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“The New Jersey Dental Association serves and supports its members and fosters the advancement of quality, ethical oral healthcare for the public.”

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Cover
Giorgio T. DeVincenzo, DMD, Immediate Past President pictured with Mark A. Vitale, DMD, President of the New Jersey Dental Association.
Dr. Vitale was sworn in on May 6, 2017 in Newark.

Photo credit: John Szpara

The New Jersey Dental Association is proud to partner with Mastergraphx to provide the community with a journal printed on environmentally-friendly paper. By using products with the FSC label you are supporting the growth of responsible forest management worldwide.
As I sit to prepare this message, I was mindful of my immediate predecessors and their hard work and messages to the members of NJDA. Drs. Bryon Roshong, Gregory LaMorte, and Giorgio DiVincenzo have worked and continue to work tirelessly in promoting membership, volunteerism, leadership, and inclusion. I applaud them and thank them.

As I look back over the past years of NJDA and dentistry, I wonder what the future holds. No one can argue that we have been successful in representing our members, having provided member benefit and value, have had a respected voice in the State Legislature, and have been successful in moving toward fulfilling our mission. We have been relevant to our members and I think we have been relevant to the citizens of NJ. Since 1870, our mission has remained constant: “The New Jersey Dental Association serves and supports its members and fosters the advancement of quality, ethical oral healthcare for the public.” But are we as relevant as we think we are, or has that relevance changed?

Allow me to digress.

In 1902 Charlie Miele was born in Suffern, NY. He was raised in a loving but impoverished home, where every day after school he would grab a bucket, walk to the railroad tracks and collect coal so that his mother could cook and there would be heat in their home. Following his youth he worked on Wall Street and experienced the stock market crash of 1929, the Great Depression, and both World Wars. He and his wife lived a simple life in a one bedroom apartment in Newark, NJ. He worked as an insurance agent and spent his spare time walking to the city field to watch the Newark Bears. Every day he would spend several hours walking along First Avenue greeting and speaking with residents, merchants, and anyone else who needed to be heard. There was not a person that did not know Charlie Miele. In his later years he moved to Iselin and again spent several hours a day walking along Green Street, speaking with residents and merchants.

So why am I telling you this about my grandfather? After he died, my family members and I found out about the role he played in so many individuals’ lives whether it was the neighbor, the police officer, the pharmacist, the barber, or the chef at the Chinese restaurant. Charlie Miele was relevant to each one of them in different and special ways. Ironically, he became relevant simply by listening to them and doing what he thought was best for them. He learned from them as they learned from him. The relationships he formed with them became a cornerstone in his life. This relevance developed because he listened. It has been said that “the biggest communication problem is we do not listen to understand. We listen to reply.” My grandfather listened to understand.

For many years NJDA has successfully functioned as a non-profit membership organization that has worked well and has served the needs of its members. However, it has functioned within a bubble, having relevance to its members with minimal outreach to other professions and organizations. We still have over 3000 dentists in the state of NJ who do not see value in membership. We may say we are relevant, but are we? I am not saying this in a derogatory sense, but just as a matter of perspective. NJDA has always been a great organization, but I think it can be better by reaching out and including more of our state’s fine dentists. As Charlie Miele did, NJDA should reach out and listen to others. Listen to understand.

Over the past five years we have seen tremendous change in the healthcare delivery system, in insurance reimbursement, in government rules and regulations, and most recently in the business models in our profession. We have seen a change in the goals and priorities of young dentists. We have been and continue to be challenged on every front. Simple things that we have always taken for granted: the autonomy of private practice, the ability to treat our patients without insurance or government intervention, the ability for retiring dentists to sell their practice to a young dentist, the ability to set our own fees. All these are being challenged.

I suggest, that in order to meet these challenges, we examine our structure, our governance and our goals, and we answer these questions: how do we remain relevant to our members, become relevant to nonmembers, and become relevant in the society in which we live and work?

Our outstanding staff and our officers have initiated changes over the past few years that I believe will forge the way for a stronger and more relevant organization. Work has been done to develop more functional and transparent business accounting systems. Relationships with our vendors are being examined and changed as needed so we can procure more efficient services for members. While membership and the growth of dues revenue remains a priority, our programs that have been developed to secure non-dues revenue are expanding and flourishing. Our educational programs are being redesigned and expanded to fulfill the needs of all dentists.
Our legislative action and our PAC, which has always been one of our greatest strengths, continue to grow stronger.

It is time for us to step out of One Dental Plaza, as we have known it, and enter into the new One Dental Plaza, housing a growing membership organization that is not only relevant to its members but to nonmember dentists, other professions and organizations, and most importantly to the citizens of NJ. People need to know who the members of NJDA are and what they represent. By expanding marketing into the public sector, we can assist our members in attracting patients to their practices and at the same time bring awareness to the public regarding the need for oral health care and the oral-systemic connection. By targeting other special interest groups, unions and labor organizations, not to mention senior citizens, we can develop programs to serve these sectors of the population and bring awareness of our function and mission. One example of a program in place that has never been promoted to a level of effectiveness is our Senior Dent program. A great idea that has yet to be maximized for our dentists and seniors.

We must encourage membership to reach out to community and social organizations which can convey our message and promote oral health. We currently play a role in the NJ hospitals via the dental residency programs. Let us expand our participation with these institutions in developing programs such as one that would relieve the ERs from the time-consuming and costly dental emergencies that they currently encounter. Let us help develop programs to establish dental homes for those that do not have a dentist. We need to develop programs that would allow our members to share their knowledge and skills in the local schools. Give Kids a Smile is one of our greatest accomplishments. Why not look at it, and similar programs such as Dental Lifeline Network, and actively work to expand them and treat those patients statewide who may not have access to care. I personally do not see a great future for Medicaid in helping to serve all who need dental care. I believe it is our volunteerism that will always outshine any state or federal program. By increasing our legislative efforts and campaigning for a State Oral Health Director, we can demonstrate the real relevance of NJDA and the importance of good oral health care.

As I mentioned earlier, NJDA has begun taking action to effect change. Several months ago we were the first healthcare organization in New Jersey to develop guidelines for opioid prescribing. We suddenly became relevant to our leaders in Trenton and to other organizations fighting to eradicate the opioid epidemic, one of the biggest social issues of today. This type of initiative is just one example of the good of which our organization is capable.

I encourage every one of our members to get involved. We are all leaders, and while we may not feel that we have the time or are able to make a difference, I assure you whatever time and ideas we can share will make a difference. A concerted effort will surely effect change and enhance the growth and development of our organization. As Charlie Miele found out, the more people you engage, the more relevant you become, and the more fulfilling is your journey. A Roman philosopher once said, “you must live for another if you wish to live for yourself.”

Isn’t it about time YOU had something to smile about?

When it comes to selecting an accounting firm for your practice, why not follow the lead from your peers.

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When it comes to kindness, a little really does go a long way. I find this especially so when it is the action of a complete stranger. Just a small simple act, such as somebody holding the door open for you, or someone helping you pick up something you may have unknowingly dropped, creates appreciation disproportionate to the degree of the kindness. These things are just behaviors that people do without even thinking twice, but the recipient of these small actions of kindness is left to digest a much larger impact than the measurement of the action itself.

Kindness is always appreciated, but there’s something about the randomness of it all that seems to leave such a warm impression that lingers behind for an extended period of time. We take in the imprint that it left with us, reflect on it, and begin to fill with gratification.

The gratification that kindness leaves behind with us feels good for a reason. We feel more open-minded and are able to relate more to the environment around us. There have been plenty of studies that have examined and explained the benefits of having gratitude. Our psychological health is greatly benefited, as appreciation reduces a plethora of negative emotions and instead enhances our happiness and our well-being. Our sleep improves, our mental strength enhances, we experience more empathy towards others, etc.

When we are kind, auras of positivity vibrate from such gentle gestures. It’s important to be cordial and considerate to everyone. There is nothing more unifying and beautiful than graciousness. More benevolence is what humanity, and the planet, so desperately needs.
In Memoriam

We note with sadness the passing of the following members:

Atlantic-Cape May
Berkey S. Clark
February 25, 2017

David P. Donati
February 27, 2017

Bergen
Murray Eilers
February 11, 2017

Herbert B. Holtzman
January 8, 2017

Central
Herbert Bressman
March 25, 2017

Howard P. Krinick
February 2, 2017

Essex
Ralph J. Attanasio
March 9, 2016

Juliet Kafka Bergen
November 16, 2016

Norman Rothenberg
March 12, 2017

Middlesex
Virginia Monsul-Barnes
March 18, 2017

Monmouth-Ocean
Terrence Fay
January 24, 2017

Harvey N. Rein
January 14, 2017

Passaic
Lawrence P. Duca
February 25, 2017

Southern
Harold M. Berlin
December 29, 2016

Gregory S. Flak
February 14, 2017

Ray L. James
January 14, 2017

Tri-County
Howard Francis O’Gorman
February 17, 2017

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A
other class of dental students is entering the employment market. Where does the class of 2017 fit into the future of its profession? Many will attend a residency program, while others will start a practice. Still others will become associates, perhaps hoping to buy into a practice in the future.

Despite the existence of dental service organizations and mid-level providers, according to the Health Policy Institute of the ADA, most dentists work in solo practice, making up 56% of dentists in 2014. Add in small group practices and other opportunities, e.g., research and not-for-profit organizations among other options, and we find only 7.4% of dentists go into corporate dentistry.

It won’t be an easy road to success for any new dentist. Their predecessors can attest much hard work goes into a successful practice.

The dental workforce is aging, averaging 48.5 years in 2005 and 50 in 2015. Dentists are putting off retirement with the average age moving from age 66.1 in 2005 to 68.8 in 2015, a significant increase.

While statistics say some states have too few dentists and others too many, the reality is many members of the class of 2017 will stay here in New Jersey. For them, it’s time to get started. And for those looking to retire, it’s time to get started, too.

An article in DentalProductsReport.com (accessed 5/19/17) lists New Jersey as the 16th best state in which to be a dentist. The ranking is based on the education level of patients and their economic confidence, availability of insurance and Medicaid, the cost of living, and more. Minnesota, cold, snowy winters and all, came out number one.

Yet, where you hang your shingle depends on much more than cost of living, weather or commute. It also depends on whether a reliable support system is available when needed. In that case, you would have to agree, New Jersey has everything you need to succeed.

The NJ Dental Association provides mentorship and career advice and has fostered strong student relationships. Student component representatives sit on the Board of Trustees and NJDA Councils. The Association enjoys a regular presence at RSDM and visits all residency programs. Our staff and leaders offer the kind of practice information students are looking for and schools do not provide. The NJDA is ready to assist even before graduation and will remain with these young men and women throughout their careers.

Our established members will have found, over the years, that the NJDA has offered courses, seminars, and advice to help prepare for the day they are ready to retire. It’s never too late – or too soon – to contact the NJDA and our endorsed businesses to get that transition under way.

For those in mid-career, the NJDA continues to be the best resource for information on state and federal regulations and insurance issues. We vet companies so you don’t have to when choosing a web-design team, credit card service analyst, or practice financier, to name just a few.

The NJDA continually improves its ability to serve you, with our newest member benefit being partnership with the Association Master Trust, to provide health benefits plans comparable to those available to large corporations. Find out more by visiting the Member Center at www.njda.org and clicking on New Health Benefit Plans for Members. See page 22.

Through NJDPAC, the NJDA provides a united voice for dentistry, especially in trying political times. And we are never too busy to listen to your voice. Whether to explain an insurance provision or to help unravel a problem, the NJDA is here for you. As it has been for more than 145 years.
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What If?

What if an Insurance Company Overpays Due to COB.
How do I Handle the Credit?

Joan Monaco, DMD
Director of Dental Benefits, NJDA

Coordination of Benefits, on the surface, seems easy enough. You determine which insurance plans a patient has and the companies “do the rest.” But as we know nothing insurance-related is ever that simple. The “birthday rule.” The “divorce rule.” Right of continuation. Retirees, Cobra, the rules and exceptions to the rules go on and on.

And then your office receives a check. Great! Payment is always a good thing. Overpayment – not such a good thing. Insurance companies get it wrong sometimes. Now you have more money in a patient’s account than is warranted by the procedure.

Bottom line – the insurance company will eventually figure it out and want that money back.

Contractually, you are obligated to return the overpayment when requested to do so. It may take an insurer months or more to catch up with the error, but catch up they will. If you’ve returned the overpayment to your patient, you now have to chase the patient down to get the money back, or swallow a loss. That’s if you’re a participating provider.

Non-participating dentists are essentially in the same boat. The provider will go after that overpayment, usually by deducting the amount from a bulk payment, even though you are under no obligation to return the money. It was their mistake, after all, and they don’t have a contract with you. But they have taken the overpayment back and now you are chasing the insurance company instead of a patient. Chances are, you will be left holding the (empty) bag.

Best practices would suggest that you develop an internal accounting policy to track overpayments. For example, rather than returning an overpayment to a patient, credit their account for that amount. If, after a reasonable length of time, the insurer does not request reimbursement, use the patient credit toward their open balance or issue the refund as you see fit.

Here’s one way of including the scenario in your policy manual and informational pieces for your patients:

In the event of an overpayment by an insurer, for any reason, Dr. XX’s office will note a credit in the patient ledger and maintain that credit on account until a request for reimbursement is received or XX months, whichever is sooner. At the end of this time period, Dr. XX will apply the credit to the patient’s outstanding balance, if any, or issue a refund to the patient.

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Dr. Jeff Van Drew, a general practitioner in Pleasantville, has been selected as a fellow in the American College of Dentists, based upon his demonstrated leadership and contributions to the dental profession and society. Dr. Van Drew was inducted during the ACD’s convocation held in October 2016 in Colorado. Dr. Van Drew also is a senator in the NJ General Assembly, representing District 1.

Chelsea Fosse Rajagopalan, DMD, RSDM ’17, was presented with the NJDA Award for “demonstrating excellence in community service and representing the future of organized dentistry” by NJDA Executive Director, Arthur Meisel, Esq., on May 11 at the RSDM 2017 Awards Recognition Ceremony. She will be entering an ADA accredited general practice residency at the Helen Hayes Hospital, in West Haverstraw, NY, which accepts just three dentists per year into its program. The hospital specializes in rehabilitation care for a variety of needs and populations, including dental care for individuals with developmental, physical and psychiatric disabilities. Dr. Rajagopalan plans to remain a loyal member of the Hudson County Dental Society as she completes her residency.

Dr. Mitchel Friedman of Newman Springs Dental Care in Lincroft has presented scholarships to three seniors at Holmdel HS, Middletown HS North, and Middletown HS South who are planning careers in healthcare. This is the 8th year the practice has presented this scholarship program.

James TenBrook, DMD, an orthodontist practicing in Vineland, has donated complete orthodontic services to a 12-year-old child through Big Brothers Big Sisters of Cumberland and Salem Counties. The boy is the 4th local student to be selected to receive braces through the practice’s relationship with Big Brothers Big Sisters.

Dr. Frank Costello, a retired dentist now living in Toms River, is one of the organizers of the Seaside Semper Five race, a charity run that was disrupted last September by an explosion along the race route. According to the Star-Ledger (5/21/17), registration for the run has more than doubled over last year. Dr. Costello, who practiced in Moorestown, is a three-time marathoner and Iron Man competitor.

To include items in Members in the News, please contact Dr. Harvey S. Nisselson, editor, at hn3@cumc.columbia.edu or Lorraine Sedor, managing editor, at lsedor@njda.org or 732-821-9400.
Erupted Complex Odontoma in Unison with Impacted Mandibular Molar Associated with a Dentigerous Cyst
Husain Sabir Mannan, MDS, Subhas Kumbhare, MDS, Rekha Chaudari, MDS, Saurabh Gupta, MD

Abstract
Dental professionals and maxillofacial radiologists routinely encounter tumoural and cystic lesions. However, simultaneous lesions are uncommon and represent a diagnostic challenge to overcome. Among odontogenic tumours, odontomas are the most common of the jaws. Cystic transformation or developments from the tumoural capsule are well familiar in cases such as ameloblastoma originating from a dentigerous cyst. Despite reports in the literature, dentigerous cysts arising from odontomas or simultaneous presence of odontoma and dentigerous cyst associated with impacted tooth are rare and could lead to misdiagnosis. We report a case of a complex odontoma in unison with a dentigerous cyst associated with an impacted mandibular molar in a 19 year-old female patient.

Keywords: odontogenic tumour; cysts; CBCT; impacted mandibular molar.

Introduction
Odontomas are developmental hamartomatous malformations or odontogenic lesions consisting of enamel, dentin, cementum and pulpal tissue. They constitute 22% of all odontogenic tumors.1 Odontomas are classified into two types – compound and complex. An agglomeration of small structures resembling teeth constitutes compound a odontoma, whereas an irregular mass in a disorderly pattern forms a complex odontoma.2,3 Compound odontomas are more frequently seen than complex odontoma.1 The majority of the complex odontomas are located in the posterior mandible with a male to female ratio of 1.5 to 1.4 About 10 to 44% of complex odontoma are associated with unerupted teeth.4 Complex odontoma located coronally to impacted teeth and clinically visible in the oral cavity is termed erupted complex odontoma.5 A dentigerous cyst is a developmental odontogenic cyst seen around the crown of an unerupted tooth and attached to its neck. Dentigerous cysts are more than twice as common in males as females. Apparently it arises by the accumulation of fluid between reduced enamel epithelium and the tooth crown.6 The simultaneous presence of an odontoma and a dentigerous cyst associated with an impacted tooth is uncommon and diagnosis of such lesions is a challenge to dental professionals. We report a case of an erupted complex odontoma and a dentigerous cyst associated with an impacted mandibular second molar with emphasis on CBCT findings.

Case report
A 19 year-old female patient presented to our department with a hard mass, pain and swelling in the left posterior region of the mandible for the past two months (Fig.1). The physical examination revealed a well defined extraoral swelling in the left angle region of the mandible of about 2cm × 1.5cm.3 The swelling was hard in consistency and tender on palpation. On intraoral examination, a whitish-yellow mass resembling dentin, measuring 14mm × 9mm in the left mandibular second molar region with an apparent absence of #18 was noted (Fig. 2). On palpation, expansion of the buccal cortical plate with buccal vestibular space obliteration was evident. The clinical findings prompted a provisional diagnosis of benign tumour along with impacted #18.
On periapical and panoramic radiographs (Fig. 3, 4), an irregular dense mass with varying degrees of radio-opacity was observed coronal to an inferiorly displaced mandibular second molar. The mass and the impacted tooth were surrounded by a well defined radiolucent zone (Fig. 5).

Sectional CBCT images (Fig.6-9) revealed a hyperdense mass coronal to #18 with perforation of lingual cortical plate. Also, a hyperdense mass associated with #18, causing expansion of the buccal cortical plate, was observed. The radiographic features suggested the cystic lesion with #18 in unison with a hyperdense mass of odontogenic origin. The clinical and radiographic features favoured the diagnosis of complex odontoma in unison with a cystic lesion. Differential diagnosis included central ossifying fibroma, central odontogenic fibroma, periapical cemental dysplasia and enostosis. However pericoronal position, radiopacity, association with impacted tooth, solitary in nature and radiolucent halo favoured the diagnosis of complex odontoma.

Complete enucleation of the cystic lesion and surgical removal of the calcified mass along with the impacted mandibular second molar under local anaesthesia was done (Fig. 10, 11). Histopathological examination revealed a complex odontoma and a dentigerous cyst associated with #18 (Fig. 12, 13). The patient was discharged and was asymptomatic.

Discussion
Paul Broca coined the term odontoma in 1867. Odontomas are usually asymptomatic; and generally remain small, rarely exceeding the diameter of the tooth. However, it may become large, causing bone expansion with resultant facial asymmetry. They may be associated with retained deciduous teeth, unerupted teeth or impacted teeth, swelling and infection. Odontomas feature a well defined radio-opacity with foci of variable density that are generally greater than bone and equal to or greater than that of the tooth. A radiolucent zone typically surrounded by a thin sclerotic line, surrounds the radio-opacity. The radiolucent halo is the connective tissue capsule of a normal tooth follicle. Odontomas can develop cystic transformation into dentigerous cysts because of their odontogenic nature, including epithelial and mesenchymal tissue. This cyst results from the cystic degeneration of the epithelial component of the enamel organ and the resultant fluid accumulation between the reduced enamel epithelium and enamel of the tooth. However, cystic transformation of the follicle associated with the unerupted tooth may also occur when its eruption is impeded by the odontoma. In our case, the radiographic features of periapical and panoramic views may have lead to a diagnostic hypothesis of complex
The CBCT images allowed better depiction of the involved structures, revealing a hyperdense mass coronal to an impacted molar and a second lesion of cystic appearance in relation to the impacted molar along with expansion of the buccal cortical plate. Most cases in literature show a cyst associated with the capsule of odontoma. However, in our case, the sectional CBCT images confirmed the cystic lesion to be associated with an impacted molar. Also, it helped with proper visualization of the root morphology of impacted the molar. Determination of the presence of two pathologies was not possible by periapical or panoramic radiograph.

At that point, as an impacted molar was associated with another lesion with cystic features, dentigerous cyst was chosen as the probable diagnosis as a result of a cystic degeneration of the follicle. This was confirmed following the surgical removal of two distinct lesions in the retromolar region. Histopathology showed a complex odontoma in unison with an impacted molar associated with a dentigerous cyst.

Different theories have been formulated on the eruptive mechanism of odontoma. In our case, the eruptive force of impacted teeth must have contributed to the eruption of the odontoma, as it was located coronal to the impacted teeth, although bone resorption as a result of the dentigerous cyst expansion may also have caused it to erupt. Excision of the lesion and allowing the impacted tooth to erupt is the preferred treatment plan in cases of an erupted odontoma associated with an impacted tooth. In our case, considering the complete root formation of the impacted tooth and its association with a dentigerous cyst, it was removed along with the lesion; also eliminating any chance for cystic recurrence.

In the case presented, features based on CBCT images paved the way for a proper diagnosis and treatment plan.
pathway for the therapeutic approach, allowing perfect planning for the surgical procedure and elucidation of a diagnosis. CBCT images were vital not only for evaluation of the lesion itself, but also for localization of associated pathologies and proper treatment planning.

References

About the Authors
Dr. Husain Sabir is a consulting oral physician and radiologist, Indore, India. Dr. Subhash Kumbhare is an associate professor and head of the Dept. of Oral Medicine and Radiology at the Government Dental College and Hospital, Nagpur, India. Dr. Rekha Chaudari is an associate professor in the Dept. of Oral Medicine and Radiology Government Dental College and Hospital, Indore, India. Dr. Saurabh Gupta is an associate professor in the Dept of Conservative Dentistry & Endodontics, Indore, India
The Role of the Endocrinologist in TMD
Deepika M. Reddy, DDS
Mikkilineni Haritha, MDS

The human body is the entire structure of a human being. It is composed of many different types of cells that together create tissues and subsequently organ systems. They ensure homeostasis and the viability of the human body.

The endocrine system consists of the principal endocrine glands: the pituitary, thyroid, adrenals, pancreas, parathyroids, and gonads, but nearly all organs and tissues produce specific endocrine hormones as well. The endocrine hormones serve as signals from one body system to another regarding an enormous array of conditions, and resulting in variety of changes of function.

The thyroid hormone is produced by the thyroid gland, located in front of the neck. This gland is essentially suspended from the mandible via the hyoid bone and thyroid cartilage.

It is extremely common for human beings to experience many problems in one area of the body that influence another area of the body. Temperomandibular disorder is a disorder, but not a syndrome, because of varying sets of signs and symptoms. There are also many co-morbid conditions. The worst cases of TMD often involve undiagnosed hypothyroidism since it causes muscle weakness, stiffness and aches. Masticatory and cervical muscles are particularly affected by low thyroid hormone levels.

In TMD patients, forward head posture places soft tissue compressive forces on the thyroid gland. It is imperative for dentists to avoid dental myopia. Severe TMD patients tend to have much higher incidences of Hashimoto’s disease and Wilson’s syndrome. Signs and symptoms of hypothyroidism are muscle weakness, fatigue, cold sensitivity, dry skin, joint pain and stiffness, bradycardia, hoarseness, constipation, carpel tunnel syndrome, muscle ache, tenderness and stiffness, puffy face, weight gain, thinning hair, and heavy and irregular menstrual periods. Most general physicians focus on blood TSH levels and not on clinical signs and symptoms of hypothyroidism. All tests have their own sensitivity and specificity, meaning that there are almost always limitations to simply diagnosing clinical diseases solely on blood tests.

About the Authors
Deepika M. Reddy, DDS, is a general dentist practicing in Atlantic City. Haritha Mikkilineni, MDS, is a prosthodontist practicing in Hyderabad, India.

2017 Continuing Education Courses

August 28, 2017 - September 1, 2017
Minimal Invasive Aesthetic Dentistry (Hands On)
Dr. Linda Greenwall
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Dentist $2995; DT $995

September 15-17, 2017
Bender Seltzer Grossman: Academic Review of Endodontology
Please see our website for more details.

Friday, October 13, 2017
Orthodontic Diagnosis and Treatment Planning for the General Dentist
Dr. Harold Slutsky
9:00am - 4:00pm / 6 CE
Dentist $295; DT $125

Friday, November 10, 2017
7th Annual Straumann Distinguished Speaker Lecture: Implant Dentistry Based on Biology and Predictability
Dr. Mauricio Araujo
9:00am - 4:00pm / 6 CE
Dentist $295; DT $150

Friday, November 17, 2017
Esthetic Dentistry and Periodontal Prosthesis: A Wonderful Marriage for Today’s Restorative Dentist
Dr. Joseph Greenberg
9:00am - 4:00pm / 6 CE
Dentist $295; DT $125

Friday, December 8, 2017
Full Crown Preparation (Hands On)
Dr. Joseph Breitman
9:00am - 12:00pm / 3 CE
Dentist $225; DT $125

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Oral Pathology Quiz #95

Presented by Rutgers School of Dental Medicine Biopsy Service

The Rutgers School of Dental Medicine oral pathology and oral medicine faculty members are showing the clinical presentation of some relatively common lesions for readers to self-evaluate their skills in clinical differential diagnosis. You are expected to choose the most likely clinical diagnosis on the basis of history and clinical or radiographic appearance with the appreciation that definitive diagnosis requires microscopic examination of the specimen.

---

**Case Number 1**

Figure 1: Courtesy Dr. George Papasikos, Montclair

67-year-old healthy female presented with a solitary papule on the lingual gingiva of her mandibular left central incisor. It measured 4 mm in diameter, extending from the free gingival margin onto the attached gingiva. The surface was partially ulcerated and it was moderately firm in consistency. Radiographs were within normal limits. Scaling was performed twice without affecting the appearance of the lesion. Which of the following is the most likely diagnosis?

A. Pleomorphic adenoma
B. Peripheral ossifying fibroma
C. Leiomyoma
D. Neurofibroma

---

**Case Number 2**

Figures 2, 3 and 4: Courtesy Dr. Vincent B. Ziccardi, Rutgers University

A healthy 15-year-old female presented with a well-defined, ulcerated, soft tissue swelling on her right mandibular alveolar ridge at the site of her non-erupted second premolar. There was expansion of the lingual aspect of that region of her mandible. The patient denied pain or paresthesia. Radiographs revealed a well-defined, expansile radiolucent lesion extending from her canine to third molar region. It extended from the superior alveolar border to the inner aspect of the inferior cortex. The fully-erupted first molar appeared to be “floating in space.” There was thinning and probable perforation of the lingual cortex. Which of the following is the most likely diagnosis?

A. Hyperplastic dental follicle
B. Ameloblastic fibroma
C. Odontogenic myxoma
D. Odontoma

---

For Guidelines on Safe Prescribing visit www.njda.org
Case Number 3  Figures 5, 6 and 7: Courtesy Dr. Raphael Figueroa, Teaneck

A solitary periapical lesion in the anterior mandible was an incidental finding on radiographs of a healthy 50-year-old female. Clinically, there was no swelling, change in color, or pain. Adjacent teeth were vital and had no restorations. Regional lymph nodes were within normal limits. The lesion was at the apex and on the mesial aspect of the patient’s left mandibular canine. It was ovoid in shape, with moderately well-defined borders, measuring approximately 1.5 cm vertically by 1.0 cm mesiodistally. Internally, most of the lesion was opaque, with a radiolucent component in the superior region. There were no other significant lesions. Which of the following is the most likely diagnosis?

A. Condensing osteitis  
B. Focal cemento-osseous dysplasia  
C. Fibrous dysplasia  
D. Osteosarcoma

Case Number 4  Figure 8: Courtesy Dr. Mahnaz Fatahzadeh, Rutgers University

The chief complaint of a 62-year-old female was, “I have a spot in my mouth. I first noticed it about three months ago.” It was asymptomatic and had not changed at all since she first noticed it. The patient was partially dentate with a well-defined, non-raised, pigmented plaque (0.6 cm) with bluish-grey coloration, located at the junction of right retromolar pad and soft palate. There was no blanching or tenderness on palpation. Her medical history included hypertension and arthritis. She was taking simvastatin, and lisinopril. Which of the following is the most likely diagnosis?

A. Melanocytic nevus  
B. Melanoma  
C. Amalgam tattoo  
D. Peutz-Jeghers syndrome

Answers on page 18

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Case Number 1  *Answer: B. Peripheral ossifying fibroma*

Peripheral ossifying fibroma (B) is a benign, reactive nodule that occurs on the gingivae. It presents as a well-defined, firm nodule that is normal-colored or erythematous. It arises from deep tissues (periodontal ligament or alveolar crest) so it has a higher recurrence rate than fibromas. In a limited number of cases, internal calcified material may be so extensive that it is seen on radiographs as irregular opacities.

The benign salivary gland neoplasm, pleomorphic adenoma (A), is very unlikely at this site because salivary gland tissue is not normally found in the gingivae. The benign smooth muscle neoplasm, leiomyoma (C) and benign peripheral nerve neoplasm, neurofibroma (D), may occur on the gingivae but are far less common than peripheral ossifying fibroma.

Other lesions that appear as normal-colored gingival nodules include reactive lesions (irritation fibroma and peripheral giant cell lesion or “giant cell epulis”) and benign mesenchymal neoplasms (leiomyoma, neurofibroma and neurilemoma).

---

Case Number 2  *Answer: B. Ameloblastic fibroma*

Ameloblastic fibroma (B) is a benign odontogenic neoplasm, which often causes expansion of the jaw. The most common location is the posterior mandible. Radiologically, they appear as well-defined unilocular or multilocular radiolucencies. They often overlie unerupted or partially erupted teeth. Most cases are diagnosed before 20 years of age. Ameloblastic fibromas are treated by conservative initial surgery; 18% to 44% recur. Recurrences are treated by wider excision. The lesion in this case was excised and a reconstruction plate was inserted.

Hyperplastic dental follicle (A) appears as a pericoronal radiolucent lesion but is excluded in this case because enlarged follicles do not exceed 5 mm in maximum dimension. Odontogenic myxoma (C) is very unlikely because most of these odontogenic neoplasms present as multilocular radiolucencies. Odontoma (D) is excluded because it is a radiopaque tumor.

The differential diagnosis of pericoronal unilocular radiolucencies also includes odontogenic cysts (dentigerous, keratocyst, and calcifying odontogenic) and odontogenic tumors (unicystic ameloblastoma and adenomatoid odontogenic tumor).

---

Case Number 3  *Answer: B. Focal cemento-osseous dysplasia*

Cemento-osseous dysplasia is an abnormal remodeling of periapical bone in response to undetermined factor(s). It is unrelated to tooth vitality. The vast majority of cases occur in women. Lesions go through lucent, mixed and opaque stages. The focal form of this condition, focal cemento-osseous dysplasia (B), presents as a solitary lesion. It appears as a well-defined, relatively small, usually non-expansible, asymptomatic lesion. In some cases, borders are slightly irregular. Some patients with the focal form of cemento-osseous dysplasia may later develop the periapical and/or florid forms. It is, therefore, important to monitor patients because inappropriate management of the florid form of the disease may result in secondary osteomyelitis.

Condensing osteitis (A) is excluded because it is associated with teeth that are non-vital, exhibit features of pulpitis or are heavily restored. Fibrous dysplasia (C) and osteosarcoma (D) are unlikely because they usually exhibit irregular and/or poorly-defined radiographic borders.

The differential diagnosis of solitary, well-defined, mixed radiopaque-radiolucent lesions apical to vital teeth also includes idiopathic osteosclerosis, cementoblastoma, localized hypercementosis, and central ossifying fibroma.
Case Number 4  *Answer: C. Amalgam tattoo*

Amalgam tattoo (C) presents as black, blue, or grey macules more often than papules. The shape of the lesion varies from well-defined to irregular and/or poorly defined; there is often local spread after implantation. If the implanted amalgam is visible on radiographs due to the metallic fragments, a biopsy is unnecessary. Otherwise, biopsy will rule out more significant diagnoses, especially melanoma.

Both melanocytic nevus (A) and early melanoma (B) may clinically resemble amalgam tattoo but they are much less common on the oral mucosa. The nevus represents only 1.5 of 1,000 diagnoses on oral pathology diagnostic services and, fortunately, oral melanoma is an even rarer entity. Peutz-Jeghers syndrome (D) is excluded because it is characterized by multiple pigmented macules around body orifices and on the oral mucosa. They are often markers for various neoplasms and hamartomas.

The differential diagnosis for oral pigmented macules or patches also includes melanotic macules, melanoacanthosis and submucosal hemorrhage.

The Oral Pathology Quiz is presented by faculty of the Rutgers University – Rutgers School of Dental Medicine, Drs. Lawrence C. Schneider, Joseph Rinaggio and Mahnaz Fatahzadeh. Clinicians who have clinical pictures and/or radiographs of cases suitable for future quizzes should call Dr. Schneider at (973) 972-4375. E-mail: Lawcschneider@aol.com

Biopsy kits may be obtained without charge by calling (973) 972-1646. Faculty members are available to answer questions Monday through Friday, from 8:00 a.m. to 4:00 p.m.

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Abstract

A review of the distribution of dentists, sources of financing for care, increasing number of dental schools and other related factors raise continuing concerns about the economics of dental practice in New Jersey and the nation.

The great recession from December 2007 to June 2009 is over; unemployment figures continue to improve since the peak in October 2009; the stock markets are almost back to their highest levels in history and lots of us are breathing easier as we survey our retirement portfolios. Nevertheless, previous reviews in the JNJDA reviewed the downturn of the economics of dental establishments within the state between 2007 and 2012 and emphasized the need to expand services to an increasing diverse population and to individuals with a wide range of disabilities. 1,2 Recently released data from the National Center for Health Statistics (NCHS) provides a national overview of dental expenditures which continues the concerns regarding the economics of the profession. 3-4

Expenditures

“Health spending growth in the United States is projected to average 5.8 percent for 2014-2024, reflecting the Affordable Care Act’s coverage expansion, faster economic growth, and population aging … The health share of US gross domestic product is projected to rise from 17.4 percent in 2013 to 19.6 percent in 2024.” 5

In 2015, national health expenditures reached more than $3.2 trillion, including $2.7 trillion for personal healthcare and $119 billion for dental services. 3 Published reports by NCHS and the Centers for Medicare and Medicaid Services (CMS) covering past years through 2014 and projections through 2020, permit a detailed review of spending for personal healthcare, including dental expenditures.

• In 2014, $114 billion were spent for dental services.
• Since 1970, in every year (except one) the average annual percent increase from the previous year in expenditures for dental services was smaller than the increase in overall personal health expenditures and specifically for hospital and physician services.
• Between 1960 and 2014, the dental expenditure component of the total personal health expenditures was reduced by almost half; from 8.5% to 4.4% (Table 1).
• The cost for dental care is “felt” to a far greater extent than the costs for other personal health services.
• In 2010, 41% expenditures for dental services were paid out-of-pocket; almost 13 times the proportion of out-of-pocket spending for hospital care and more than 4 times the proportion of out-of-pocket spending for physician services.
• In 2020 it is projected that these differences will remain relatively unchanged (Table 2).

Numbers of active dentists

In 2013, there were 191,247 active dentists in the U.S., ranging from several hundred in a numbers of states to 13,391 dentists in Texas, 14,468 in New York and 29,425 in California. The number of dentists per 100,000 population ranged from 40.9 and 42.6, respectively, in Arkansas and Mississippi to 89.2 in the District of Columbia. During the years between 2006 and 2013, among all the states, New Jersey (with the increasing number of active dentists from a count of 6,922 to 7,238) had the greatest number of dentists (81.2) per 100,000 residents. 3

In addition, between 1990-1991 and 2013-2014 academic years there was an increase in the number of dental schools from 56 to 65 and in first year total enrollment from 4,001 to 5,904 students. 3 As of 2016, there are 66 dental schools.

Business receipts, as reported previously in the JNJDA

Between 2007 and 2012, there was a New Jersey statewide increase of 165 dental establishments. 1

Professionally active dentists include those whose primary occupation is one of the following: private practice (full or part-time), dental school/faculty staff members, armed forces or other federal services (i.e., Veterans Affairs, Public Health Service), state or local government employee, hospital staff dentist, graduate students/intern/resident or other health/dentist organization staff members. 3

• Current dollar business receipts per establishment increased in 10 counties. However, standard dollar business receipts decreased in all 21 counties in the state (removing the effects of inflation); i.e., increases in business receipts did not keep pace with the rate of inflation.
• Current dollar annual salary per employee (including dentists) increased. Again, standard dollar annual salary per employee decreased (removing the effects of inflation); i.e., increases in salary did not keep pace with the rate of inflation.
• In 2007 and 2012, NJ state current and standard dollar average business receipts per dental establishment were lower than the national level. 1

Need for dental services

At the national level, during the past twenty-five years, there has been a general decrease in the proportion of the population with untreated dental caries. Nevertheless, in 2011-2012, between 38% and 51% of adult Hispanics (of Mexican origin), blacks and residents living below the poverty level had untreated dental caries (Table 3).

Outlook

It would seem natural that, as the general economy of the nation continues to improve, there will be increasing use of oral health services. This review considered the uneven distribution of active dentists, increasing number of dental schools and student enrollment, sources of financing for care which rely heavily upon out-of-pocket spending and (not to be overlooked) intermediate dental personnel (e.g., dental nurses, denturists and court approved groups that provide teeth whitening in our malls). These issues do raise continuing concerns. As emphasized in the prior JNJDA article, the need is to expand the delivery of care to underserved populations, including the poor, individuals with disabilities, minorities and new immigrant populations for whom oral health services may not be a priority commodity.
Table 1. National personal health expenditures, average percent change, and percent distribution by type of expenditures: selected years: 1960-2014 with projection for 2020.  

<table>
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<td></td>
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<td></td>
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<td>Personal health expenditures</td>
<td>$23</td>
<td>$63</td>
<td>$217</td>
<td>$615</td>
<td>$1,162</td>
<td>$2,379</td>
<td>$2,441</td>
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<td>Hospitals</td>
<td>9</td>
<td>27</td>
<td>101</td>
<td>250</td>
<td>416</td>
<td>903</td>
<td>934</td>
<td>972</td>
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<tr>
<td>Physicians</td>
<td>6</td>
<td>14</td>
<td>48</td>
<td>158</td>
<td>289</td>
<td>563</td>
<td>577</td>
<td>604</td>
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<tr>
<td>Dentists</td>
<td>2</td>
<td>5</td>
<td>13</td>
<td>32</td>
<td>62</td>
<td>109</td>
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Average annual percent change from previous year

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<tr>
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<td>11.0</td>
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<td>2.9</td>
<td>5.0</td>
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<td>Hospitals</td>
<td>11.7</td>
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<td>9.6</td>
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<td>3.5</td>
<td>4.1</td>
<td>6.6</td>
<td></td>
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<tr>
<td>Physicians</td>
<td>9.9</td>
<td>12.8</td>
<td>12.7</td>
<td>6.2</td>
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<td>4.6</td>
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<td>9.0</td>
<td>7.0</td>
<td>4.8</td>
<td>1.5</td>
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Percent distribution of expenditures

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<tr>
<td>Hospitals</td>
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<td>46.3</td>
<td>40.7</td>
<td>35.6</td>
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<td>38.3</td>
<td>37.9</td>
<td></td>
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<tr>
<td>Physicians</td>
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<td>22.7</td>
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<td>25.7</td>
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<td>23.7</td>
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<tr>
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<td>5.3</td>
<td>4.6</td>
<td>4.5</td>
<td>4.4</td>
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Table 2. National personal health expenditures by source of payment: 2010 and projection for 2020.  

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<tr>
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<th>Out-of-pocket</th>
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<td>2010</td>
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<td>2020</td>
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<td>%</td>
<td>13.7</td>
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<td>34.6</td>
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<td>35.9</td>
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<tr>
<td>Physicians</td>
<td>9.8</td>
<td>6.5</td>
<td>46.6</td>
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<tr>
<td>Dentists</td>
<td>41.2</td>
<td>35.6</td>
<td>48.8</td>
</tr>
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</table>

Table 3. Percent of persons with untreated dental caries by age, race and Hispanic origin: 2011-2012.  

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<tr>
<th>Age</th>
<th>5-19 yrs</th>
<th>20-44 yrs</th>
<th>45-64 yrs</th>
<th>65+ yrs</th>
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<tbody>
<tr>
<td>Total</td>
<td>17.5%</td>
<td>27.4%</td>
<td>25.8%</td>
<td>18.9%</td>
</tr>
<tr>
<td>White</td>
<td>14.5</td>
<td>22.1</td>
<td>22.1</td>
<td>15.5</td>
</tr>
<tr>
<td>Black</td>
<td>23.2</td>
<td>41.4</td>
<td>43.2</td>
<td>40.9</td>
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<tr>
<td>Asian</td>
<td>15.2</td>
<td>17.7</td>
<td>16.0</td>
<td>27.3</td>
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<td>Hispanic</td>
<td>22.2</td>
<td>38.0</td>
<td>44.1</td>
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<td>Below power Level</td>
<td>24.6</td>
<td>40.2</td>
<td>51.6</td>
<td>39.5</td>
</tr>
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</table>

* This estimate is considered unreliable by the reporting agency.

References

2. Waldman HB, Wong A, Perlman SP. Dental economics and the increasing numbers of individuals with disabilities in New Jersey. NJDJ, 2016;87(2):17-19.

About the Author

H. Barry Waldman DDS, MPH, PhD is a Distinguished Teaching Professor in the Department of General Dentistry at the School of Dental Medicine at Stony Brook University, NY
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Puttiing Clients First
The Human Immune System – An Overview
Part 1 – Innate Immunity

Do not be immune to understanding the future of dental and medical science

Harold V. Cohen, DDS

Abstract:
Our human immune system (IS) has evolved over millions of years and it knows how to modify its contents and function to meet challenging “invaders” so as to allow us to survive. Occasionally it does make a mistake (autoimmune disease) but overall it has helped to keep us functioning. In following today’s healthcare science, there is an increasing focus (both in research and clinical practice) on better understanding the immune system in order to continue the development of new immune system diagnostics and therapies that can prevent and/or treat disease. There is also an increasing focus relating to the IS and oral/dental pathology and this will impact our practices in future years. This first of three articles will present brief overview of one aspect of the complex IS so as to provide the dental clinician with a basic understanding of how this system may relate to their daily existence and patients that they may treat.

Overview of our Immune System
The IS is a complex network of specialized cells and organs that continuously evolves to defend our body from foreign invaders. Most critically, when functioning correctly, it can distinguish between “self” (don’t attack you) and non-self (attack the invader). Parts of the IS have a memory to prevent future attacks from disease (e.g. chicken pox, vaccines [Hepatitis B]).1 Every day is a battle against microorganisms. We make billions of immune cells each day just in case they are needed to protect us from billions of bacteria, viruses and other parasites. The structure and function of our immune system can be looked at from three aspects:
1. Body Organs
2. The Innate Immune System (IIS) – Body Barriers, Cells, Cytokines, Complement
3. Adaptive Immune System (AIS) – T-Lymphocytes, B-Lymphocytes, Cytokines

The IIS has been around for millions of years as a first line of defense against invaders; it reacts to structural and chemical aspects related to an invader but does not remember who the invader was. So, over time, our bodies developed the AIS which helps us if the IIS does not eliminate the invader and protects us against funguses and viruses and does have a memory of a previous invader. Unfortunately, although components of the IS have the potential to eliminate cancer, the smart cancer cells, in many cases, possess mechanisms to evade or suppress the immune response. New chemotherapies are focusing on rejuvenating the IS to fight cancer.

1. Organs of the immune system, commonly called “lymphoid organs” are stationed throughout the body. This immune system component includes the bone marrow (where lymphocytes and other defensive cells are made), the thymus (where immature adaptive system T-cells are “selected to survive” to become defenders), lymph nodes (where T-cells are “educated” to attack and remember pathogens), and other sites seen below (Fig. 1) where immune system cells reside and are activated to multiply and participate in our immune defense. Of interest, although the appendix is part of this structural system, its actual immune function is not well defined and it may be classified as “vestigial.” 2

2. Innate Immune System - Body Barriers – our body “armor” to repel and/or manage invaders
Physical Barriers - skin, mucous, tears, saliva, sneeze, urine, cilia, sweat
Chemical Barriers - pH (stomach / genital tract), Lysozymes (enzymes that damage bacterial cell walls)
Biological Barriers - non-pathogenic bacteria in gut that compete with pathogenic bacteria

3. The Innate Immune System –Cells, Cytokines, Complement, Inflammation – Our basic defense system that has been around for about 500 million years - cells and fluids – The IIS reacts to, but does not remember, previous attackers. However, it provides a rapid response to invaders (100 trillion bacteria a day).3 It also communicates with the AIS when faced with bacteria, viruses, fungi and cancer cells. This rapid response allows dental infections to be cleaned up by our innate immune system neutrophils and not require the AIS.
a. Part 1 - The basic cells – they provide a rapid response to invaders by recognizing molecules on the surface of the attacker. These molecules are called pathogen-associated molecular patterns (PAMP), but the innate system cells do not remember the specific invader. Think of it as recognizing the coat that a person is wearing but not remembering who was wearing the coat. Macrophages, neutrophils and dendritic cells eat the invaders (phagocytosis) and secrete multiple chemicals (cytokines) to activate other immune system components. The macrophages and dendritic cells phagocytize the invading organism and display on their surface digested proteins to awaken the AIS. (This communication with the AIS is called antigen presentation.) Basic components include:

![Immune System Components](image1.png)

Natural killer cells may attack and destroy cancer cells. The dendritic cell (above) is considered as both an Innate and Adaptive System cell as its main function is eating invaders and then communicating with the Adaptive System cells to awaken their response (antigen presentation) but it also has co-function with AIS B-lymphocytes. Recent research has shown that natural killer cells and dendritic cells it may also have “memory” as do the AIS cells.

b. Part 2 – Cytokines – These are the “chemical communicators” that facilitate actions, reactions and functions among the various immune system components. There is cytokine communication between both the IIS and the AIS, so the systems do “talk to each other.” Cytokines are produced by a broad range of cells (immune system cells, endothelial cells, fibroblasts, etc.)

c. Part 3 – The Complement System – Consists of about twenty proteins that work together to destroy invaders and send signals to other immune system components to awaken for defense when attacked.

4. **Inflammation** – One of the early IIS responses to infection to help the body protect itself. The injured cells produce cytokines to sensitize pain receptors, cause vasodilation, and attract phagocytes (notably our dental bacteria killer neutrophils).

![Inflammation](image2.png)

**Summary:** For dental practice, the above IIS structures are key components of day-to-day patient care. If the IIS is working well, daily oral bacteremia from normal function (chewing, brushing teeth) are controlled and the IIS helps us in our management of dental infections. Alterations in the normal IIS function can have oral/dental effects (e.g. serious dental infections, periodontal disease). Dysfunction of the IIS becomes a major consideration when treating patients with medical disorders affecting normal function of the IIS. Also, remember that the two major immune system components (IIS, AIS) work together. (Next article: Overview of the Adaptive Immune System)

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**Figures:**
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**About the Author**
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