine and Dentistry of New Jersey, now Rutgers School of Dental Medicine. She has held many important positions in organized dentistry, including chair of the SDDS New Dentist Committee and member of the ADA New Dentist Committee; member of the NYSDA councils on Membership and Communications and Dental Practice, SDDS District Liability Claims Committee, SDDS Oral Health Committee and the ADA Student Loan Forgiveness Task Force. In addition to being our president in 2024, she will begin serving on the ADA Council on Communications. Her energy and willingness to help our tripartite seems boundless. But all that takes second place to the two most important people in her life: her husband, Noel, and year-old son, Kendrick.

Joining Dr. Quartey-Sagaille as 2024 officers of SDDS are: Dr. Paul Teplitsky, president-elect; Dr. Valerie Venterina, vice president; Dr. Phyllis Merlino, secretary; and Dr. Cherry Libramonte, treasurer.

Another outstanding moment came when Dr. Quartey-Sagaille awarded Dr. Steven Gounardes with the SDDS Distinguished Service Award, the society's highest honor. Only 15 individuals in our 156-year history have previously been so honored. Dr. Gounardes has held more offices in organized dentistry than any two people I know. He was SDDS President in 2002, and president of NYSDA in 2007. He has been a member of the NYSDA Board of Governors, a delegate to both the NYSDA House of Delegates (HOD) and the ADA HOD. He served as ADA Trustee for the 2nd Trustee District (NYSDA) from 2010-2014. His eight years as speaker of the NYSDA HOD (2016-2023) was a master class in leadership.

Dr. Gounardes is a 1984 graduate of NYU College of Dentistry. He maintains a private practice in Bay Ridge, Brooklyn; is the assistant director of the Department of Dentistry and Oral & Maxillofacial Surgery at Woodhull Hospital and has been the hospital's GPR Program Di-

Dr. Steven Gounardes receives Distinguished Service Award from President Quartey-Sagaille.

Second District *cont.*

rector for over 37 years. He and his wife of 45 years, Diane, are beyond proud of their three children—Andrew, Patricia and Gregory—and find unlimited joy in their three grandchildren.

At the luncheon, SDDS always honors members who have donated their time and energy to promote our great society. In keeping with that tradition, we thanked the following: Dr. Richard Oshrain, for his exemplary service as the GNYDM's general chair; Drs. Sari Rosenwein and Christen J. Carute, for their service on the SDDS BOT; and Drs. Mitchell Mindlin and Deborah Pasquale, for representing the SDDS on NYSDA councils. In addition, we recognized members who obtained Life Membership status. Congratulations to Drs. Paul Albicocco, Michael Caramico, Ralph Costgliola, Jean Fayette, William Goldman, Michelle Meers, Ronald Mizrahi, Bryan Pieroni, Craig Ratner and Steven Schwartz.

And, of course the SDDS thanked and honored Dr. Raymond Flagiello for his remarkable tenure as our president in 2023. His term was marked by great leadership—punctuated by his unique style of levity. With his guidance, the 2023 SDDS BOT navigated through a complicated but rewarding year.

Greater New York Dental Meeting

The reviews are in, and they are GREAT! The 2023 Greater New York Dental Meeting (GNYDM) ended on a very high note this year—a seemingly magical success coming back from the devastation caused by the COVID-19 pandemic. This success was in no small part due to the tireless efforts of our own Dr. Richard Oshrain, the 2023 GNYDM General Chair. The SDDS is proud and grateful for the leadership he provided. As general chair, he pre-

Dr. Mitchell Mindlin administers oath to 2024 officers, from left, Drs. Paul Teplitsky, Valerie Venterina, Phyllis Merlino, Cherry Libramonte.

Dr. Mindlin swears in President Trisha Quartey-Sagaille.

Society's newest Life Members are, from left, Drs. Paul Albicocco, Ralph Costagiola, Jean Fayette, Craig Ratner, Steven Schwartz, Ronald Mizrahi.

sided over every aspect of the meeting and was instrumental in its success.

And by every metric, the meeting was a resounding success. There were over 36,000 attendees, 1,020 booths, more than 500 exhibitors (150 were new this year!) and over 250 continuing education courses. There were over 13,000 dentists in attendance from all 50 states; 3,500 of the attendees were international dentists from 129 countries.

Highlights included the Celebrity Luncheon with comedian Michael Birbiglia as the keynote speaker, the ever-popular Saturday Night Cocktail Reception and the International Reception. Also, onsite this year, were alumni events hosted by Stony Brook University School of Dental Medicine, Tufts University School of Dental Medicine, Columbia University College of Dental Medicine, New York University College of Dentistry, Touro College of Dental Medicine and NYU Langone Hospital. The Pre-Dental Conference attracted over 140 attendees; the GPR Fair had over 30 participating programs; and over 200 Scientific Posters were presented.

Dr. Oshrain and the SDDS want to take this (and every) opportunity to thank the members of the GNYDM Organization Committee, whose hard work over the course of the year has continued to build this meeting. You guys are fantastic. To the members of the Advisory Committee, who are our past general chairmen, and all the former organization committee members, the troubleshooters, who continue to work hard, giving hours of time and energy for our meeting, as well as our GNYDM staff, thank you all! As Dr. Oshrain said, "It takes a lot of people to put together a meeting of this size. I have the deepest respect for the dedication of our staff and committee members, who I cannot thank enough."

Dr. Oshrain's wife, Abby, led the hospitality committee. This group consists of the spouses and significant others of the volunteer dentists on the GNYDM's Organization Committee. They work hard to welcome VIPs, scouts from other meetings and all the international attendees. Every year, they step up and make the GNYDM

Dr. Ray Flagiello saying "thank you" for great year.

2024 SDDS President Trisha Quartey-Sagaille and husband, Noel.

SECOND DISTRICT

Turnout was good for Richmond County's Past President's Night. Former officers are, seated, from left, Drs. Phyllis Merlino, Howard Lieb, Vincent Frazzetto, Robert Seminara, Charles Mistretta. Standing, from left, Raymond Flagiello, Robert Sorrentino, Sandra Scibetta, Paul Albicocco, Valerie Venterina, Lydia Lam, Edward Jastremski, Michael D'Anna, Michael Costa.

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For further information about NYSDA Endorsed Programs, call Michael Herrmann at 800.255.2100

Second District *cont.*

renowned for its hospitality. Both the GNYDM and SDDS cannot thank them and Mrs. Oshrain enough.

A special shout-out to our GNYDM staff, which includes General Manager Tom Loughran, Exhibits Manager Carla M. Borg, Marketing & Sponsorship Manager Dana A. Soltis, Global Project Manager Kersing Yam, Program Manager Jayme Spicciatie, Publication Director Estelle Montalvo, Education Director Avery B. Sandiford, and Volunteer & Entertainment Manager Victoria M. Calas. The GNYDM could not happen without you!

We at the SDDS would be remiss if we did not extend our deepest gratitude to the hundreds of volunteers who make the meeting possible. You are the backbone of our meeting. Most people do not realize that while other shows have scores of employees, members of the SDDS and NYCDS step up in a big way to help make ours the greatest meeting, actually, the most spectacular of its kind in North America. You are the envy of all other major dental meetings. To just say thank you seems vastly insufficient. Nevertheless, know you are appreciated!

RCDS Past Presidents' Night

On Nov. 14, members of the Richmond County Dental Society (RCDS), a branch society of the Second District, convened for the society's regular monthly meeting at Max's EsCa restaurant. The occasion was Past Presidents Night—an evening to thank those who have served the society at the highest level.

Several RCDS past presidents were there, including Drs. Phyllis Merlino, Howard Lieb, Vincent Frazzetto, Robert Seminara, Charles Mistretta, Raymond Flagiello, Robert Sorrentino, Sandra Scibetta, Paul Albicocco, Valerie Venterina, Lydia Lam, Edward Jastremski, Michael D'Anna and Michael Costa. A great time was had by all!

CLASSIFIED
INFORMATION

Online Rates for 60-day posting of 150 words or less — can include photos/images online: Members: $200. Non-Members: $300. Corporate/Business Ads: $400. Classifieds will also appear in print during months when Journal is mailed: Jan and July.

FOR SALE

ALBANY: Nestled in Albany, renowned for its rich history, cultural vibrancy and top-tier educational institutions is thriving general dental practice. Situated along scenic Hudson River, well-established practice holds strong patient base with 1,560 active members. Six (6) state-of-the-art operatories, supporting both principal doctor and associate. Open four days/week and offers room for growth. Generating impressive EBITDA of $530K. Real estate can be acquired at time of sale, presenting outstanding investment opportunity. Current owner keen on ensuring seamless transition, prioritizing practice's ongoing success. Interested parties invited to discover this golden opportunity further by contacting Professional Transition Strategies: Email Bailey Jones at bailey@professionaltransition.com; or call: (719) 694- 8320, referencing #NY83023.

SYRACUSE SUBURBS: General dental practice for sale creating exceptional opportunity to own your own practice. Located in standalone 6-operatory facility with plenty of off-street parking on main road in Fayetteville/ Manlius area. Real estate, equipment and established patient practice, all available for sale. Retiring dentist willing to stay part time to ensure successful transition and assist buyer to further develop practice. Owner open to exploring all transition options. For details, contact: richardmaestri44@gmail.com.

WATERTOWN: General dental practice for sale. Grossing approximately $1.1M. Located north of Syracuse in Watertown, close to Thousand Islands. Practice has 9 operatories with digital X-ray, CBCT, 3D printing and CEREC. Real estate also available. For more information, please contact Sean Hudson by phone: (585) 690-6858; or email: sean@hudsontransitions.com.

BRONX: Long-established general dental practice for sale in Kingsbridge area of Bronx. Located in high-visibility building with significant foot traffic. Medicaid/Insurance /Private. 100% digital and paperless office with digital X-rays and practice software. 2-op practice with 1,100 square feet at $1,500/month. Parking available for dentist. Open Monday-Thursday from 10 a.m. to 4 p.m., creating lots of potential to grow practice. 2022 gross collections $399K. Asking $350K. Contact to discuss: Victor Henriquez at (347) 749-2049; or email: eribaez@hotmail.com.

BRONX: 3-op office designed for comfortable working conditions available for sale. Includes lab and sterilization area. Very heavily populated area. Owner retiring for medical reasons. Call to discuss: (347) 831-3742 or (718) 379-4800.

CAPITAL DISTRICT: Located on main road with ample onsite parking. Thoroughly modern with Dentrix software, 3 Shape Trios scanner and digital X-rays with Scan X. Open three days/week. Great for satellite practice or to grow. Four-chair office with two hygiene and two fully equipped ops for dentist. Post-COVID headed toward $600K gross. Busy hygiene schedule. Building can be part of package deal. Contact by email: drdave329@gmail.com; or (518) 428-1492.

SYRACUSE SUBURBS: General practice conveniently located off main road in Liverpool. Open 2.5 days/week with 4 days of hygiene. Healthy patient base with 50% commercial insurance, 20% self-pay and 30% state insurance. Located in small medical building with 4 ops in second-floor rental space and plenty of parking. Grossing $608K with room to grow with help of longstanding staff. For details contact Henry Schein Dental Practice Transitions Consultant Michael Damon at (315) 430-9224; or email: mike.damon@henryschein.com. #NY291.

TOMPKINS COUNTY: Well-established, high-quality general practice available to transition to new owner, or seller can stay as part of team. Located in Ithaca suburb, this beautiful standalone, 15-year-old building of 2,544 square feet has five ops, digital X-rays, utilizes Eaglesoft software and is completely paperless. Revenue over $700K. One FT and one PT Hygienist. Real estate also. Growing patient base, practice draws increasing number of new patients with strong mixture of FFS. Great opportunity, with doctor willing to stay on as part-time associate. For details contact Dental Practice Transitions Consultant Michael Damon by email: mike.damon@henryschein.com; or call (315) 430-9224. #NY3071.

ORANGE COUNTY: Family-oriented practice in desirable location experiencing explosive retail and residential growth with completion and early success of Legoland. Well-established practice has served dental needs of area for past 30 years. Housed in 1,500-square-foot building with mixed tenants. Four fully equipped treatment rooms featuring contemporary up-to-date equipment, including intraoral camera, imaging scanner, Picasso laser unit and utilizes Dentrix and Dexis. Diagnostic, preventive and restorative-driven practice with strong hygiene program. For details contact Dental Practice Transitions Consultant Chris Regnier at (631)766-4501; or email: chris.regnier@henryschein.com. #NY3257.

ERIE COUNTY: Great practice with 3 treatment rooms. All digital, with collections of $413K. For details contact Dental Practice Transitions Consultant Brian Whalen at (716) 913-2632; or email: brian.whalen@henryschein.com. #NY3366.

ERIE COUNTY: Located on busy road surrounded by established residential population and beautiful town. 3-operatory digital practice well-positioned for future growth with $307K gross revenue. Crown & bridge, restorative and preventative focus. Some specialties referred out. Strong patient base and mixed PPO. Real estate next to practice owned by seller and for sale with practice. Contact Dental Practice Transitions Consultant Brian Whalen at (716) 913-2632; or email: brian.whalen@henryschein.com. #NY1648.

JEFFERSON COUNTY: Great opportunity. Long-established, profitable practice is must-see. Located minutes from downtown Watertown. Well-equipped 4-operatory practice sits on busy road with great curbside appeal. Large private parking lot. Practice fully digital with pano X-ray and utilizes Eaglesoft. Revenue $730K with one FT Hygienist. Doctor only works 3 days/week (20 hours max). Seller refers out all endo, ortho and oral surgery. Practice positioned for growth. Primarily FFS with 2,000 active patients. 2-story building also for sale, with vacant apartments upstairs. Contact Dental Practice Transitions Consultant Michael Damon at (315) 430-9224; or email: mike.damon@henryschein.com. #NY3385.

ONTARIO COUNTY: Long-established, highly productive practice with 2022 revenue of $1.4M. Nestled in backdrop of beautiful Finger Lakes wine-making country. Fully computerized, fully digital office with 7 well-equipped treatment rooms. Utilizes Dentrix Ascend PMS; Planmeca CBCT and digital impression systems added in recent years. 3,500 active patients and combination of insurance and FFS. Strong hygiene program. Well-trained team available for transition. Contact Dental Practice Transitions Consultant Michael Damon at (315) 430-9224; or email: mike.damon@henryschein.com. #NY3395.

EASTERN LONG ISLAND: Well-established PPO/FFS dental practice/charts sale. In practice for 17 years with over 779 active patients and averages 10-15 new patients monthly. For details contact Transition Sales Consultant Chris Regnier at (631) 766-4501; or email: chris.regnier@henryschein.com. #NY3437.

BINGHAMTON AREA: Reduced price with motivated seller. Highly profitable $600K revenue, modern, attractive practice 20 minutes from downtown. Great location with beautiful views from 2 of 4 well-equipped treatment rooms. Approximately 1,000-square-foot space. Standalone building, available for sale with practice purchase, has apartment to rent upstairs. Practice utilizes Eaglesoft PM with digital sensors and digital scanner. Refers out most specialties. Strong new patient flow, with 1,100 active patients. Practice open 34 hours/week. FFS/ PPO. Doctor willing to stay on with transition. Contact Transition Sales Consultant Mike Damon at (315) 430-9224; or email: mike.damon@henryschein.com. #NY3444.

SUFFOLK COUNTY: Well-established general practice located in professional building that overlooks beautiful park and plenty of parking. Three fully equipped treatment rooms and open 4.5 days/week. Highly profitable with collections over $570K. Collections based on 50% FFS and 50% PPO insurance. Seller open to transition options. For details contact Transition Sales Consultant Chris Regnier at (631) 766-4501; or email: chris.regnier@henryschein.com. #NY3470.

STATEN ISLAND: State-of-the-art general practice in highly desirable area. Doctor will provide 100% seller financing. 1,500 square feet in beautiful free-standing building with 5 fully equipped treatment rooms. Open Dental software, digital X-rays and paperless. 80% FFS and 20% PPO, with collections $624K in only 2.5 days/week. For more information contact Transition Sales Consultant Chris Regnier at (631) 766-4501; or email: chris.regnier@henryschein.com. #NY3562.

UPSTATE NY: Long-established practice in diverse community halfway between Binghamton and Syracuse; situated just minutes from area hospital and college on busy 2-lane road with excellent street visibility. Three operatories in 3,000 square feet and room to expand. Real estate also available. Building includes 2,000-square-foot rental apartment upstairs for great passive income. Three full-time employees, including one full-time Hygienist. 75% FFS and 25% PPO. Refers out all endo, ortho and oral surgery, offering great upside for new owner. 2022 gross collections $358K. Highly motivated seller. Contact Transition Sales Consultant Mike Damon at (315) 430-9224; or email: mike.damon@henryschein.com. #NY3488.

ONEIDA COUNTY: Bright, immaculate all-digital 100% FFS practice with great curb appeal. Highly desirable location, with convenient access to highways. $900K+ revenue on 4-day workweek. Seller in practice for 30 years and committed to aiding in very successful transition. Four well-equipped operatories and Dentrix, all in efficiently designed 1,100-square-foot space. Thriving general practice averages 30+ new patients per month. Excellent turnkey opportunity. Contact Transitions Sale Consultant Mike Damon at (315) 430-9224; or email: mike.damon@henryschein.com. #NY3513.

ROCKLAND COUNTY: Beautifully appointed, very welcoming practice with collections just under $445K sits in front entrance of multi-tenant office building with street-front visibility and free parking. 3 ops within 1,325 square feet. Seller will provide doctor-friendly lease with option to purchase. 60% PPO and 40% FFS. Office has hygienist and refers endo, ortho, pedo, oral surgery and implant placement. Seller available to stay during transition period. Strong upside to grow revenues with added procedures and hours. Contact Transition Sales Consultant Donna Costa by phone (609) 304-0652; or email: donnacosta@henryschein.com. #NY3563

SENECA COUNTY: Charming practice in heart of Finger Lakes region; 45-minute drive to both Rochester and Syracuse city centers. Digital practice offering 3 equipped ops, with 2022 revenue of $653K on 3 clinical days/week. Softdent, 2D pano and diode laser. 1,700-square-foot practice offers comprehensive dental care in welcoming environment. Full-time Hygienist and full administrative staff, all with excellent systems and training in place. 50% FFS. Refers out specialties. Real estate also available. Schedule to see this wonderful opportunity today. Contact Transition Sales Consultant Michael Damon at (315) 430-9224; or email: mike.damon@henryschein.com. #NY3572.

MANHATTAN: Great opportunity to own private, well-established practice in elegant boutique residential apartment building with commercial street-front-level entrance in desirable area close to Lexington Ave. 2 treatment rooms in 600 square feet, including intraoral camera, scanner, laser and digital X-ray in nicely renovated modern office. Collections in 2022 were $409K driven by 60% PPO, 40% FFS and active patient base with strong new patients per month. Great startup for younger doctor looking for successful Manhattan focal point. Contact Transition Sales Consultant Rikesh Patel by phone: (845) 551-0731; or email: rikesh.patel@henryschein.com. #NY3596

ST. LAWRENCE COUNTY: Highly profitable $550K+ revenue all-digital practice on just 3 days/week schedule. Located in scenic St. Lawrence County, along Canadian border. 5 well-equipped treatment rooms. Approximately 2,500-square-foot practice space, with building available for sale. Large property with ability to expand footprint. Eaglesoft PM and iCat 3D. Refers out all Endo and Ortho. 1,200 active patients, with strong new patient flow. FFS practice with 1 in-network insurance. Doctor willing to stay on for 12 months to assist with transition. Priced to move. For more information, contact Transition Sales Consultant Michael Damon at (315) 430-9224; or email: mike.damon@henryschein.com. #NY3632

WESTCHESTER: Holistic general dental practice for sale. 4 ops in spacious 1,800-square-foot suite in medical building. FFS office on pace to gross over $1.7M in 2023. Cone beam CT, Dentrix software, Trios scanner, as well as digital X-rays, computers, TVs in every operatory. Open only 4 days/week. Amazing opportunity to purchase profitable practice with huge growth potential in wonderful community. For details contact Transitions Sales Consultant Chris Regnier at (631) 766-4501; or email: chris.regnier@henryschein.com. #NY3641

NASSAU COUNTY: FFS practice for sale. Consistently grosses over $1.3M and highly profitable. Selling dentist has owned practice for 39 years. 4 treatment rooms in approximately 1,100 square feet. Dentrix software, digital X-rays and open 4.5 days/week. For more information contact Transition Sales Consultant Chris Regnier at (631) 766-4501; or email: chris.regnier@henryschein.com. #NY3650

SOUTHERN ERIE COUNTY: Fantastic opportunity to grow in 3-op digital practice treating 1,100 active patients 3.5 days/week. Well-established patient base of mixed PPO and FFS. Real estate with apartment also available. Plenty of off-street parking. Low overhead and skilled team make great opportunity for profit and lifestyle. Contact Transition Sales Consultant Brian Whalen at (716) 913-2632; or email: Brian.Whalen@henryschein.com. #NY3661

WESTERN NEW YORK: 5-op practice with 4,700 active patients and averaging 40 new patients per month. Well-established growing practice with loyal patient base. 86% insurance and 14% FFS. Fully digital pan, sensors, intra-oral cameras and paperless charting, all integrated with Eaglesoft software. Building with off-street parking and additional rental units also for sale or lease. Outstanding staff and established patient base make this wonderful opportunity. Contact Transition Sales Consultant Brian Whalen at (716) 913-2632; or email: Brian.Whalen@henryschein.com. #NY3665

SOUTHERN TIER: Long-established, stable, 8-op FFS practice. No in-network insurance. Located on main road, this standalone building offers great visibility and curb appeal. 2,620-square-foot, 100% digital practice utilizes computers throughout, with Softdent, Carestream sensors and CS8100 panoramic X-ray. Well-trained, experienced team of professionals, including 4 full-time hygienists expected to transition with practice. Open 5 days per week with 4,100 active patients and healthy new patient flow. Doctor willing to stay on for up to 12 months to assist with transition. Priced to move. Contact Transition Sales Consultant Michael Damon at (315) 430-9224; or email: mike.damon@henryschein.com. #NY3679

CAPITAL REGION: Attractive 2,100-square-foot practice in professional building on busy main road. 5 well-equipped treatment rooms and 6th plumbed in long-established practice. Located in desirable, affluent community with one of area's top school districts. Affordable rent with assignable lease. 100% digital, paperless and utilizes Eaglesoft. Doctor refers out all endo, implants, perio, ortho and some extractions. Primarily PPO. Schedule showing today as seller looking to sell and transition quickly. Contact Transition Sales Consultant Michael Damon at (315) 430-9224; or email: mike.damon@henryschein.com. #NY3691

WESTERN NEW YORK: Fantastic opportunity to own well-established, thriving general practice in beautiful area. 5-ops, fully digital, paperless, supported by Eaglesoft software with room to expand if desired. Strong hygiene team treats patients with care and has excellent recall. Sensors, scanner, laser, air, electric handpieces, CAD/CAM technology, Carivue detection and more. 60% PPO, 40% FFS. with 2,300 active patients. Real estate available. Turnkey opportunity. Contact Transition Sales Consultant Brian Whalen at (716) 913-2632; or email: Brian.Whalen@henryschein.com. #NY3695

NASSAU COUNTY: 4-treatment-room practice based on 60% PPO insurance and 40% FFS. 1,100-square-foot office available for rent or purchase. Tremendous room for growth as doctor refers out endo, ortho, implants and oral surgery cases. Contact Transition Sales Consultant Chris Regnier at (631) 766-4501; or email: chris.regnier@henryschein.com. #NY3698

NEW YORK CITY: High-tech dental practice with CBCT, two scanners, two lasers and A-Dec dental chairs. Three equipped treatment rooms and 4th plumbed. Located in co-op that is also available for purchase. Collections consistently over $1.1M. Open 5 days/week. Contact Transition Sales Consultant Chris Regnier at (631) 766-4501; or email: chris.regnier@henryschein.com. #NY3722

SUFFOLK COUNTY: Well-established, 1,500-square-foot practice averaging 45 new patients monthly. Three ops with one additional plumbed, needing only dental chair/unit. Dentrix, Dexis, and digital Pan. On heavily trafficked main road with great visibility in standalone building shared with medical urgent care. Medicaid/PPO and FFS patients. Nicely appointed and excellent opportunity for growth. A must-see opportunity. Contact Transition Sales Consultant Chris Regnier at (631) 766-4501; or email: chris.regnier@henryschein.com. #NY3746

JEFFERSON COUNTY: Well-established, spacious, 3,500-square-foot practice in beautiful, historic building housing 7 equipped treatment rooms with 8th plumbed. Practice utilizes Dentrix PM software. FFS/PPO; only in-network with 2 insurances. Strong hygiene program, with dedicated team ready to stay on. All specialties referred out. Revenue $837K and positioned for continued growth. Stunning property also for sale includes 4 fully occupied residential apartment units. Doctor looking to stay on for extended period. Contact Transition Sales Consultant Michael Damon at (315) 430-9224; or email: mike.damon@henryschein.com. #NY3719

MANHATTAN: Upper East Side. State-of-the-art dental practice just a stone's throw from iconic Central Park. Situated in one of most desirable neighborhoods in NYC. Grossing $1.8M in collections. with seven meticulously designed operatories. Cutting-edge technology, including 3D imaging and Dentrix PMS. Mostly FFS, with some PPO insurance accepted.

Open 4 days/week. 3,920-square-foot office located in professional building with plenty of room for growth. Contact Transition Sales Consultant Rikesh Patel at (845) 551-0731; or email: rikesh.patel@henryschein.com. #NY3759

FOR RENT

MIDTOWN MANHATTAN: Newly decorated office with windowed operatory for rent FT/PT. Pelton Crane equipment, massage chair, front desk space available; shared private office, concierge, congenial environment. Best location on 46th Street, between Madison and 5th Avenue. Please call or email: (212) 371-1999; karenjtj@aol.com.

MIDTOWN MANHATTAN: Near Grand Central. Space available for periodontist or endodontist. 1 or 2 operatories in professional building with many general dentists. Office has CBCT machine. For more information, please contact by email: dr.pdpack@gmail.com; or call (212) 683-4476.

WHITE PLAINS: Modern, state-of-the-art operatories available in large office with reception. Turnkey; available FT/PT. Rent includes digital radiology with pan, equipment, Nitrous, all disposables. Start-up or phase down. Need satellite or more space? Upgrade or downsize. Contact us to discuss at (914) 290-6545; or email: broadwayda@gmail.com.

MIDTOWN MANHATTAN: Madison Avenue. 3 to 4 operatories for rent full time. Renovated large, bright and modern dental operatories available with full-service in-house lab. Fully equipped, with CS-9600 CBCT scanner and X-ray system. Shared front desk, private Doctor's office and large conference room. Please contact Dr. Anthony Ceccacci at (646) 265-7949; or email: office@madisonavenuesmiles.com.

MIDTOWN MANHATTAN: Space for rent in great location. 1-2 operatories available full time or part time. Renovated, sunny, windows, with private office in 24-hour doorman building. Reasonable. Call or email for details: (212) 581-5360; or email: kghalili@gmail.com.

MIDTOWN EAST: Op for rent. Beautiful operatory with windows and private office available for rent. Elegant, modern, streetlevel, best location. Please call or email for details. Contact: (917) 721 6825; or email: esenayny@gmail.com.

UPPER EAST SIDE: Operatory for rent in UES office (Madison Ave & 60th). Modern, quiet, boutique private practice. Endodontic microscope, 2 digital scanners, materials, instruments available for rent. Inquiries by text or email: (646) 648-3242; or pyondds@gmail.com.

BROOKLYN: Manhattan Beach. Turnkey, fully equipped dental office available for sale or rent. 2 fully equipped ops in beautiful, upscale co-op building facing the water in Manhattan Beach. 35-year-old established practice. 70% high-end PPOs and 30% FFS, with original phone number and website available. Active patient charts and large amount of supplies will be included with purchase or lease. Private doctor's office, lab, storage closet and beautiful waiting room. Lobby level, with exterior signage. Only office in building. Available immediately. Lease/rent with option to purchase or purchase outright. No fees; offered by owner. Contact by email: filmrn@aol.com; or call (516) 527-2343.

MULTIPLE NYC LOCATIONS: Midtown and Brooklyn. Ready-to-use, recently renovated dental operatories/chairs available for rent on Central Park South in Midtown Manhattan and Park Slope, Brooklyn. Flexible lease terms (per hour, per day, etc.) We can provide dental assistants, billing services, insurance assistance, etc. if needed. Great street access, with lots of foot traffic. Easy commute to and from with public transportation. Please call/text (646) 820-4655; or email: doc@centralparkdentalservices.com.

OPPORTUNITIES AVAILABLE

MANHATTAN: West 57th Street. Retirement-minded dentist with long-established, fee-for-service general practice seeking associate with practice who wants to grow their nucleus of patients. Three-chair office; good amenities. Helpful staff. Goal is compatible sale and transfer of my practice with lease and equipment. Respond to: dds.midtownwest@gmail.com.

BAY RIDGE, BROOKLYN: Seeking part-time general dentist associate with experience. Must possess excellent clinical and communication skills. Proficiency in all aspects of general dentistry. Must be team player and self-starter. State-of-the-art facility. Must be able to work Saturdays and Thursdays. Please call (347) 487-4888; or email: Studiodntl@gmail.com.

SYRACUSE: Great opportunity for associate dentist. Busy, rapidly expanding office looking to add another associate dentist. Highly respected, fast-paced and FFS practice. We take pride in quality dentistry and excellent patient care. Practice emphasis on general restorative, fixed, cosmetic and implant surgery and restoration. Modern equipment and technologies include: Invisalign, Itero scanner, Fastbraces, laser dentistry (Biolase), dental implant surgery and restorations, smile makeovers. Primescan scanner, 3D printer, CEREC crowns, PAN/CT unit. Also have visiting surgeon who comes to office once/month for complex surgeries. Experienced, friendly, family-oriented staff, with 2 full-time and 1 part-time Hygienists. Thriving, up-to-date Perio program. Fully digital, with 8 operatories. Full-time and part-time positions available. Monday-Thursday. Visit us online at: www.Smilesbd.com and view Google reviews at Smiles by Design Dentistry in Syracuse NY. Contact us for further information or to set up interview: info@smilesbd.com.

SARATOGA SPRINGS: Seeking Associate dentist in Saratoga Springs area. Offering great respect, benefits and bonuses. Fast-growing, privately owned dental office in Wilton seeks talented and enthusiastic Associate. Huge opportunities for advancement for everyone on our team and because of unique bonus system, income potential is essentially limitless. Managerial potential. Enjoyable, respectful and professional environment with most advanced instruments and procedures. Full educational support and in-practice training and CE allowances. Four days/week, with outstanding morning and evening shifts available. Role will be vitally important to keeping practice running smoothly and maintaining valued patients in highest level of dental health. If you are excited by these extraordinary opportunities, we look forward to hearing from you very soon. Please contact Dr. Richard Dunham at abettersmile@yahoo.com.

HUDSON: Associate dentist position available full time. Booming upper Hudson Valley river town. 6 operatories for 2 doctors and 2 Hygienists. Retiring dentist will provide a great opportunity for new Associate to quickly build upon already solid patient base. Abundant new patient flow and hygiene booked for months. Potential for equity position or future buyout. Applicant must have gentle, kind disposition, excellent communication skills with patients and be able to perform high-quality dentistry. Please forward resume or contact to discuss. Email: karenron94@yahoo.com.

CATTARAUGUS COUNTY: Olean. Seeking general dentist to join Freedom Dental Partners team. Premier pathway to ownership and lucrative base salary, plus equity-based compensation. Close to Buffalo, Olean serves as financial, business and entertainment center of Cattaraugus County. We Offer: guaranteed daily rate or 32% of collections, whichever is greater; unlimited earning potential; opportunity for percentage of vested equity with no financial buy-in; $10,000 signing bonus; PTO; 401K; annual continuing education stipend; no weekends; office hours M-F 8-5; premium-level FDP Office Management services to handle daily practice operations. What You Will Bring: confidence & drive; friendliness & flexibility; responsibility & ambition; care & compassion. Qualifications: DDS/DMD degree; active and unrestricted license to practice in NY; 3+ years general dentistry experience; desire to continuing growing and learning while superseding your patients' needs; entrepreneurial mindset. Why You Will Love Working with Us: we are empowering professionals to achieve ultimate financial lifestyle by utilizing the power of community to create transformational and multigenerational wealth. Freedom Dental Partners is cooperative of over 300 entrepreneurial dentists nationwide and fastest growing group in all of dentistry. We're disrupting dental industry to put power back in the hands of dentists. If you desire career autonomy, lifestyle freedom and the wealth you deserve for your hard work, this is your opportunity. Contact Kennedy Wilhite at: recruiting@freedomdentalpartners.com or call: (551) 245-0203.

MID-SUFFOLK COUNTY: Practice seeking Oral Surgeon. Multi-doctor practice has immediate opening for board-eligible/board-certified Oral Surgeon. One day per week at very busy Selden, Long Island, group practice. Great opportunity. Call or email for more information. (631) 732-9000; or email: andrea@coramseldendental.com.

INDEX TO ADVERTISERS

NYSDA Life Members

NYSDA Salutes its Newest Life Members

The New York State Dental Association recognizes its members who are achieving Life Member status in 2024. They have dedicated many years to the profession, and we are grateful for their continued participation in organized dentistry.

Each year, NYSDA grants life membership to dentists who as of Dec. 31 of the previous membership year have attained 30 consecutive or 40 nonconsecutive years of membership.

Please join us in congratulating and thanking the NYSDA members listed here for their years of dedication and support. These 139 dentists together have accrued more than 4,209 years of membership.

New York County
Barrios, Jorge
Bogart, Tara
Brandes, Irene
Brisman, David
Cohn, Debra
Goldberg, Joseph
Grasso, Caroline
King, James
Lisenby, Kenneth
Stern, Sheldon
Vincenty, Pedro

Second District
Albicocco, Paul
Caramico, Michael
Costagliola, Ralph
Fayette, Jean
Goldman, William
Meersand, Michelle
Mizrahi, Ronald
Pieroni, Bryan
Ratner, Craig
Schwartz, Steven

Third District
Bausback, Debra
Check, Debra
Cottrell, Dolores
De Rosa, Alan
Delehanty, Janice
McMahon, James
Oshins, Steven
Reilly, Christopher
Wynnykiw, Askold
Zhang, Lily

Fourth District
Cornell, David
Cottrell, Eric
Dunham, Richard
Dweck, Steven
Eigo, Thomas
Every, Thomas
Liberatore, Gregory
Scotto, Robert

Fifth District
Camesano, Theodore
De Michele, Annamaria
DeVito, David
Engle, Marc
Madonian, Margaret
Melo, Hilario
Richardson, James
Rosinski, Stanley
Vlassis, James
Zimmerman, Christopher

Sixth District
Ambis, Edward
Kane, Ronald
Mauleon, Luis
Muench, David
Perna, Michael
Ward, Peter

Seventh District
Ferchaw, Michael
Harrison, Cathy
Lawrence, David
Lowenguth, Jeffrey
Lucia, John
Najeem, Shaesta
Quevedo, Joseph
Sansone, James
Santo, Craig
Vogler, James

Eighth District
Athans, John
Bochiechio, Robert
Candino, Beth
Cappellucci, Steven
Covell, David
Dunn, Mary Beth
Dwyer, Edward
Edgerton, Mira
Falsafi, Rebecca
Kritkausky, Anthony
Langton, William
Lippa, Ellen
Lukasik, Antoinette
Mercurio, Michael
Meyer, Robert
Pantera, Carole
Schwab-Davis, Ann
Soltiz, Frank
Tibbetts, John
Vatral, Michael
Welsh, Daniel
Wisholek-Fischer, Deborah

Ninth District
Calian, Eric
Chung, Joseph
Delia, Gina
Fedele, Dennis
Gershanok, Michael
Hindin, Jeffrey
Kanganis, Jenny
Kirchmann, Robert
Laxminarayan, Revathi
Lockwood-Roach, Joyce
Ma, Keith
Miraglia, Benedict
Pai, Paul
Ramaswamy, Suresh
Scalera, Francis
Sylvia, Jennifer
Teitelbaum, Michael
Zivari, Sohayla

Nassau County
Boshnack, Robin
Danoff, Laura
Elkowitz, Aaron
Emma, Denise
Fleischer, Michael
Gerstenblatt, Randi
Green, David
Kaufman, Mitchell
Lubliner, Jay
Sacks, Harry
Schmitz, Robert
Tsotsos, Harry

Queens County
Addeo, Paul
Aiuto, Vivian
Bruno, Robert
Dourmas, George
Gales, Salvador
Halper, Jodi
Huang, Eric
Kolinsky, Gary
Kyaw, Maung
Sharifi, M Naser

Suffolk County
Collura, Michael
DiPietro, Guy
DuBois, Robert
Errante, Salvatore
Felton, Greg
Greenberg, Jonathan
Miller, Arthur
Palermo, Andrew
Thornhill, Lori
Wendt, Robert

Bronx County
Baskas, David
Szanto, Kathleen

Management of Wisdom Teeth

NYSS OMS
NEW YORK STATE SOCIETY of Oral and Maxillofacial Surgeons

- Anesthesia
- Dental Implant Surgery
- Wisdom Teeth Management
- Extractions and Other Oral Surgeries
- Facial Injury / Trauma Surgery
- Oral, Head and Neck Pathology
- Corrective Jaw Surgery
- Obstructive Sleep Apnea (OSA)
- Facial Cosmetic Surgery
- Cleft Lip/Palate and Craniofacial Surgery
- TMJ and Facial Pain

When should you consult an oral and maxillofacial surgeon (OMS) about third molars?

Because complications increase dramatically with age, all third molars should be evaluated each year for potential problems. When warranted, they can be removed in the OMS office using safe and appropriate anesthesia. Visit MyOMS.org for more information.

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