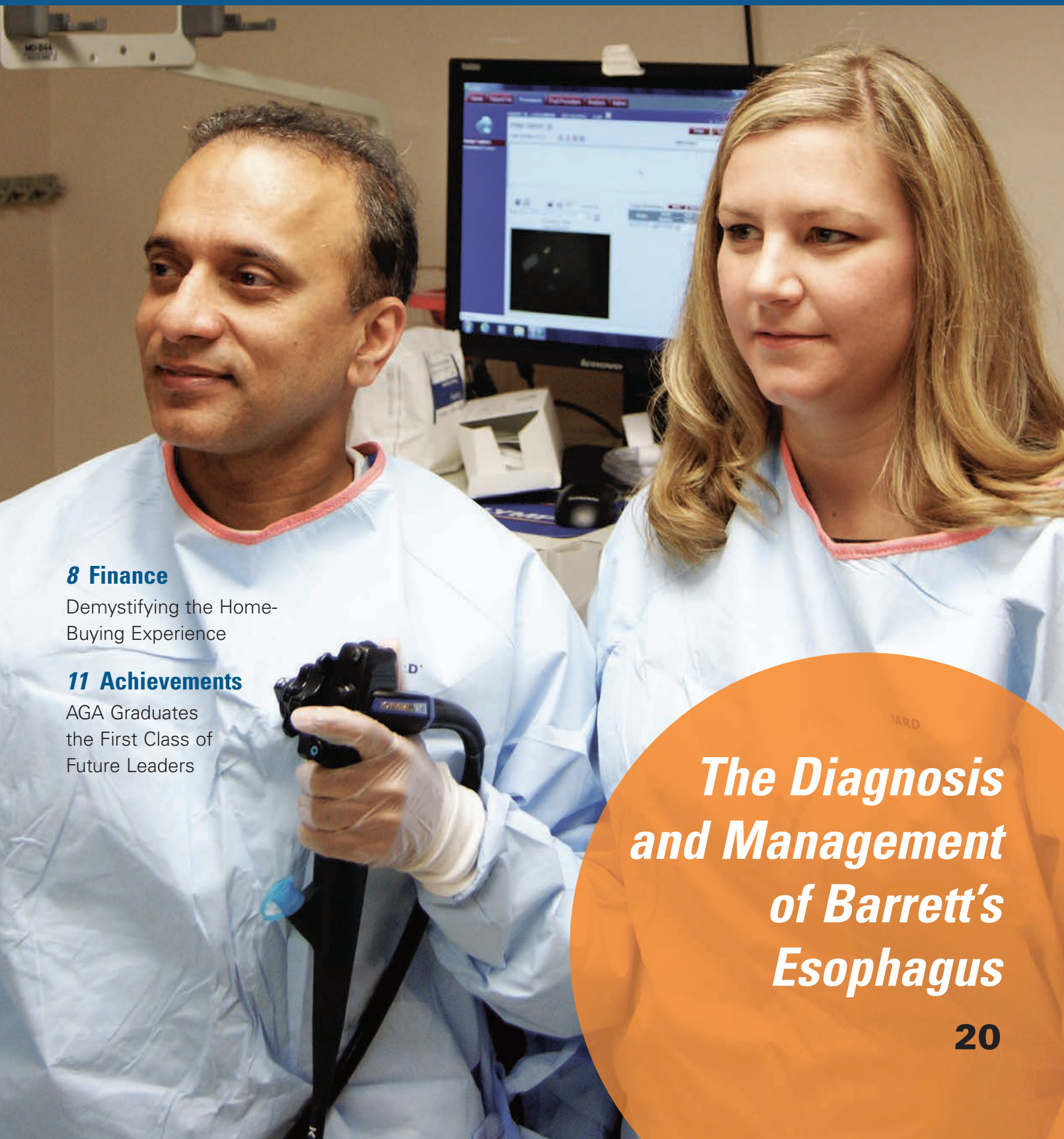
The NEW GASTROENTEROLOGIST

INSIGHTS FOR FELLOWS & YOUNG GIs

A Quarterly Supplement to GI & Hepatology News | Spring 2016



The Diagnosis and Management of Barrett's Esophagus

Letter
FROM THE EDITOR

Bryson W. Katona is an instructor of medicine in the division of gastroenterology at the University of Pennsylvania.

Dear Colleagues,

It is hard to believe that a year has passed, and now *The New Gastroenterologist* is beginning its second year of publication. What better way to start off than with an update on Barrett's esophagus. In this issue, Jesica Brown and Prateek Sharma (University of Kansas) provide a fantastic overview of the diagnosis and treatment of Barrett's esophagus, as well as the most up-to-date information on current surveillance strategies.

Also in this issue is a piece highlighting one of the AGA's newest initiatives directed at the young GI community, the Future Leaders Program, by Celena NuQuay (AGA), Byron Cryer (University of Texas Southwestern), and Suzanne Rose (University of Connecticut). Additionally, to help shed light on Medicare, Barry Kisloff (University of Pittsburgh – retired) provides an enlightening review of the history and evolution of this complex social insurance program. Other features include coverage of several recent studies that show the significant number of HCV infections that can be missed by birth-cohort and risk-based screening, a perspective on pursuing a career in private practice by Nelson Garcia Jr. (GastroHealth – Miami), as well as an article outlining important aspects to consider when buying a home.

You can download *The New Gastroenterologist's* free app on iTunes, Google Play, and Amazon. If you are interested in contributing to an upcoming issue, or have suggestions for future content, please e-mail me at bryson.katona@uphs.upenn.edu or Ryan Farrell, Managing Editor, at rfarrell@gastro.org.

For those attending DDW® 2016, have a fantastic conference, and I hope to see you there!

Sincerely,
Bryson W. Katona M.D., Ph.D.
Editor in Chief

The NEW GASTROENTEROLOGIST

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Bryson W. Katona, M.D., Ph.D.

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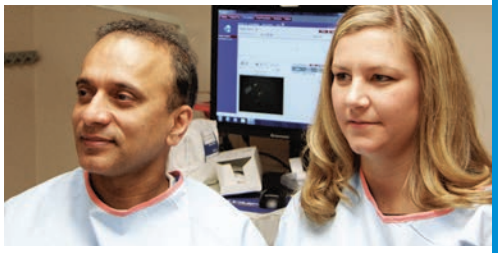
ON THE COVER
Dr. Jesica Brown and Dr. Prateek Sharma.

Photo provided by Dr. Jesica Brown.

IN THIS ISSUE



Dear Trainees and Young GIs,

As you start your careers in gastroenterology and hepatology, the AGA Institute Governing Board welcomes you and invites you to join the community of colleagues, clinicians, academics, and scientists who choose to make the AGA its home away from home. You are entering the field during an exciting time in its history and the AGA is the best source of information to keep you abreast of the rapidly evolving opportunities and challenges we all face.

The AGA provides a diverse array of professional and educational tools and offers us many opportunities to enhance our knowledge and expertise no matter the path we take, whether it be academia or clinical practice. Importantly, in the highly connected global environment, the AGA allows us to learn at our own pace, when it is convenient, and provides ways in which we can demonstrate quality and value to our patients. The field of digestive disease is changing with more emphasis on noninvasive, sophisticated techniques that change the daily activities of the gastroenterologist, which in the past, were centered in the endoscopy suite. These new techniques include the Cytosponge for Barrett's esophagus screening, fecal DNA testing, liquid biopsies of circulating DNA, "-omic" studies to understand genetic and pathophysiologic mechanisms in disease, greater application of endoscopy as a therapeutic tool, and embracing team-based therapeutic opportunities in obesity. These advances represent opportunities and the AGA is committed to providing the venue, educational tools, and research funds to enhance the life-long learning that will be crucial for your long-term success.

The New Gastroenterologist is the perfect place to start your professional journey and to stay on the cutting edge of the field. It provides a wealth of information you won't find in other publications. Its unique focus promises that you'll read content that meets your immediate needs as a trainee or young gastroenterologist.

I look forward to seeing you at DDW®!

Michael Camilleri, M.D., AGAF
President, AGA Institute Governing Board
Mayo Clinic College of Medicine
Rochester, Minn.

News from the AGA

AGA Helps Future GIs Prepare for Successful Careers

Throughout the spring, AGA held five Regional Practice Skills Workshops across the U.S. – in New York City, Houston, San Diego, Boston, and Philadelphia – to help GI fellows prepare for life after fellowship.

The workshops highlighted various practice options and addressed topics rarely discussed during fellowship, such as employment models, partnerships, hospital politics, billing and coding, compliance, contracts, and more.

Check out other learning opportunities and resources in the trainee section of the AGA website, http://www.gastro.org/trainees. And if you're on Twitter, see updates from the AGA Regional Practice Skills Workshops using the hashtag #FutureGIs. ■

Participants at the San Diego Regional Practice Skills Workshop in February 2016.

Trainees: Meet the Editors of AGA's Journals During DDW®

Do you ever wish you could connect with the editors of AGA's journals to receive advice on getting published? You can make this a reality during a special trainee-focused session, Advancing Clinical Practice: GI Fellow–Directed Quality Improvement Projects, at Digestive Disease Week® (DDW) 2016.

M. Bishr Omary, Ph.D., M.D., editor of *Gastroenterology*; Hashem B. El-Serag, M.D., MPH, editor of *Clinical Gastroenterology and Hepatology*; and Jerrold R. Turner, M.D., Ph.D., editor of *Cellular and Molecular Gastroenterology and Hepatology*, will give brief presentations followed by ample time for Q & A.

Also during the session, GI fellows will present selected abstracts based on quality improvement, with a state-of-the art lecture. Attendees will be provided with information that defines practical approaches to quality improvement from start to finish.

There are several other AGA sessions planned at DDW® that meet the unique needs of physicians who are new to the field. View the full list on AGA's website.

Visit the AGA website to find out more. ■

AGA Continues to Push for MOC Reform

In early March, AGA attended the usually closed-door American Board of Internal Medicine (ABIM) GI Specialty Board meeting. Dr. Suzanne Rose, AGA Institute Education and Training Councillor, along with Lori Marks, Ph.D., AGA Vice President for Education and Training, were there to advocate that ABIM reform maintenance of certification (MOC). Although we are viewing the invitation to attend this meeting as a positive step, we wish we had better news to report. It seems that ABIM has no definitive approach to change the high-stakes examination and that their current efforts are focused on maintaining business as usual.

ABIM acknowledged AGA's call for ending the every-10-year, closed-book exam. ABIM's own Assessment 2020 report even suggested consideration of alternative assessment strategies. Despite these appeals, and more from the medical community to end the exam, ABIM pointed to their research proving its validity. AGA leadership is both disappointed and frustrated by ABIM's intransigence to this point. Following the board meeting in March, ABIM launched a new plan to examine re-engineering MOC. AGA and other societies wrote a letter to ABIM asking for clarification about the plan, and asked for a response by the end of April. The letter can be viewed at http://www.gastro.org/career-center/maintenance-of-certification.

We commit to you that we will keep up the pressure and push on multiple fronts for ABIM to reform MOC, and specifically to end the MOC exam. We will keep you informed as we move forward. ■

By Michael Camilleri, M.D., AGAF, AGA Institute Govenring Board President, and Suzanne Rose, M.D., M.S.Ed., AGAF, AGA Institute Education and Training Councillor

Submit an Abstract for the 2016 Freston Conference

Showcase your intestinal metaplasia research in a small, relaxed environment and receive valuable feedback from your peers and expert faculty.

Students, trainees, and junior faculty are invited to submit an abstract for consideration as an oral or poster presentation at the 2016 James W. Freston Conference, which will be held Aug. 19 through 21 in Chicago. Abstracts are due no later than Wednesday, June 15, 2016. Only a select number of abstracts will be chosen for oral presentation.

Notification regarding the status of your abstract will be sent via email the week of July 4, 2016. For questions or concerns, contact Jamie Parreco at agacouncil@gastro.org. ■

Travel Awards Available for the 2016 Freston Conference

Travel awards will be provided to 10 individuals (students, trainees, and selected junior faculty) who submit outstanding abstracts as determined by the Freston conference organizing committee. Individuals selected to present oral presentations will be awarded $500, and $250 will be awarded to poster presenters.

Find out more online at http://www.gastro.org/in-person/2016/8/19/2016-james-w-freston-conference-intestinal-metaplasia-in-the-esophagus-and-stomach-origins-differences-similarities-and-significance. ■

AGA Outlook

For more information about upcoming events and award deadlines,
please visit http://www.gastro.org/education and http://www.gastro.org/research-funding.

Upcoming AGA Events

MAY 17; JUN 9; JUN 14; JUN 20; JUN 21, 2016

Payer and Provider Collegial Discussions in HCV and IBD

Join AGA, PRIME, and the Academy of Managed Care Pharmacy at a free evening program to bridge gaps across payer and provider settings that impact patient care in HCV and IBD.
Houston (5/17); New York (6/9); Chicago (6/14); Baltimore (6/20); Washington, D.C. (6/21)

AUG 19-21, 2016

2016 James W. Freston Conference: Intestinal Metaplasia in the Esophagus and Stomach – Origins, Differences, Similarities, and Significance

Examine the latest research on the molecular and cellular mechanisms involved in the pathogenesis of intestinal metaplasia in the stomach and esophagus.
Chicago, IL

NOV 1, 2016

ABIM® Gastroenterology Certification Exam

Registration dates are from March 1 to May 16, 2016 (with late registration from May 17 to June 1, 2016).

NOV 2, 2016

ABIM® Transplant Hepatology Certification Exam

Registration dates are from March 1 to May 16, 2016 (with late registration from May 17 to June 1, 2016).

Awards Application Deadlines

AGA-R. Robert and Sally Funderburg Research Award in Gastric Cancer
Deadline: Aug. 12, 2016

AGA Research Scholar Awards
Deadline: Aug. 26, 2016

AGA-Elsevier Gut Microbiome Pilot Research Award
Deadline: Jan. 6, 2017

AGA-Elsevier Pilot Research Award
Deadline: Jan. 6, 2017

AGA-Covidien Research and Development Award in Technology
Deadline: Jan. 6, 2017

AGA Microbiome Junior Investigator Award
Deadline: Jan. 13, 2017

AGA-Rome Foundation Award in Functional Gastroenterology and Motility
Deadline: Jan. 13, 2017

AGA-Carolyn Craig Augustyn and Damian Augustyn Award in Digestive Cancer
Deadline: Jan. 20, 2017

AGA-June and Donald O. Castell, MD Esophageal Clinical Research Award
Deadline: Jan. 20, 2017

AGA Investing in the Future Student Research Fellowship Award
Deadline: Feb. 3, 2017

AGA-GRG Fellow Abstract Prize
Deadline: Feb. 24, 2017

AGA Student Abstract Prize
Deadline: Feb. 24, 2017

AGA-Moti L. and Kamla Rustgi International Travel Awards
Deadline: Feb. 24, 2017

Digestive Disease Week (DDW)® 2016 – San Diego

MAY 21-24
AGA Trainee and Young GI Sessions at DDW®
The following sessions are specifically designed to meet the unique needs of physicians who are new to the field. Participants will learn about all aspects of starting a career in clinical practice or research, have the opportunity to network with mentors and peers, and review board materials. For comprehensive information, please visit www.gastro.org/trainee-sessions.

MAY 21-22; 8:15 a.m. – 5:30 p.m. & 8:30 a.m. – 12:35 p.m.
AGA Spring Postgraduate Course: Cognitive and Technical Skills for the Gastroenterologist
This 1.5-day course is a clinically focused program that offers you immediately applicable information. Trainees and young GIs may register at a reduced registration fee. To learn more and register, visit http://www.gastro.org/in-person/2015/10/27/2016-aga-post-graduate-course.

MAY 22; 1:15 – 5:45 p.m.
Board Review Course
This session, designed around content from DDSEP® 8, serves as a primer for third-year fellows preparing for the board exam as well as a review course for others wanting to test their knowledge. Discount coupons for DDSEP 8® will be offered on a first-come, first-served basis.

MAY 22; 7-9 p.m.
Trainee and Young GI Networking Event
Join AGA and your fellow colleagues at House of Blues in San Diego, CA, for a night of networking, music, and refreshments.

MAY 23; 12:30-2 p.m.
Career and Professional-Related Issues
Receive advice on beginning a career in gastroenterology, understand the principles of successful time management, learn how to create successful professional relationships, and gain tangible tools to apply for a job in GI.

MAY 23; 4-6 p.m.
Advancing Clinical Practice: GI Fellow-Directed Quality Improvement Projects
This trainee-focused session will showcase selected abstracts from GI fellows based on quality improvement, with a state-of-the art lecture. Attendees will be provided with information that defines practical approaches to quality improvement from start to finish. A component was also added to the session to allow attendees the opportunity for personal interaction time with the editors of AGA journals to obtain guidance or advice on getting published.

MAY 23; 4-5:30 p.m.
Mentoring Across the Generations – A Spectrum of Perspectives
This session will discuss the mentor/mentee relationship from the unique perspectives of the fellow mentee, junior faculty mentor, and senior faculty mentor.

MAY 24; 2-3:30 p.m.
#MillennialGI: Engaging and Collaborating with the Millennial Generation
Through diverse panel discussions, attendees will gain an understanding of the strategies to successfully engage, collaborate, and teach the millennial generation. They will also dissect common case scenarios found in clinical practice, endoscopy suite, and research settings.

MAY 24; 2-3:30 p.m.
Surviving the First Years in Clinical Practice – Roundtable with the Experts
Attendees will be provided with practical advice for common problems faced by early-career gastroenterologists in all types of practice settings.

PR ImageFactory/Thinkstock

Demystifying the Home-Buying Experience

By Meghan Klauder, BS, MS, MBA

Ms. Klauder is a realtor at Keller Williams on the Skye Michiels & Associates Team; a licensed realtor in Pennsylvania and New Jersey; Director, Board of Governors, Drexel University; and preferred realtor, Drexel University, Philadelphia.

Whether you are thinking about purchasing a house this year or 5 years from now, educating yourself about the process is an intelligent thing to do. TV shows like House Hunters and websites like Zillow (www.zillow.com) can make the home-buying process seem very straightforward: You find a house you like, you get a mortgage, and you buy it. However, there's a lot more that goes into it and this article will touch upon several things to think about when the time comes to buy a house that's right for you.

Renting vs. buying

Reaching a decision on whether to continue renting or purchase a home can feel difficult.

Purchasing a house is likely one of the largest investments you will make and comes with a lot of responsibility. It also comes with a lot of benefits, both financial and emotional. Financially, you build equity with every mortgage payment you make and increase your net worth. Keep in mind, if you rent, you are still paying a mortgage, but you are paying your landlord's mortgage. At tax time, you will be able to write off some of the interest on the loan payment as well as deduct property taxes, and if you have a home office there are additional deductions you can take. Make sure to talk with your accountant after you purchase a home to maximize your benefits. From an emotional standpoint, you get to customize the house, don't have to answer to a landlord, and have security knowing that you can stay as long as you desire.

When you are evaluating whether to rent or own, you need to keep in mind there are benefits to renting as well. If you have a landlord, then you have someone to call when something goes wrong with your residence. If you are the homeowner, it is up to you to solve the problem.

Making sure to budget for unforeseen issues is a must when it comes to homeownership.

There will always ... always ... be things that need to be updated, fixed, and maintained at your home.

Another consideration if you purchase a property is how long you plan to own it. Note that the issue is not how long you will live there. Real estate "buy and hold" can be a long-term investment strategy, especially in certain markets. If you think you'll own the property for at least 5 years, either as your primary residence or as a landlord, then buying a property may be right for you. If you know that you will only be living in the area for 1-3 years and don't have any intention of renting out or holding the property, then renting would probably make more sense.

Financial considerations

Working through some financial considerations should happen early on in the process. The first thing you'll need to do is get a preapproval letter from a mortgage company. You only need to be preapproved by one lender, but you should make sure that you are working with a lender that can provide the type of mortgage you are seeking. For example, if you want to use a physician loan, then you should be preapproved by a lender that offers this program. A lender can provide a preapproval letter with some basic information provided from you, including credit history, income/contracts, debts, etc. Getting preapproved does not mean you are approved for a loan, but it should provide you with a good idea of what you can afford based on the information you provided to the lender. Once you are preapproved, then you can start working with a realtor to view properties. The next financial step will be figuring out what kind of mortgage is best for your situation. There are a few options: conventional, government-insured (FHA), portfolio loan programs, and VA loans (Table 1). In addition to these, there are fixed rates and adjustable rates, with fixed rates usually being the preferred option.

Physician loan programs

Physician loans or doctor loans are portfolio loan programs that are offered only to physicians (e.g., MD, DO, DMD, DDS, DVM, OD, DPM; although this varies by bank). A portfolio loan means the loan is serviced by the same bank that issued it. Guidelines can be a little less strict on these loans since the bank does not need to "sell it" and can determine how much risk it will accept. Portfolio loans are typically used when traditional financing isn't available. Physician loans are usually available to residents, fellows, or new attendings (7-10 years out of residency). As far as determining what is the best loan option for you, it really depends on your individual circumstance. For some people, putting 20% down is the best option, and for others, a physician loan is the best option. It is important that you work with a lender that can help you explore which scenario best meets your needs.

With physician loans there is no private mortgage insurance, down payments are typically 0%-5% (depending on the bank), and interest rates will be comparable to conventional rates. Interest rates are typically the same whether it is a conforming loan (less than $417,000) or a jumbo loan (greater than $417,000). Many times a contract will be accepted as evidence of future earnings since you may not have pay stubs yet. Some banks will let you close up to 60 days prior to the contract start date. To qualify for this loan, a common requirement is to show cash reserves equivalent to a few months of your mortgage payment which consists of principal, interest, taxes, and insurance. Your credit score should be strong and your debt to income (DTI) should be less than 40% (this can vary by lender).

	Down Payment	Private Mortgage Insurance (PMI)	Seller Assist	Debt to Income Ratio (DTI)	Type of Loan
Conventional Loan	Minimum 5%	Required for down payment less than 20%, can be removed	Up to 6%	Maximum 43%	Conventional
FHA Loan	Minimum 3.5%	Required for down payment less than 20%, lasts for life of loan	Up to 6%	Maximum 43% with exceptions	Government insured
Physician Loan	Minimum 0%	Waived	Optional	Varies - deferred student loans will be viewed differently than conventional loans	Portfolio
VA Loan	Minimum 0%	Waived	Maximum 4%	Maximum 41% with exceptions	Government insured

Student loan debt

Student loan debt may affect your ability to obtain a mortgage loan. Both conventional and FHA financing include your student loans in your DTI. Most student loan balances will increase your DTI above the qualifying rates, which is why these types of mortgages can be very hard to obtain for residents, fellows, or new attendings. With physician loan programs, deferred student loans are not counted in DTI ratios. This allows for a lower DTI and will help you qualify for the physician loan.

Out-of-pocket costs

Everyone knows they need some kind of down payment, but it is not always clear how much is required. Like many of the topics covered in this article, down payment amounts vary based on the type of loan and bank used. In general terms, conventional loans require a minimum of 5% down, FHA loans require a minimum of 3.5% down, and physician loans require anywhere from 0% to 5% down. You can always put more down, but these are the minimums required in most cases.

The not-so-obvious out-of-pocket costs are called "closing costs" which are additional costs on top of your down payment. These can be significant and vary from state to state. Closing costs include a number of different fees and taxes that are paid at the time of settlement. Some common fees include, but are not limited to: transfer taxes, title insurance, property tax escrow/reimbursements, homeowner's insurance escrow, government recording fees, loan origination fees, appraisal fees, credit reporting fees, and survey fees. Using a $100,000 home as an example, the closing costs would be estimated to be from $5,000 to $8,000 depending on the state and city in which the property is located. It is very important to account for closing costs when evaluating how much money you'll need for the purchase of a home. Ask your realtor or lender to run some numbers for you before submitting an offer on a property.

Protecting yourself when purchasing a home

There are a few ways you can make sure to protect yourself when you are purchasing a home. One of the first things you'll want to do is find a good realtor (i.e., not your mother's best friend who has been doing this for 30 years part-time). When buying a home, it is important to know that working with a buyer's agent will not cost you any money – you don't pay their commission. When looking for a realtor, you'll want to find someone who is financially savvy, knows the market, can work with your schedule, and is a good negotiator. You should get recommendations from both friends and family and be sure to interview candidates; remember, this is one of the largest purchases you will make. A good realtor will prepare an offer package that will protect you through the home-buying process using contract contingencies. A contingency clause defines a condition or action that must be met in order for a real estate transaction to become binding. The two most common contingencies are inspection and mortgage, but there may be additional contingencies depending on the property and situation. Find out if and when an attorney should review your contract. In some states, there is a review period, which allows for additional time to ensure the contract is correct; in others, once both parties sign you are locked into a legally binding agreement. A good realtor will be able to point this out to you.

Purchasing a home is a great way to build equity and security. When deciding to purchase a home, there are many factors that need to be weighed such as length of ownership, out-of-pocket costs, ability to obtain financing, and ability to keep up with general maintenance. As a physician, you have special loan options available to help you finance the purchase of a home. You should take the time to educate yourself about this process to make an informed decision. Finding a qualified realtor will help guide you through the process and maybe even make it a fun experience as well. Remember that your real estate experience will be unique to you! ■

American Gastroenterological Association Graduates the First Class of Future Leaders

By Byron L. Cryer, M.D., Suzanne Rose, M.D., M.S.Ed., and Celena T. NuQuay, C.A.E.

Byron L. Cryer, M.D. Professor and associate dean for faculty diversity and development, University of Texas Southwestern Medical Center at Dallas, Tex.
Councillor-at-Large, American Gastroenterological Association, Bethesda, Md.
Suzanne Rose, M.D., M.S.Ed. Professor of medicine and senior associate dean for education, University of Connecticut, Storrs, Conn.
Education & Training Councillor, American Gastroenterological Association, Bethesda, Md.
Celena T. NuQuay, C.A.E. Senior director, member relations & constituency programs, American Gastroenterological Association, Bethesda, Md.

In today's increasingly complex health care environment, there is a burgeoning need to cultivate leadership skills that will guide the field of gastroenterology into a new era of high-value care, promote discovery and innovation, and foster the education and training of the next generation while also advocating for the needs of patients, communities, providers, and learners. As part of its new strategic plan, the AGA created the Future Leaders Program to identify and promote prospective leaders both in the field as well as in the organization.

The AGA is committed to ensuring that there is a healthy pipeline of future leaders who are willing and able to effectively meet the obligations of key leadership positions within the field of GI while at the same time helping to advance the strategic objectives of the association. The inaugural class consists of 18 early-career GI professionals selected through a highly competitive process and paired with nine prestigious current and former AGA leaders who served as their mentors.

The program participants received leadership development training from a top industry expert who cultivated their skills in communications, negotiation, and conflict resolution as well as expanded their knowledge regarding emotional intelligence, collaboration, and presentation skills. The Future Leaders were also trained in advocacy and traveled to Capitol Hill last fall to share their thoughts, experiences, and recommendations with legislators and their staff. The program also included web-based seminars and phone conferences with participants and their mentors.

The Future Leaders have already begun to advance the strategic direction of the AGA through proposals related to practice and quality, research and innovation, education and training, advocacy, publications, and member engagement.

As the inaugural class prepares to graduate this May at the 2016 Digestive Disease Week®, they are continuing to contribute to the AGA and the field as they address complex topics and new initiatives in virtual roundtables designed to continue the dialogue using innovative technology. The next round of applications will open in fall 2016 and interested applicants should visit http://www.gastro.org/about/initiatives/aga-future-leaders-program for more details later this year.

The impact of the program is best shared through the voices of its participants.

What is the one leadership principle that you learned during the Future Leaders Program that you will use to help advance your career?

• Rotonya Carr, M.D., assistant professor of medicine, University of Pennsylvania, Philadelphia – Future Leader

The technique of working backward from a goal to assess which steps will be required to accomplish that goal. In so doing, one can set realistic milestones and break down visions into small, achievable steps. I also found the concept of "managing up" quite important. Our goals need to be consistent with the mission of our organizations and be mutually beneficial.

• Sonia S. Kupfer, M.D., assistant professor of medicine, The University of Chicago Medicine, Chicago, Il. – Future Leader

The importance of – and skills needed to – engage different types of people toward a common goal. This requires an understanding of how individuals from different generations or backgrounds interact and communicate as well as how different personalities bring strengths to the team. Learning how to encourage participation from all members of a team is crucial and allows everyone's voice to be heard.

What aspects of leadership development from the Future Leaders Program will be most critical for the future of the AGA and are most valuable to either the AGA or the field of GI?

• Brijen Shah, M.D., assistant professor of medicine, gastroenterology, Mount Sinai School of Medicine, New York, N.Y. – Future Leader

This program has taught me the power of a clear vision as well as engaging in planning and activities which further that vision. I saw this first hand in working with my project team as we tried to craft a proposal that addressed a broad topic. The AGA Strategic Plan became our beacon. This type of thinking will help both the field and our organization continue to move forward and adjust to changing times.

• Silvio de Melo, Jr., M.D., director of endoscopy, program director GI fellowship, University of Florida College of Medicine, Jacksonville, Fla. – Future Leader

Firstly, the program had a diverse group of individuals from all over the country in both academic and clinical gastroenterology. The connections made during the program are invaluable for the professional growth of the field and the AGA. Secondly, it emphasized micro-volunteerism; a new trend in organizations that I believe is the future of the AGA and its efforts to engage future GIs and increase its volunteer pool.

What are the key leadership principles that are needed most in the field of GI today?

• J. Sumner Bell, III, M.D., AGAF, in clinical private practice and professor of medicine, Gastroenterology, Ltd., Eastern Virginia Medical School, Norfolk, Va. – Mentor

A strong individual character enhanced by leadership and business skills is necessary to succeed in this environment. To be recognized as a leader in GI, one must have displayed expertise in their professional domain and be known for hard work. The personal qualities of trustworthiness, dependability, patience, and courage are paramount for success as a leader. Skills as an educator, listener, communicator, and consensus builder support the leader's daily work. Certain acquired expertise in information technology, data and financial analysis, marketing, and social media may be important from time to time. With a well-defined reputation, experience within an organization, communication skills, and an understanding of the winds of change, the most effective leaders educate and motivate their colleagues to adopt a vision for their shared future.

• Mark Donowitz, M.D., AGAF, LeBoff Professor of Medicine and Physiology, Johns Hopkins University School of Medicine, Baltimore, Md. – Mentor

It will be essential for future leaders to be interested in bench, translational, and clinical research; the intellectual and procedural aspects of practice; and the teaching and training of future GIs. We must also pay greater attention to diversity and recruitment of underrepresented groups in medicine including persons of color and women.

• John M. Carethers, M.D., AGAF, professor and chair, internal medicine, University of Michigan, Ann Arbor – Mentor

I think that the future of gastroenterology will be in good hands with (A) well-trained individuals who know their craft as a physician; (B) creative

individuals who are socially adept at stimulating and motivating trainees and young faculty to do their best; and (C) maintaining their engagement with the academic tripartite mission of training those rising up within the field.

• Avlin B. Imaeda, M.D., Ph.D., assistant professor of medicine, section of digestive diseases, Yale University School of Medicine, New Haven, Conn. – Future Leader

Key leadership principles include leading with kindness, embracing diversity, and fostering and encouraging independence. ■

AGA Future Leaders Inaugural Class Mentors

J. Sumner Bell, III, M.D., AGAF
John M. Carethers, M.D., AGAF
Mark Donowitz, M.D., AGAF
Gary W. Falk, M.D., M.S., AGAF
Michael L. Kochman, M.D., AGAF
Xavier Llor, M.D.
Darrell Pardi, M.D., M.S.
Vincent W. Yang, M.D., Ph.D.
Ellen M. Zimmermann, M.D., AGAF

AGA Future Leaders Inaugural Class Mentees

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DDSEP® 7

Digestive Diseases Self-Education Program®

QUESTIONS // Answers on page 31

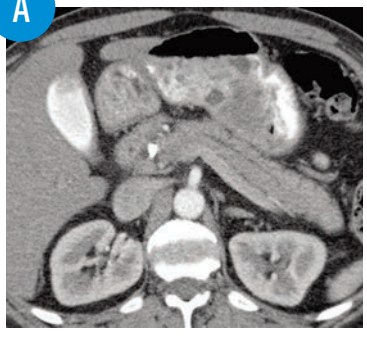
Q1: A 63-year-old male patient presents with painless obstructive jaundice. He gives a history of dry eyes and dry mouth and does not drink alcohol or smoke. On examination he is deeply jaundiced and has bilateral enlargement of the parotid glands. An MRI scan shows diffuse enlargement of the pancreas (Figure A) without a mass or pancreatic ductal dilation. The magnetic resonance cholangiopancreatography and endoscopic retrograde cholangiopancreatography (Figure B) show stricture at the origin of the left hepatic duct and in the intrapancreatic bile duct; the bile duct is stented. Bile duct brushings are negative for malignancy.

The most likely explanation for this constellation of findings is:
A. Pancreatic cancer
B. IgG_4-associated systemic disease
C. Primary sclerosing cholangitis
D. Chronic pancreatitis
E. Cholangiocarcinoma

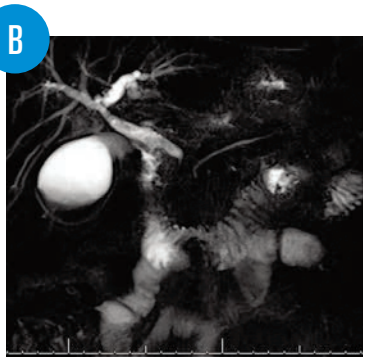
Q2: A 43-year-old male with a history of heavy alcohol use and who was recently diagnosed with hepatitis C was found to have nodular liver and moderate volume ascites on ultrasound. An upper endoscopy showed medium-size esophageal varices. What is the best course of action?

A. Metoprolol 25 mg p.o. b.i.d.
B. Repeat upper endoscopy in 3 years
C. Endoscopic variceal ligation
D. Sclerotherapy of varices
E. Oral antibiotics to prophylax for bleeding

A



B



Medicare: A Primer

By Barry Kisloff, M.D., FACP, AGAF

Dr. Kisloff is director (retired), Digestive Disorders Center; clinical director (retired), division of gastroenterology, hepatology & nutrition, University of Pittsburgh Medical Center.

In July 2015, Medicare passed a significant milestone. It has been 50 years since President Lyndon Johnson signed Medicare into law. The influence and evolution of this landmark legislation provide meaningful insights into our nation's progress and challenges in providing medical care not only to seniors, but to all citizens.

At its inception, Medicare provided insurance to some 19 million seniors.[1] Medical care consumed only 7% of the nation's gross domestic product (GDP), Medicare accounted for 0.9% of this total (or 0.6% of GDP), and the Medicare payroll tax stood at 0.35% with a dollar cap at $6,600 ($49,700 in year 2015 dollars).[2-4] At Medicare's half-century, the number of beneficiaries is 52 million, the nation is spending roughly 17% of the GDP on health care, Medicare now accounts for almost 3.5% of GDP, and the Medicare payroll tax now stands at 2.35% without an income cap.[5,6]

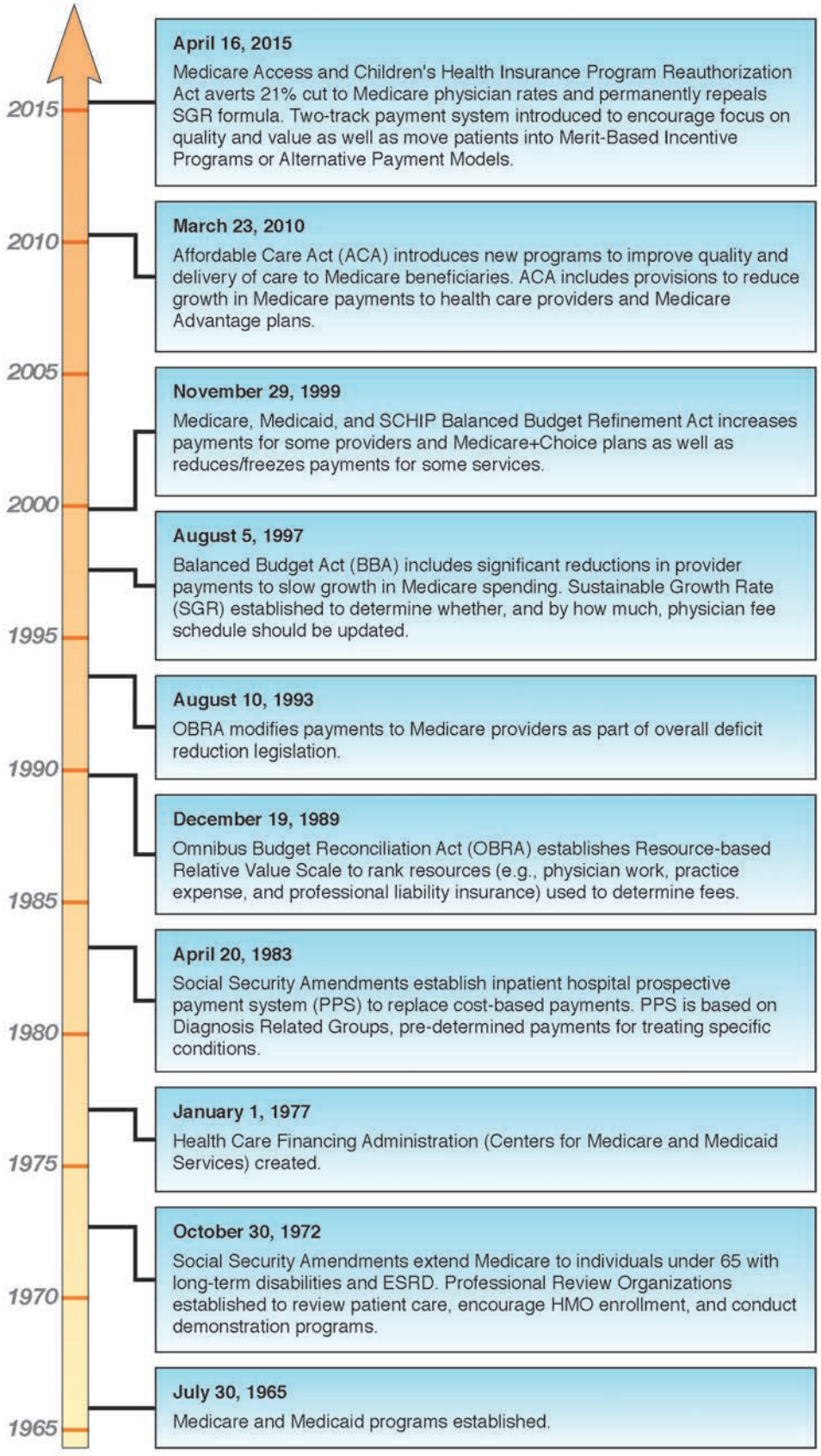
The prodigious growth of Medicare spending is the result of a host of societal changes.[7] Medicare coverage for the elderly injected a massive flow of dollars into the health care system. Not surprisingly, this fostered highly productive pharmacology and medical device research, which vastly improved, but became a major source of increment in the cost of, medical care.[8] With Medicare's success at improving access to care for seniors, the desire to extend such access to other populations led to coverage for end-stage renal disease, AIDS, the disabled, amyotrophic lateral sclerosis, and Alzheimer's disease. These worthy additions not only increased the number of beneficiaries but constituted a group of individuals who dramatically enhanced the intensity of services provided and thus the incremental cost of Medicare. Finally, predictable demographics have caught up with the cost of care for the elderly. Jan. 1, 2011, marked the first day of Medicare eligibility for "baby boomers." This post–World War II reproductive phenomenon is expected to essentially double the population of Medicare beneficiaries by 2030.

By the early 1980s, the cost of medical care as a percentage of GDP exceeded 10%, and this triggered an evaluation of how Medicare dollars were being spent and how limits might be imposed. Initial efforts in 1983 involved caps on hospital spending by means of a new system called Diagnosis Related Groups. Under this reform, hospitals would

Predictable demographics have caught up with the cost of care for the elderly. Jan. 1, 2011, marked the first day of Medicare eligibility for 'baby boomers.'

be reimbursed a set maximum amount for a given admitting diagnosis with provisions made for extended care in the event of additional diagnoses, complications, or outliers. Provision of care for a given diagnosis for less than the provided amount would result in the hospital retaining the balance of payment. Also in 1983, a Medicare Physician Fee Schedule (MPFS) was introduced to replace the Usual, Customary, & Reasonable (UCR) manner of Medicare reimbursement for physician services. In 1988, we were introduced to the Resource-based Relative Value System by William Hsaio and his Harvard colleagues.[9,10] These changes were intended to equate the inherent value of services provided with amounts reimbursed. Relative Value Units (RVUs) were introduced into the MPFS in 1992 with conversion of the system of payment completed by 1996. While all of the aforementioned changes provided a supposedly more "rational" method of payment for provider services, the undervaluation of payment, once the RVU system had passed through political and administrative hands, did nothing to contain the increasing volume, and hence costs, of medical care.[11]

Given the failure of the RVU system to reign in medical costs, President Bill Clinton signed into law the Balanced Budget Act of 1997, which created the Sustainable Growth Rate (SGR) formula to link and limit payment for provider services to the volume rendered and the GDP. This system was designed to cap payments to providers based upon changes in the GDP. Payments for medical services were coupled to an anticipated cost for Medicare. If such services were, in the aggregate, provided for less than anticipated (adjusted for the GDP), the MPFS would rise. If such services came in over budget, then



payments for all services would be reduced by that amount. This system failed to account for the cost of new technology and the fact that the individual provider had essentially no stake in the aggregate amount of services the medical community would provide. The result was that the more the practitioner provided, the more dollars would accrue to his/her balance sheet. This led to repeated medical "overspending," threats to decrease provider reimbursement (which actually occurred in 2002), and annual provider pilgrimages to Congress to beg for reprieves from any cuts to the MPFS payments with threats of diminished access to care.

In response to the pleadings of the medical community and the repeated failure of the SGR to control Medicare spending, the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) was signed by President Barack Obama in April 2015; ending the use of the SGR as the mechanism to determine provider reimbursement. MACRA put in place a 0.5% annual increase in payment for Medicare services for a period of 5 years beginning in 2016 and extending through 2019, while implementing a risk/reward system based upon the delivery of value-based services. This legislation is consistent with the Centers for Medicare & Medicaid Services' desire to render payment based on quality rather than volume. It provides for a replacement of the SGR with a system of payments/penalties based on achieving a set of quality measures, resource use, clinical improvement activities, and use of electronic health records for patient care. The legislation also adds to a welter of rules, reporting measures, and requirements providers must meet to receive payment or suffer penalties in Medicare reimbursement.

In the half-century since the creation of Medicare, we have witnessed both the benefits and limitations of the "Great Society" envisioned by its authors. The intended goal of providing high-quality medical care to seniors and the disabled at discounted premium payments has required multiple adjustments in the face of demographic and technological realities. These realities have threatened both affordability and accessibility for intended Medicare beneficiaries. Whether the delivery of true quality medicine can survive these machinations is far from certain and will depend on a new generation of physicians to adapt to or modify the proposed changes, which involve not only Medicare and Medicaid but private insurance reimbursement as well. ■

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Postfellowship Pathways: Pursuing a Career in Private Practice

By Nelson Garcia Jr., M.D., AGAF

Dr. Garcia is a private practice gastroenterologist in Miami. He has been in practice for 12 years since completing his fellowship at Virginia Commonwealth University and is currently employed at GastroHealth – a group consisting of more than 45 adult gastroenterologists, four pediatric gastroenterologists, and four colorectal surgeons.

What led you to pursue a career in private practice?

I believe we are all attracted to medicine by a desire to help patients and humanity as a whole. This desire is pervasive in our daily lives as physicians. Furthermore, medicine is a broad field of study and gastroenterology provides many different opportunities. Like most private practitioners, I decided to practice general gastroenterology and care for patients with a wide breadth of gastrointestinal diseases. I find it truly rewarding to care for patients with functional gastrointestinal disorders, chronic liver disease, or gastrointestinal cancers, all within the same morning. I believe this variety helps maintain my interest in the field. Conversely, it requires me to remain abreast of evolving technologies, approaches, and therapeutic options in order to provide state-of-art care. Also important are maintaining relationships with mentors, who may be professors in medical school, residency/fellowship, or even family members who are practicing physicians. These influential relationships cannot be overstated, as they often play a large role in the physicians we become. I can clearly identify mentors within my family that nurtured my interest to become a private practice physician. Furthermore, I can also identify mentors during residency that led me to choose gastroenterology as a subspecialty. Ultimately, it was through my observation of these physicians and their interactions with patients and colleagues that I eventually chose my career path.

What does your average day in private practice consist of?

Clearly, the average day in the life of a practicing private practitioner depends on his/her area of focus and the size of the group. However, in my practice, I typically spend 6 days per month covering our inpatient service of 10-20 patients at a nonprofit, tertiary care hospital. This allows me to participate in the care of relatively complex patients during the acute phase of their illness. I spend about 5 half-day sessions in my office seeing outpatients (12-15 per session) with myriad gastrointestinal illnesses. The remainder of my time, typically 3 mornings per week, consists of performing outpatient procedures. The vast majority of the procedures performed are at an ambulatory surgery center (ASC) near the hospital. The average gastroenterologist in our group performs approximately 100 outpatient endoscopic procedures per month. My workday consists of 8-9 hours of clinical work and I am on call once every 7 weekends. As part of a large group, I also have obligations outside of clinical work. Specifically, I am involved in the board and various committees both within the group and at the hospital level. This allows me to participate in decisions regarding our future direction as well as help develop and foster directives that ensure the highest quality of care for our patients.

What is the most challenging aspect of being in private practice?

As with many physicians, achieving an acceptable work-life balance is one of the greatest challenges early on in our careers. This is often compounded by the fact that upon completion of fellowship training, we are typically in the process of starting our families. It is a constant struggle to find the right balance between professional and family life. However, with the appropriate amount of diligence, this balance can be achieved. For example, we are continuously assessing our weekend coverage needs in order to maximize time spent with family. Often, the use of ancillary staff such as nurse practitioners or physician assistants helps decrease the physician's workload. Furthermore, nurturing a hobby or interest is important. I believe the ability to "disconnect" temporarily is critical. I make it a habit to exercise on a regular basis, and I find that this helps me remain focused during the workday.

Another challenge in early career private practice is the acquisition of patient volume. I recommend establishing relationships early on with primary care physicians in the community. Increasingly, hospitalists manage inpatient care in many hospitals. Taking the time to discuss the care of complex patients with these physicians may yield a future consultation request and the development of a mutually beneficial professional relationship. Also, primary care physicians in the outpatient setting may be courted as well. I typically send a letter introducing new physicians as they join our practice. Furthermore, as a new community physician, a brief introductory visit is always reasonable and appreciated by our primary care colleagues. Lastly, I take the time to speak with patients and their family after procedures. Frequently, the family member is so appreciative of this brief, but important, interaction that they later come to see me as a patient.

What are the different practice models that young GIs may encounter in the private sector and what are the benefits and disadvantages of each?

There are three basic practice models available to young GIs completing their fellowship: academic practice, employed physician, and private practice. Each practice opportunity has its pros and cons. Focusing on private practice, one may choose to become an employed physician or join a group with the goal of becoming a partner. An employed physician typically has a limited ability to benefit from future incomes associated with ancillaries such as ASCs, anesthesia, pathology, and infusion services. However, this arrangement does ensure a stable source of income with less of the day-to-day struggles associated with managing a

I take the time to speak with patients and their family after procedures. Frequently, the family member is so appreciative of this brief, but important, interaction that they later come to see me as a patient.

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medical practice. By joining a private practice, the goal would be to achieve partnership in order to benefit from other associated revenue streams. Therefore, although beginning salaries are often stressed, it is more important to assess the practice's path to partnership as well as potential for ancillary revenues. Groups of varying sizes may have different abilities to provide access to additional revenues that can easily double the physician's base salary. Also, the culture of the group is exceedingly important. Do the group's goals align with your professional goals (i.e., educational, work-life balance, patient-centered care, etc.)? If not, perhaps another employment opportunity should be considered regardless of short-term income potential.

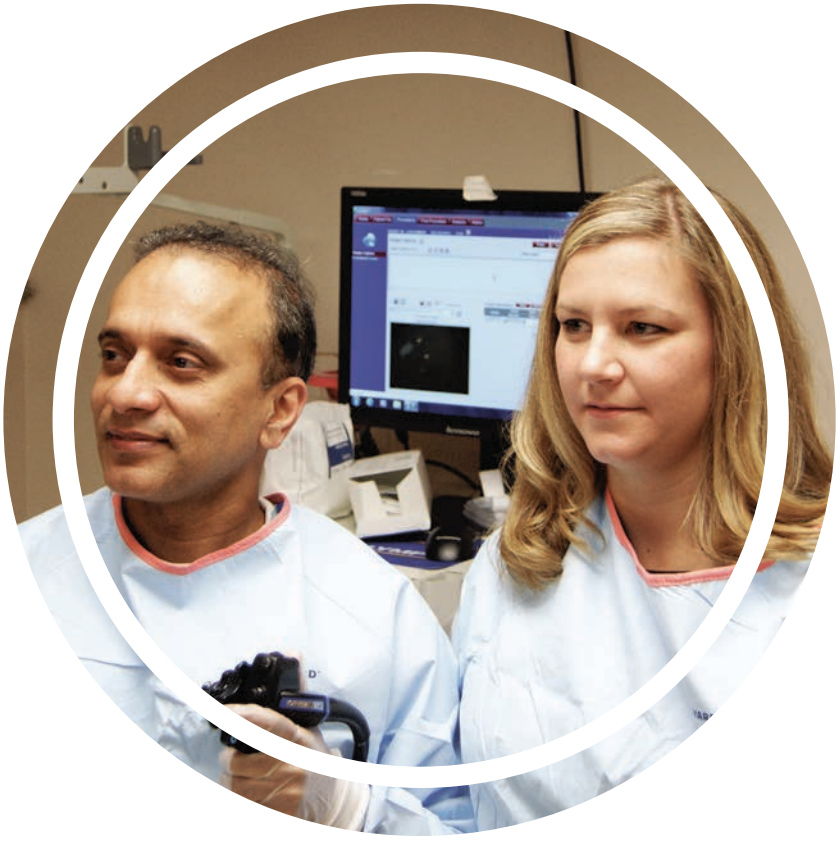
How are private practice physicians involved with ASCs?

Private practice physicians are often partners of ASCs. This partnership allows them to benefit from the procedural profits of endoscopic exams. ASCs may be wholly owned by physicians, but are more commonly co-owned with a corporate partner such as a hospital or management company. This partnership is beneficial to all involved parties including patients and payers. Partnerships allow for the establishment of the ASC with physician partners being responsible for only a portion of the associated development costs. Also, the corporate partner manages the ASC and thus allows physicians to focus on patient care. Clearly, ASCs are able to efficiently care for patients at a relatively lower cost when compared to hospital outpatient departments. Given their importance, it is very important for young GIs to assess ASC partnership potential. It is also often useful to speak with younger partners in the group to assess their experiences in achieving partnership.

What can fellows do to prepare for a successful career in private practice?

During their last year of fellowship, trainees should explore various employment opportunities in the private sector, academic sector, or industry. Job opportunities are posted both in journals as well as on the AGA's www.gicareersearch.com. However, those with specific needs may benefit from the use of a recruiter in order to facilitate the job search at a national level. National meetings – such as Digestive Disease Week® and those organized by the AGA's Trainee & Young GI Committee – offer excellent opportunities for networking.

Practices and employment opportunities should be compared not only based on salaries, but also location and practice culture. Furthermore, one should try to envision his/her long-term role and potential for growth in the practice. When speaking to the younger members, one should ask about partnership pathways not only within the practice but also at relevant ASCs. Additionally, is the location of the practice one that is compatible with your lifestyle and goals? For example, recreational opportunities, quality of the educational system for your children, and proximity to your extended family may play a large role in which employment opportunity you choose. In summary, finding the right "fit" is a complex decision involving many factors. ■



Courtesy Dr. Jesica Brown

The Diagnosis and Management of Barrett's Esophagus

By Jesica Brown, M.D., and Prateek Sharma, M.D.

Dr. Brown is a gastroenterology fellow and Dr. Sharma is professor of medicine, gastroenterology fellowship program director, division of gastroenterology and hepatology, Veterans Affairs Medical Center and University of Kansas School of Medicine, Kansas City.

Introduction

Barrett's esophagus (BE), a known precursor of esophageal adenocarcinoma (EAC), is characterized by intestinal metaplasia with columnar epithelium containing goblet cells replacing squamous over areas of the lower esophagus (Figure 1). Although the exact prevalence of BE in the general population is unknown, it can be found in as many as 10%-15% of patients who undergo upper endoscopy for heartburn.[1] Patients found to have BE are 11.3 times more likely to develop EAC when compared to the general population.[2] The incidence of EAC is increasing more rapidly than any other cancer in the world, therefore the diagnosis and treatment of BE is important.[2-6]

Diagnosis

BE can be diagnosed endoscopically when there is salmon-colored mucosa extending above the gastroesophageal junction (GEJ), ideally more than 1cm into the esophagus. Biopsy confirmation should be made by the presence of intestinal metaplasia containing goblet cells.[7] Risk factors for BE include chronic duration of gastroesophageal reflux disease (GERD) symptoms, male sex, Caucasian race or ethnicity, central obesity, increasing age, smoking, and, potentially, family history of BE. Infection with certain strains of *H. pylori* is associated with a reduced risk of BE.[8] A study found that 11% of 701 patients reporting GERD symptoms were found to have BE on endoscopy.[9] Age and Caucasian race were found to be risk factors in a study cohort of 155,641 patients; this study also showed 3% diagnosis of BE in the third decade of life and 9% diagnosis in the sixth decade of life.[10] Male sex is a known risk factor for BE, with a male to female ratio of 2:1.[11] It is also associated with a higher risk of EAC, with men comprising 88% of all EAC patients.[12] A meta-analysis of 1,102 patients compared to 1,400 control cases showed that waist circumference, independent of body mass index, is a risk factor for BE among both men and women.[13] A recent systematic review showed both weight loss and tobacco cessation were associated with reduced reflux symptoms.[14]

When screening for BE, the goal of initial endoscopy is to first diagnose and then grade and evaluate for the presence of dysplasia and EAC. If BE is suspected at endoscopy, its extent should be carefully documented using the Prague C&M criteria. As part of this exercise, the landmarks that should be evaluated include the squamo-columnar junction, the gastroesophageal junction, and the extent of BE. This classification describes the circumferential (C) columnar lining and the maximum length (M) of BE, excluding islands. The C&M criteria were found to have a high validity and consistent assessment during endoscopy by an international group.[15] The Prague criteria provide a standardized description of BE, useful for comparison with subsequent endoscopic evaluations.

Other considerations when evaluating BE during endoscopy are careful inspection of the mucosa and the choice of imaging modalities. For instance, high-definition white light imaging is superior to standard-definition. Narrow band imaging (NBI) and near-focus allows for a careful evaluation of vasculature and pit patterns within the mucosa (Figure 2). NBI allows targeted biopsies to evaluate for dysplasia and EAC. A recent study by the Barrett's International NBI Group aimed to develop a classification system for the identification of dysplasia and cancer. The system is able to classify BE with greater than 90% accuracy with a high level of inter-observer agreement. The mucosa and vasculature are defined as regular or irregular based on NBI; an irregular mucosal and/or vascular pattern being associated with high-grade dysplasia (HGD) and EAC.[16]

When BE is suspected, at least eight biopsies should be obtained unless a short segment is present and then four biopsies should be obtained. Once a diagnosis of BE has been confirmed, biopsies should be obtained based on the Seattle protocol in which samples are obtained every 2 cm in four quadrants during surveillance endoscopy. A cohort study of 362 patients showed that this technique resulted in a 13-fold increase in detection of dysplasia.[17] All mucosal irregularities should be sampled and placed in a separate bottle for histologic evaluation; this was an agreed upon quality indicator during a recent symposium of BE experts.[18]

The presence of dysplasia is the most important risk factor for development of EAC. A meta-analysis of 236 patients with HGD had an EAC

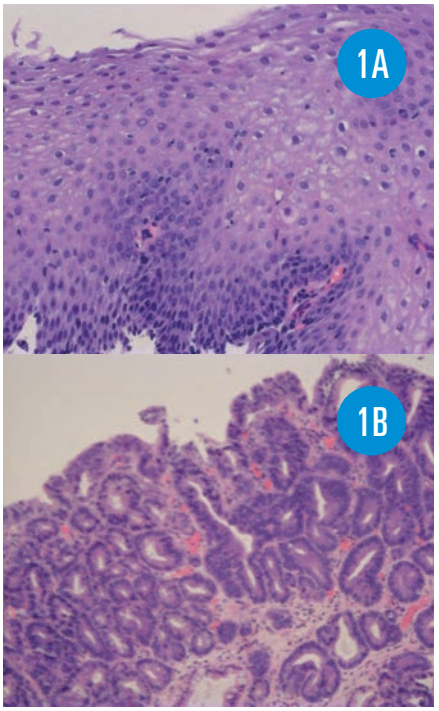
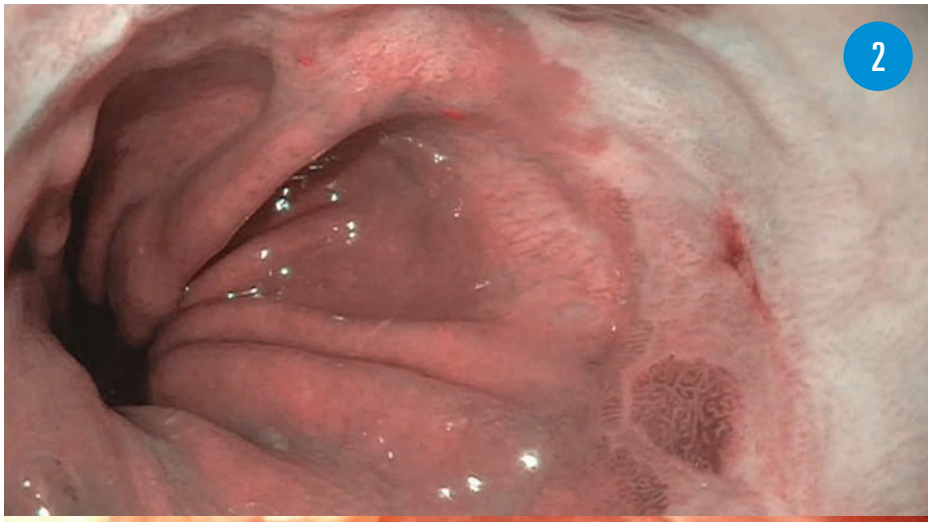
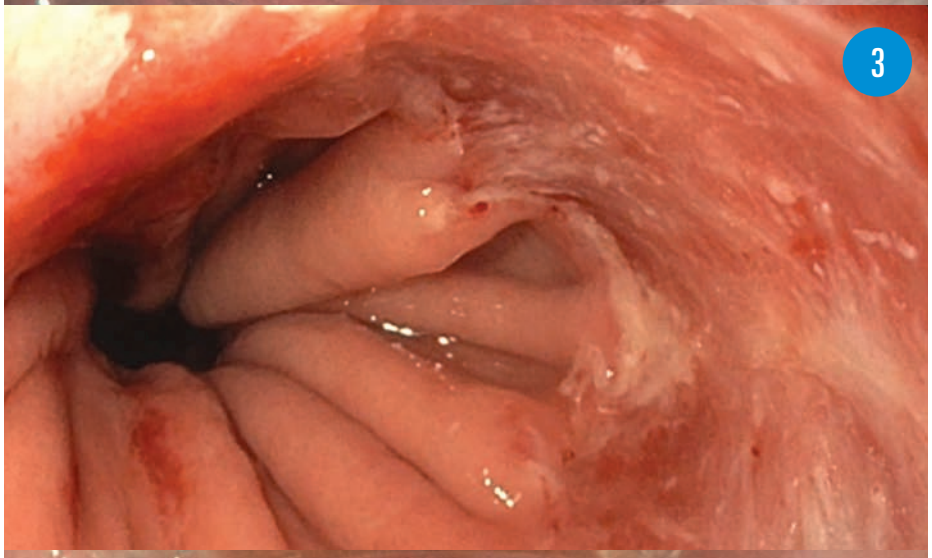
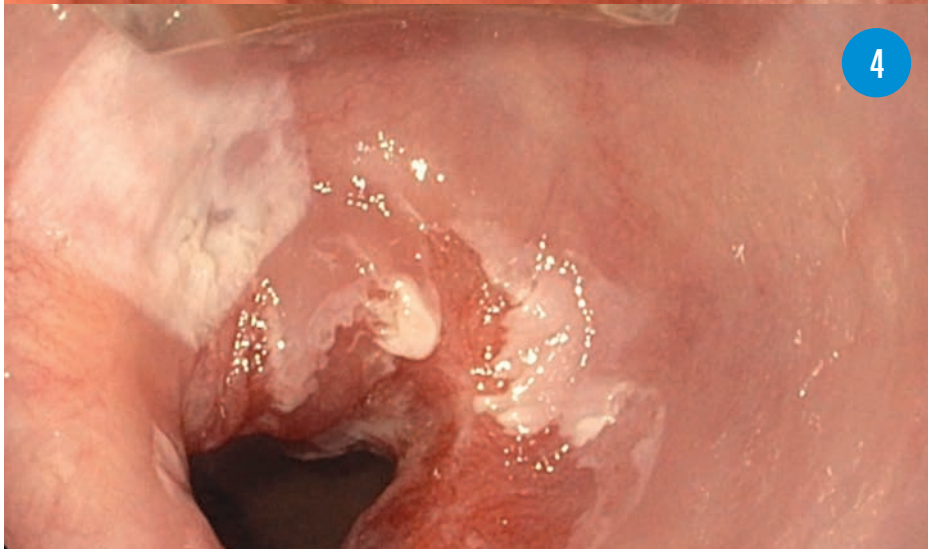


Figure 1A. *Normal squamous mucosa, esophagus.*
Figure 1B. *High-grade dysplasia in a patient with Barrett's esophagus.*







Courtesy Dr. Jesica Brown

Figure 2. *Narrow band imaging.*
Figure 3. *Post endoscopic mucosal resection.*
Figure 4. *Post radiofrequency ablation.*

ncidence rate of 7%.[19] However, two randomized trials have subsequently shown the rate of EAC in HGD to be as high as 19%.[20,21] If dysplasia is present, review of the specimens should be performed by two pathologists due to high inter-observer variability. One study found that of the 147 patients diagnosed with low-grade dysplasia (LGD) by a general pathologist, 85% had no dysplasia when reviewed by an expert pathologist.[22] Another study found that of 293 patients with reported LGD, 73% were found to have no evidence of dysplasia.[23]

Treatment

All patients with confirmed BE should be started on once-daily proton pump inhibitor (PPI) to suppress acid secretion and esophageal acid exposure. These drugs may have additional benefit since studies have shown that BE patients have a lower risk of progression to EAC when on daily PPI.[24-26] A meta-analysis of 1,813 cases found that any use of aspirin and nonsteroidal anti-inflammatory medications was associated with protective benefit from progression to EAC; however, this is not currently recommended as chemoprevention by guidelines.[27]

Initially, all nodular BE should be treated with endoscopic mucosal resection (EMR), which acts as both a staging and therapeutic procedure (Figure 3). Furthermore, an accurate T staging is crucial when determining if endoscopic therapy will be a curative therapy. EMR allows for classification of EAC based on tumor depth, which is significantly associated with lymph node metastasis, lymphovascular invasion, and tumor size.[28] The overall survival and 5-year recurrence rate are significantly better in tumors confined to the mucosa (reported at 91% and 100%, respectively).[28] In one study, long-term follow-up of 1,000 patients with early Barrett's cancer treated with EMR demonstrated an impressive rate for both complete remission

(96.3%) and long-term complete remission (93.8%), suggesting this is both an effective and durable therapy. Complications included significant bleeding (1.4%), stricture formation (1.3%), and perforation (0.1%).[29]

T1b lesions should not be treated with endoscopic therapy alone given the high rates of lymphatic involvement as shown in two retrospective studies following esophagectomy of T1b lesions.[30,31] EMR should be followed by ablative therapy of the remaining BE with a goal of endoscopic eradication to prevent recurrence of dysplasia (Figure 4).[29] The AIM Dysplasia Trial (a multicenter, randomized, sham-controlled trial) compared radiofrequency ablation (RFA) plus endoscopic surveillance to endoscopic surveillance alone when treating dysplasia in 127 patients. This trial showed complete eradication of all dysplasia in 95% of the subjects. At 2 years, dysplasia was eradicated in 93% in those with HGD and 98% in those with LGD. RFA was also noted to have 3.4% risk of serious adverse events with a rate of stricture of 7.6%.[32]

Screening and surveillance

Routine screening of the general population (including those with GERD symptoms) is not currently recommended. Guidelines state that screening can be considered in men with symptoms of chronic or frequent reflux and with two or more risk factors including smoking, Caucasian ethnicity, central obesity, or a family history of BE. Based on the most recent American College of Gastroenterology guidelines, if BE is present without dysplasia, surveillance endoscopy should take place every 3-5 years.[7] A case-control study of 8,272 members from the Northern California Kaiser Permanente group has shown that surveillance, while recommended, does not improve mortality.[33]

Despite endoscopic therapy, recurrence rates are high with some studies showing a 20% risk of recurrence at 2-3 years.[34-36] Therefore, following complete eradication of HGD or EAC, surveillance endoscopy is recommended every 3 months for 1 year, every 6 months for the next year, and then every 1 year to monitor for the development of further dysplasia. If RFA is performed for LGD, then surveillance endoscopy is recommended every 6 months for the first year and then yearly thereafter.[7,18]

Conclusion

In summary, risk factors for BE include chronic GERD symptoms, advanced age, Caucasian ethnicity, male sex, obesity, and smoking. It is essential to perform a careful initial endoscopy while focusing on the clear and concise documentation of your findings. Ensure that adequate biopsies are obtained to allow for the highest rate of dysplasia identification. If using advanced techniques such as narrow-band imaging, always evaluate mucosal patterns, vascular patterns, and mucosal abnormalities with targeted biopsies placed in separate jars to allow for the location and identification of dysplasia. And in the presence of mucosal abnormalities, perform EMR for accurate staging and diagnosis. This allows for the foremost choice of treatment whether it be endoscopic or surgical. ■

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What's Your Diagnosis?

A sinister cause of hematemesis

Published previously in Gastroenterology (2015;148:e5-6)

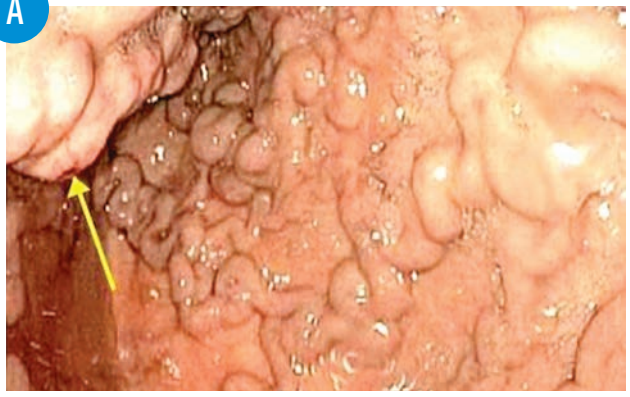
By Kati Glockenberg, M.D., Ethan M. Weinberg, M.D., and David W. Wan, M.D.

A 52-year-old man with myelofibrosis presented to the emergency department with hematemesis. Earlier that day, he had experienced cough, rhinorrhea, and pharyngitis. On the evening of admission, he vomited blood, prompting him to seek medical attention. He denied fevers, chills, chest pain, abdominal pain, melena, hematochezia, prior history of upper gastrointestinal bleeding, nonsteroidal anti-inflammatory drug ingestion, or alcohol abuse. He was afebrile and hemodynamically stable. Physical examination was significant for splenomegaly and brown, guaiac-positive stool. His abdomen was nontender and nondistended without overt evidence of hepatomegaly. Pertinent laboratory results were as follows: blood urea nitrogen, 34 mg/dL; International Normalized Ratio, 1.3; white blood cell count 4.6 × 10^3/microL; platelets, 194 × 10^3/microL; and hemoglobin, 12.5 g/dL, which decreased to 9.6 g/dL on repeat 6 hours later. On presentation, he was given an intravenous bolus of esomeprazole 80 mg and initiated on an intravenous esomeprazole drip at 8 mg/h. An urgent upper endoscopy revealed isolated gastric varices with recent evidence of bleeding (Figure A, yellow arrow). He was given a bolus of intravenous octreotide 50 microg followed by an intravenous octreotide drip at 50 microg/h and ceftriaxone 1 g/d. The patient was transferred to the intensive care unit for further monitoring. ■

What was the cause of this patient's gastric varices and what is the next appropriate step?

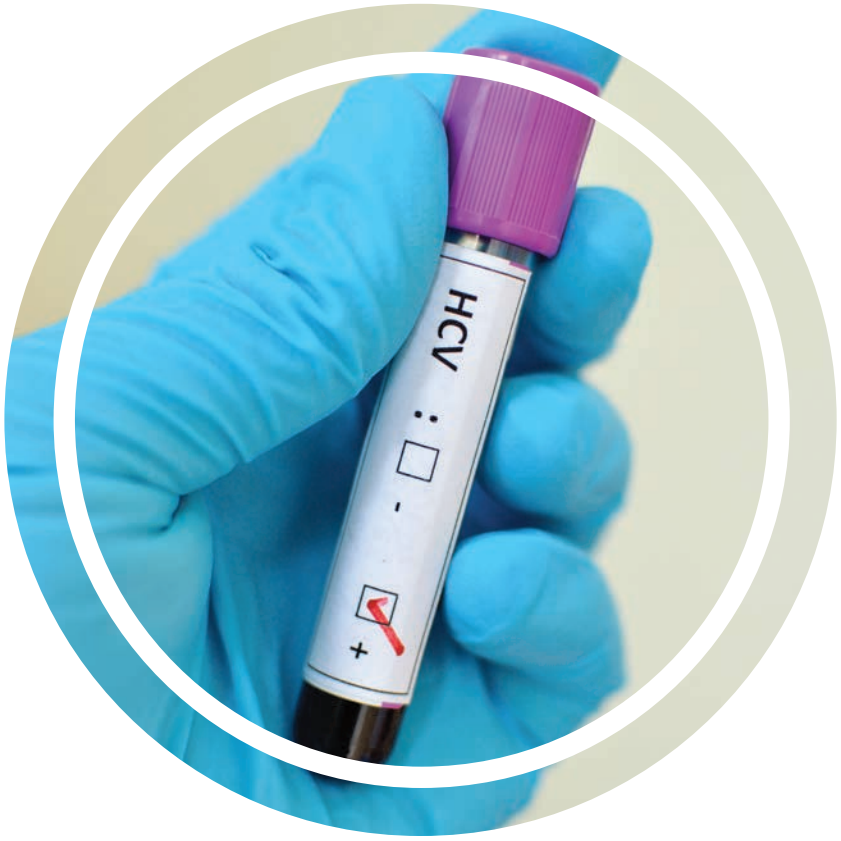
Dr. Glockenberg, Dr. Weinberg, and Dr. Wan are at New York-Presbyterian Hospital in the Department of Medicine; Dr. Weinberg and Dr. Wan are in the Division of Gastroenterology and Hepatology; Dr. Wan is also with Weill Cornell Medical College, New York, N.Y.

A



Courtesy AGA Institute

See ***The Answer*** on page 27



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Birth-Cohort HCV Testing Misses One-Quarter of Infections

BY BIANCA NOGRADY // Frontline Medical News

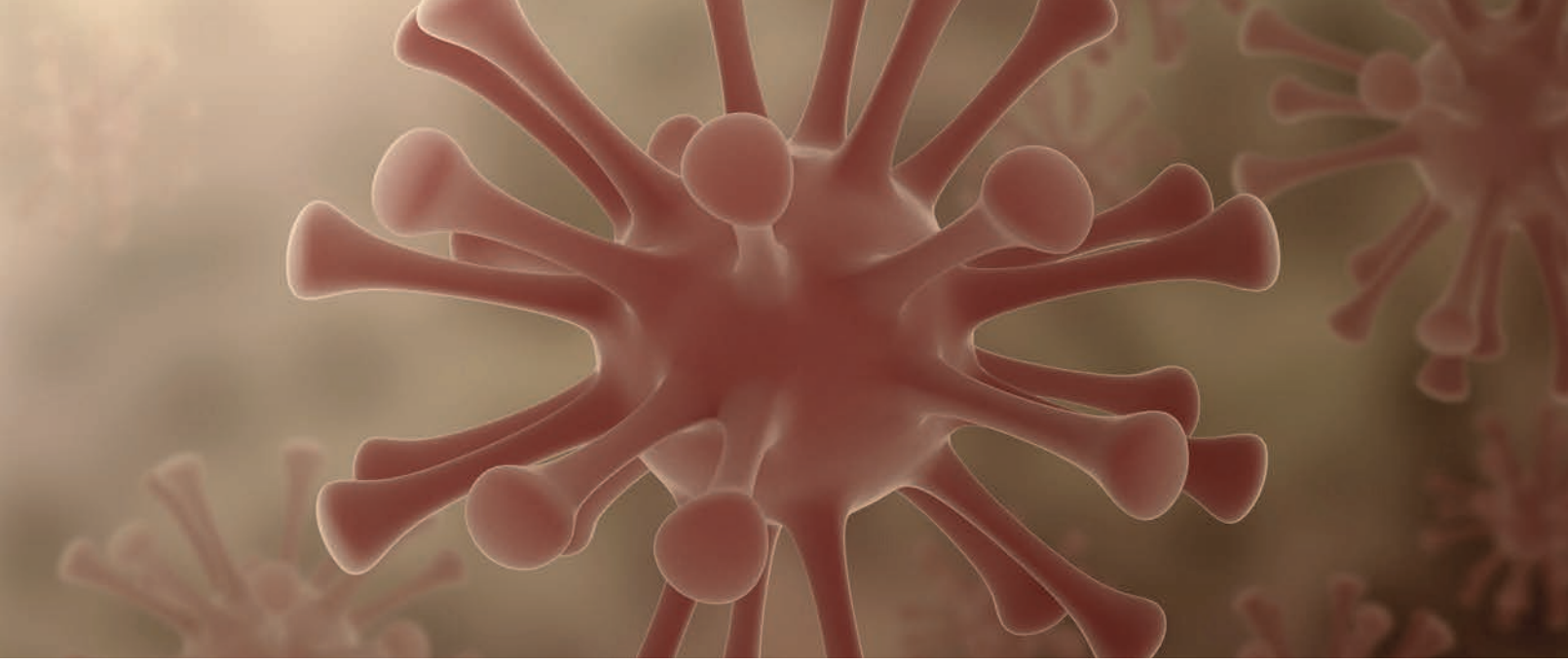
Birth-cohort screening for hepatitis C virus (HCV) according to U.S. Centers for Disease Control and Prevention (CDC) guidelines may miss around one-quarter of infections, researchers said.

An 8-week seroprevalence survey in an urban emergency department tested excess blood samples from 4,713 patients for HCV, finding an overall prevalence of 13.8%, of which 31.3% was undocumented infection.

According to a paper published in Clinical Infectious Diseases, among the 204 patients with undocumented HCV infection, 48.5% were born between 1945 and 1965 and therefore would have been included in birth-cohort testing, and 26.5% would have been picked up for risk-based testing.

But 25% of the patients found to be infected with HCV in the study would not have been tested based on birth cohort or risk (Clin Infect Dis. 2016 Feb 21. doi: 10.1093/cid/ciw074).

The CDC added the recommendation for one-time testing of individuals born between 1945 and 1965 to its existing advice on risk-based screening in 2012, and this was backed by the U.S. Preventive Services Task Force in 2013.



JEZPERKLAUZEN/THINKSTOCK

"Since the CDC's revised HIV testing recommendations for the health care settings were released, many EDs have had great success in implementing routine HIV testing to the population they serve over the past decade," wrote Dr. Yu-Hsiang Hsieh of Johns Hopkins University, Baltimore, and coauthors. "This coupled with the availability of effective therapeutics makes EDs a key and strategic component of the national plan to expand HCV testing."

At the same time, a second study, also in an urban emergency department, tested samples from 924 individuals enrolled in an HIV prevalence survey.

In this study, published in the same issue of Clinical Infectious Diseases, researchers found HCV antibodies in samples from 128 patients (14%); 34% of whom self-reported a history of HCV or hepatitis and 81% of whom were RNA positive.

The researchers noted, however, that, had they only implemented birth-cohort or risk-based screening, they would have missed 28% of individuals with antibodies and 25% of individuals with replicative HCV.

In this study, individuals with HCV infection were more likely to report injection drug use and high-risk sexual behavior, even among individuals reporting neither of these risk factors, but the prevalence of HCV infection was 7% (Clin Infect Dis. 2016 Feb 21. doi: 10.1093/cid/ciw073).

"We also cannot compare our results with the epidemiology of the surrounding population not using the ED, but suggest that as is the case with HIV, EDs are likely to provide a uniquely high level of access to populations with undiagnosed HCV who are in need of treatment," wrote Dr. Michael S. Lyons and colleagues from the University of Cincinnati.

The authors, however, suggested that their survey may have underestimated the current prevalence of HCV because of an increase in heroin use in the area in more recent years.

Dr. Hsieh and colleagues suggested there was a need to revise the CDC recommendations and expand the age cut-off to all individuals aged 18 years or over.

Researchers found HCV antibodies in samples from 128 patients (14%); 34% of whom self-reported a history of HCV or hepatitis and 81% of whom were RNA positive.

The first study was supported by the National Institutes of Health and the authors declared no conflicts of interest. The second study was partly supported by Gilead Sciences, the National Institutes of Health, and Bristol-Myers Squibb. Four of the seven authors reported support, research grants, consultancies, or advisory board positions with pharmaceutical companies including Gilead and Bristol-Myers Squibb. ■

The Answer

From ***What's Your Diagnosis?*** on page 24

This is sinistral portal hypertension and gastric variceal bleeding secondary to splenomegaly from increased splenic blood flow owing to myelofibrosis-induced extramedullary hematopoiesis.

CT of the abdomen and pelvis revealed marked splenomegaly and prominent gastric (Figure B, C, arrow), paragastric, splenic, and mesenteric varices (Figure B, C, arrowhead). The patient underwent a liver biopsy, which revealed extramedullary hematopoiesis without evidence of fibrosis or nodular regenerative hyperplasia. Measurement of the hepatic venous pressure gradient was 8 mm Hg, confirming the absence of right-sided portal hypertension.

In our patient, sinistral portal hypertension and gastric variceal bleeding occurred secondary to splenomegaly from increased splenic blood flow owing to myelofibrosis-induced extramedullary hematopoiesis. Isolated gastric varices are less prevalent than esophageal or gastroesophageal varices. Our patient had type 1 varices (IGV1), which are confined to the fundus. A common cause of IGV1 is splenic vein thrombosis and this diagnosis should be excluded. Initial management of gastric variceal bleeding includes antibiotics, vasoactive drugs, and selective transfusion.[1]

Beyond this initial management, studies have documented the use of splenectomy, splenic embolization, endoscopic variceal obturation (EVO) using tissue adhesives such as cyanoacrylate, endoscopic injection sclerotherapy (EIS), variceal band ligation (EBL), transjugular intrahepatic portosystemic shunt and balloon-occluded retrograde transvenous obliteration.[2] Cyanoacrylate has demonstrated higher hemostasis and lower rebleeding rates compared with EBL and EIS. A recent study has shown that endoscopic ultrasonographic (EUS)-guided therapy for fundal varices with cyanoacrylate and coils may improve efficacy and decrease embolization of glue.[3] Cyanoacrylate is not currently available in the United States. However, many experts agree that, in patients with bleeding gastric fundal varices, the use of cyanoacrylate is preferred where available, with EBL as an alternative.[1]

Splenectomy can be definitive treatment in patients with gastric varices associated with sinistral portal hypertension.[1] In patients with myelofibrosis and splenomegaly, splenectomy is reserved for those with drug-refractory, symptomatic splenomegaly associated with frequent transfusions, portal hypertension, or severe thrombocytopenia.

In our patient, splenectomy was chosen over EVO or transjugular intrahepatic portosystemic shunt owing to lack of available cyanoacrylate in the United States and the lack of elevated right-sided portal pressures. Postoperatively, his white blood cell count was 6.7 × 10^3/microL and platelet count was 279 × 10^3/microL. He received low-molecular-weight heparin for splenic and portal vein thrombosis, as well as hydrea and interferon. Repeat endoscopy 1 year after surgery showed no evidence of any varices. This case highlights the need for larger scale, randomized, controlled trials to guide management of gastric variceal bleeding. In addition, not all effective endoscopic and interventional techniques to treat gastric varices are widely available, making it difficult for providers to follow current recommendations. ■

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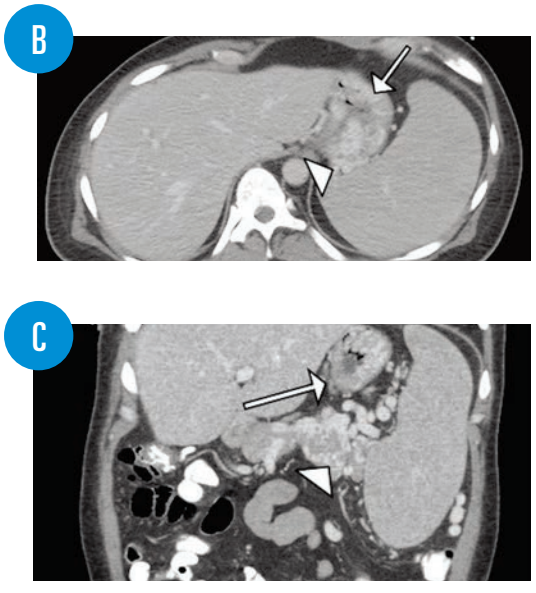

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Snapshots from the AGA Journals

Nonalcoholic Fatty Liver Disease Will Keep Rising 'in Near Term'

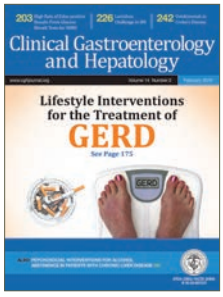
February Clinical Gastroenterology and Hepatology (doi: 10.1016/j.cgh.2015.08.010)

Key clinical point: The prevalence of nonalcoholic fatty liver disease has risen substantially since 2003, and will probably keep increasing in the near term.

Major finding: Prevalence among veterans rose about 2.8 times between 2003 and 2011, mirroring trends reported in the general population.

Data source: An analysis of data from 9.78 million Veterans Affairs patients.

Disclosures: The study was partially supported by the Michael E. DeBakey Veterans Affairs Medical Center. The researchers had no disclosures.



Commentary

Dr. Zobair M. Younossi, MPH, FACG, AGAF, FAASLD, is chairman, department of medicine, Inova Fairfax Hospital; vice president for research, Inova Health System; professor of medicine, VCU-Inova Campus and Beatty Center for Integrated Research, Falls Church, Va. He has consulted for Gilead, AbbVie, Intercept, BMS, and GSK.

Kanwal and colleagues present an interesting study assessing the trends in the incidence and prevalence of NAFLD in the United States. Findings suggest that the annual incidence of NAFLD has generally been stable (2.2%-3.2%), while the prevalence of NAFLD has increased 2.8-fold (6.3%-17.6%). These findings are consistent with the literature and provide additional evidence supporting the increasing burden of NAFLD. Although an important study, there are some limitations to the study design. First, the diagnosis of NAFLD was solely based on elevated liver enzymes, which can underestimate the true incidence and prevalence of NAFLD. In fact, in a recent meta-analysis, NAFLD prevalence based on liver enzymes was 13%, while NAFLD prevalence based on radiologic diagnosis was 25% (Hepatology. 2015 Dec 28. doi: 10.1002/hep.28431. [Epub ahead of print]). Second, the study subjects came from the VA system, which may not be representative of the U.S. population (Patrick AFB, FL: Defense Equal Opportunity Management Institute, 2010). This is important because sex-specific differences in the prevalence of NAFLD have been reported (Hepatology. 2015 Dec 28. doi: 10.1002/hep.28431. [Epub ahead of print]). Nevertheless, these limitations do not minimize the important contribution of this study. There appears to be an alarming increase in the burden of NAFLD within all the racial and age groups in the U.S. Further, this increase in the incidence and prevalence of NAFLD is especially significant among the younger age groups (less than 45 years). This finding is in contrast to others who have reported a higher prevalence in older subjects (Presented at AASLD 2015. San Francisco. Abstract #534). If confirmed, this younger cohort of patients with NAFLD can fuel the future burden of liver disease for the next few decades (JAMA. 2012;307:491-7). Given the current lack of an effective treatment for NAFLD, a national strategy to deal with this important and rising cause of chronic liver disease is urgently needed. ■

Labeled Peptide Bound the Claudin-1 Target in Colorectal Cancer Models

March Cellular and Molecular Gastroenterology and Hepatology (doi: 10.1016/j.jcmgh.2015.12.001)

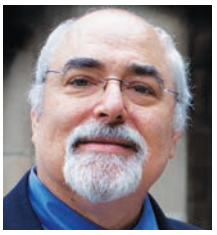
Key clinical point: The claudin-1 protein is overexpressed in human colonic adenomas and was bound by the labeled fluorescence RTSPSSR peptide.

Major finding: The peptide bound to claudin-1 in colorectal cancer cells in 1.2 minutes, with an "adequate" affinity of 42 nmol per liter. Immunofluorescence revealed significantly greater binding intensity for human colonic adenomas and sessile serrated adenomas than normal tissue or hyperplastic polyps.

Data source: An analysis of gene expression data, phage display, endoscopy of CPC;Apc mice, and immunofluorescence of normal and cancerous human proximal colon tissue.

Disclosures: The study was partially funded by the National Institutes of Health and by Mary L. Petrovich. Dr. Rabinsky and two coinvestigators are coinventors on a provisional patent on the peptide. The other researchers had no disclosures.

Commentary



Jerrold R. Turner, M.D., Ph.D., AGAF, is in the departments of pathology and medicine (GI), Brigham and Women's Hospital, Harvard Medical School, Boston.

The application of fluorescent affinity probes described in this study is groundbreaking. In the context of advanced imaging techniques, including chromoendoscopy, narrow-band imaging, high magnification, and confocal endomicroscopy, this study describes a specific molecular probe. That is a major advance in the area of personalized medicine.

While most would agree that detection of polypoid adenomas does not generally require advanced imaging technologies, the genetically engineered mouse model used in this study is useful for proof of concept. It is, however, important to note that lesions were not detected from a broad area; polyps were labeled during a 5-minute incubation with the fluorescent-tagged peptide and the area was then washed. While the fluorescent intensity of lesions relative to surrounding nondysplastic mucosae were impressively elevated in both polypoid and flat adenomas, it is important to note that there was significant overlap between normal mucosae, hyperplastic polyps, sessile serrated adenomas/polyps, and traditional adenomas. While the limited sensitivity and specificity make it unlikely that the probe used here, which targets a surface protein that is only modestly upregulated in dysplasia, will be of great value. However, the idea of specifically detecting lesions using affinity probes does have promise.

On the basis of this study, some might ask whether biopsy and histopathologic examination can be replaced by intravital affinity labeling. At this point, the answer must be no, as the sensitivity and specificity of labeling techniques are far below that of traditional histopathologic examination, even for straightforward lesions such as those studied here. Yet as a means to enhance the sensitivity of sampling when surveying large areas, such as Barrett's esophagus or long-standing ulcerative colitis, the approaches described in this study point the way to a bright future. ■

Rectal Indomethacin Does Not Prevent Pancreatitis Post ERCP

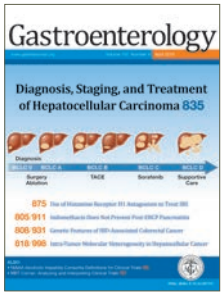
April Gastroenterology (doi: 10.1053/j.gastro.2015.12.018)

Key clinical point: Rectal indomethacin does not prevent pancreatitis in patients who undergo endoscopic retrograde cholangiopancreatography (ERCP).

Major finding: 7.2% of subjects on indomethacin and 4.9% on placebo developed post-ERCP pancreatitis, indicating no significant difference between the two cohorts (P = .33).

Data source: Prospective, double-blind, placebo-controlled study of 449 ERCP patients between March 2013 and December 2014.

Disclosures: Study funded by National Pancreas Foundation and National Institutes of Health. Dr. Levenick and his coauthors did not report any relevant financial disclosures.



Commentary

Dr. Georgios Papachristou is associate professor of medicine at the University of Pittsburgh. He is a consultant for Shire and has received funding from the National Institutes of Health and the VA Health System.

Acute pancreatitis is the most common and feared complication of endoscopic retrograde cholangiopancreatography (ERCP). The incidence of post-ERCP pancreatitis is around 10% with a mortality of 0.7% (Gastrointest Endosc. 2015;81:143-9). Recent advances in noninvasive pancreaticobiliary imaging, risk stratification before ERCP, prophylactic pancreatic stent placement, and administration of nonsteroidal anti-inflammatory drugs (NSAIDs) have improved the overall risk benefit ratio of ERCP.

NSAIDs are potent inhibitors of phospholipase A2, cyclooxygenase, and of the activation of platelets and endothelium, all of which play a central role in the pathogenesis of post-ERCP pancreatitis. NSAIDs constitute an attractive option in clinical practice, because they are inexpensive and widely available with a favorable risk profile. A recent multicenter randomized controlled trial (RCT) of 602 patients at high risk for post-ERCP pancreatitis showed that rectal indomethacin is associated with a 7.7% absolute and a 46% relative risk reduction of post-ERCP pancreatitis (N Engl J Med. 2012;366:1414-22). These findings have been broadly adapted in endoscopic practice in the United States.

The presented RCT by Dr. Levenick and his colleagues evaluated the efficacy of rectal indomethacin in preventing post-ERCP pancreatitis among consecutive patients undergoing ERCP in a single U.S. center. This study was a well designed and conducted RCT following the CONSORT guidelines and utilizing an independent data and safety monitoring board.

The authors reported that rectal indomethacin did not result in reduction of post-ERCP pancreatitis (7.2%) when compared with placebo (4.9%). Of importance, 70% of patients included were at average risk for post-ERCP pancreatitis. Furthermore, despite a calculated sample size of 1,398 patients, the study was terminated early after enrolling only 449 patients based on the interim analysis showing futility to reach a statistically different outcome.

This well executed RCT reports no benefit in administering rectal indomethacin in all patients undergoing ERCP. Evidence strongly supports that rectal indomethacin remains an important advancement in preventing post-ERCP pancreatitis. However, its benefit is likely limited to a selected group of patients, those at high-risk for post-ERCP pancreatitis. Further studies are under way to clarify whether rectal indomethacin alone vs. indomethacin plus prophylactic pancreatic stenting is more effective in preventing post-ERCP pancreatitis in high-risk patients. ■

DDSEP® 7 Digestive Diseases Self-Education Program® ANSWERS

// From page 13

Q1: ANSWER: B

CRITIQUE
The patient has multiple organs involved and cytology brushing from the bile duct is negative. The clinical evidence for IgG_4-associated systemic disease (ISD) is strong with suspected involvement of pancreas (autoimmune pancreatitis), bile duct, and salivary glands. Further confirmation of the diagnosis would include an elevated antinuclear antibody titer and elevated serum IgG_4 level. Imaging of a diffuse pancreatic gland without focal mass, and with pancreatic duct narrowing in contrast to dilation is also supportive of the diagnosis, and not at all suggestive of focal pancreatic neoplasm.

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Q2: ANSWER: C

CRITIQUE
First variceal hemorrhage in patients with cirrhosis and portal hypertension occurs at a rate of 5%-15% and carries a significant morbidity, increased health care costs, and mortality of 20% at 6 weeks. Therefore, prevention of first hemorrhage is an important part in the treatment of portal hypertension. High risks for variceal hemorrhage include large variceal size (greater than 5 mm), small varices (less than 5 mm) that have red wale signs, and advanced cirrhosis class Child B/C. The patient in question has medium-size varices. Medium-size esophageal varices are larger than 5 mm and are at high risk for bleeding, especially in advanced cirrhosis (ascites in this case). High-quality large controlled trials have shown equal efficacy for nonselective beta-blockers (nadolol and propranolol) and endoscopic variceal ligation in the prophylaxis of first variceal bleeding in patients with cirrhosis and large size varices. Beta-blockers reduce portal pressure by reducing portal venous inflow through a beta-1 reduction in cardiac output, and beta-2 splanchnic vasoconstriction effects. Metoprolol is a selective beta-1 blocker and is less effective due to lack of vasoconstricting action on the splanchnic circulation. Sclerotherapy has been replaced with endoscopic variceal ligation because of its side effects. Antibiotics have no role in the prophylaxis of variceal bleeding.

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