

AAPM NEWSLETTER

July/August 2020 | Volume 45, No. 4



JULY 12–16
2020  **VIRTUAL**
JOINT AAPM | COMP MEETING
EASTERN TIME [GMT-4]

Special Interest Feature:
2020 Joint AAPM | COMP Virtual Meeting

IN THIS ISSUE:

- ▶ President's Report
- ▶ Treasurer's Report
- ▶ Education Council Report
- ▶ Science Council Report
- ▶ Website Editor's Report
- ▶ Annual Meeting Subcommittee Report
- ▶ Technical Exhibits Subcommittee Report
- ▶ IHE-RO Report
- ▶ ...and more!

COVID-19 UPDATE

Notice as of Monday, July 1, 2020.

- [COVID-19 Information for Medical Physicists](#)
- [2020 Joint AAPM | COMP Meeting GOING VIRTUAL](#)
- All AAPM in-person meetings, plans for AAPM-funded travel and meetings of other groups at HQ are to be canceled through July 31, 2020 (subject to change).



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EDITORIAL BOARD

Jessica Clements, Editor

Chief Physicist
Kaiser Permanente
4580 Electronics Pl
Los Angeles, CA 90039
818-502-5180
newsletter@aapm.org

Yanle Hu, PhD

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Anna E. Rodrigues, PhD

SUBMISSION INFORMATION

Please e-mail submissions (with pictures when possible) to:
newsletter@aapm.org
AAPM Headquarters
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[Submission Information](#)

PUBLISHING SCHEDULE

The AAPM Newsletter is produced bi-monthly.
Next issue: September/October
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Posted Online: Week of August 31, 2020

CONNECT WITH US!



Editor's Note

I welcome all readers to send me any suggestions or comments on any of the articles or features to assist me in making the AAPM Newsletter a more effective and engaging publication and to enhance the overall readership experience. Thank you.

JULY 12–16
2020 *Improving Health QUALITY. Increasing Global IMPACT.*
VIRTUAL
JOINT AAPM | COMP MEETING
EASTERN TIME [GMT-4]



PRESIDENT'S SYMPOSIUM

Join 2020 AAPM President Saiful Huq on **Monday, July 13 at 10:30 am ET** for his President's Symposium on "Improving Health Quality; Increasing Global Impact". Highlights will include a **keynote address by HRH Princess Dina Mired**, the mother of a cancer survivor and President of the Union International for Cancer Control (UICC), as well as a **20-minute extended clip of the documentary feature *How I Live*** about the global fight to cure childhood cancer.

[Click here](#) for additional details.



OPPORTUNITIES IN GLOBAL HEALTH: VISION FOR ONE WORLD

PRESIDENT'S REPORT M. Saiful Huq, PhD | Pittsburgh, PA



These are unprecedented times. We are living through two pandemics: institutionalized racism that has spanned over four hundred years in United States history, and COVID-19, which has completely changed our world in just six months. AAPM, an organization consisting of 8,800+ members and affiliates, of which about 13% live outside of North America, is an integral part of this “one world” and thus cannot escape these two pandemics.

The words “I can’t breathe” of Eric Garner and George Floyd have become a powerful rallying cry of hundreds of thousands of people of all races, creeds, and sexes across the country protesting the horrific deaths of George Floyd, Breonna Taylor, Ahmaud Arbery, and countless African Americans. These tragedies reflect the consequences of pervasive systemic racism within the US which continues to lead to inequities in the justice system, employment rates, and educational opportunities, particularly in STEM. The same root causes have led to disparities in health care, including access to diagnosis and treatment, and outcomes from COVID-19. Nationally and around the world, thousands of people march in solidarity to express their allegiance to US protesters and denounce the racism that exists in their own countries.

On June 2, 2020, AAPM published its position statement on [Racism, Injustice and Humanity](#). An excerpt of it reads as follows: “AAPM is committed to the fair, just, and equitable treatment of all of our members and indeed all members of society so that everyone has the right to safety, respect, and the opportunity to contribute.” This statement reflects the long-standing commitment to equity, diversity, and inclusion within AAPM.

Thank you to the scores of members who have publicly and privately expressed your support for the position that AAPM has taken. Although AAPM is an organization focused on science, education, and professional practice, you agreed that it was important for our organization to take a formal stance on these issues. You have also said that words are not enough and that AAPM should undertake concrete steps to follow through on our words. We hear you and agree with you fully. I have decided to form an Ad Hoc Committee whose goal will be to unify the voice of our organization and take concrete actions towards addressing these issues. AAPM pledges to its members to not let the dust settle.

In some ways, there is an underlying human connection between our response to recent events and the theme of this year’s [Joint AAPM | COMP Virtual Meeting](#) and the President’s Symposium: “[Improving Health Quality](#).”

Twitter: @HuqedOnPhysics

A powerful quote by Kareem Abdul-Jabbar, a recipient of the Presidential Medal of Freedom and the NBA’s all-time leading scorer, in the LA Times this week read:

“Racism in America is like dust in the air. It seems invisible — even if you’re choking on it — until you let the sun in. Then you see it’s everywhere. As long as we keep shining that light, we have a chance of cleaning it wherever it lands. But we have to stay vigilant, because it’s always still in the air.”

PRESIDENT'S REPORT, Cont.

Increasing Global Impact." Members in our organization have embraced equity, diversity, and inclusion and many have joined an international chorus calling for the creation of a new world paradigm — a "one world vision." COVID-19 has taught us that global health is local health and local health is global health. We are all interconnected. The recent tragedies in our country have reminded us that racism here is injustice everywhere. We propose a "one world vision" in which we stand together shoulder-to-shoulder with our international colleagues to embrace our common humanity and work for solutions to problems that exist locally and globally. We recognize that collaborations between professionals from high-income and low- and middle-income countries can lead to innovation and development that can benefit us all.

The AAPM Board of Directors supports the creation of an International Council with the objective of developing, facilitating, and accomplishing the goals of this new world paradigm. It is my sincere hope that the membership at large will approve this initiative. This will require a membership vote to revise the AAPM's Bylaws to include the new council. More information is forthcoming, and this proposal will be discussed during the 2020 Virtual Annual Business Meeting on Wednesday, July 15 from 6:15 – 7:30 pm Eastern Daylight Time. The meeting will be open to all members, not just those registered for the Joint AAPM | COMP Virtual Meeting. More details on how to participate will be sent out soon.

The 2020 President's Symposium will focus on the humanistic side of the global fight against childhood cancer. It will demonstrate how the dreams of parents shatter when they receive the frightening news of their child's diagnosis. Our speakers will take us through an unforgettable journey of four children diagnosed with cancer in five countries and their stories of living with cancer in a documentary film *How I Live*. We will listen to the stories of families who faced barriers accessing cancer treatment in low resource settings. We hope these will highlight the need for global collaboration in order to combat global health disparities. The welcome remarks will be given by the Presidents of COMP, ASTRO and RSNA: **Horacio Patrocinio, MS, FCCPM, FCOMP, Thomas J. Eichler, MD, FASTRO**, and **James Borgstedt, MD, FACR**, respectively. The highlight of the President's Symposium will be the keynote speech given by **Her Royal Highness**

Princess Dina Mired from Jordan, President of [Union for International Cancer Control \(UICC\)](#), who will speak on the **impact of the COVID-19 pandemic on global health, especially on cancer care**. Her Royal Highness Princess Dina Mired is the mother of a cancer survivor and is a well-known and respected advocate for treatment of cancer and non-communicable diseases. The President's Satellite Symposium, as well as one of the Special Interest Meetings planned for social interaction in the evening, will discuss opportunities for AAPM members to get involved in these exciting global health initiatives.

I am thrilled to welcome you to join in our truly exciting first ever [Joint AAPM | COMP Virtual Meeting](#). Please join us and show your support for the medical physics community. We have overcome the monumental challenge of converting the face-to-face meeting into a virtual platform. The virtual meeting will feature six tracks of curated content, along with interactive online ePosters and a virtual exhibition. The program will offer a wide range of scientific, educational and professional sessions with live Q&A opportunities. Shortly after their scheduled time, all presentations will be available on-demand, allowing attendees the flexibility to view content at their convenience up to six weeks after the meeting. Attendees can also engage with their favorite exhibitors in a virtual exhibit hall while learning about new products and services during presentations comprising a unique vendor-focused seventh track. The virtual meeting platform also will host networking social events, as connecting with colleagues is an essential component of any meeting!

This would have been impossible were it not for the dedicated effort and countless hours of work by the volunteers serving on the [Annual Meeting Subcommittee](#) and our fabulous HQ team. Moving the Joint AAPM | COMP Meeting from a physical meeting to a virtual experience in less than 90 days was a colossal effort. I give my sincere and heartfelt thanks to all involved.

We are currently living through two pandemics, and AAPM is inevitably impacted by both. Our "one world vision" means that the global medical physics community must work together to unify our voice and consolidate efforts to address the paramount issues we face today.

I look forward to virtually engaging with you soon. ■

MANAGING OUR FINANCES DURING THE PANDEMIC

TREASURER'S REPORT Mahadevappa Mahesh, PhD | Baltimore, MD



For the past four years, I have generally looked forward to preparing my report for the July-August issue of the Newsletter, with the anticipation of meeting many of my friends, colleagues, students, and trainees at the AAPM Annual Meeting. Often the subject matters discussed in my columns act as starters for many conversations and interactions with new contacts. It is unfortunate that this year due to the pandemic, we are only meeting virtually. Writing this report takes on a new and vital role in communicating the financial status of

AAPM to the membership. As discussed in my previous column (Treasurer's column, May-June 2020), the Spring Clinical Meeting went much better than we anticipated. Even though we incurred revenue loss due to the absence of technical exhibits, an increased number of virtual meeting registrations balanced the loss. By our early assessment, the meeting appears it will ultimately break-even after overhead costs are applied.

It is too early to say the same about the 2020 Joint AAPM | COMP Virtual Meeting. First of all, as Treasurer, it was a difficult task to sign the refund checks to our exhibitors because of the face-to-face meeting cancellation. At this point, examining the registration numbers five weeks out, I am a bit concerned at the relatively low number of scientific registrants, compared to the budget, and hoping more people will register by the start of the meeting. The members of the annual meeting sub-committee have been working so hard and have planned a great [program](#) this year. I also urge all those who have registered for the meeting to encourage their colleagues to register too. An essential benefit for virtual meeting attendees is that the presentations will be accessible for six weeks post meeting, allowing an extra opportunity to obtain SAM or CE credits.

I have been discussing and monitoring the AAPM finances with **Robert McKoy** (Finance Director) and **Angela Keyser** (Executive Director) regularly. Because of the timely action taken, we were able to qualify for and secure loans under the Paycheck Protection Program, which could be forgiven if specific requirements are met. I am confident that our Finance Team will closely monitor and take the necessary steps to meet these requirements. If we are successful and secure this loan forgiveness, it would undoubtedly benefit the organization at a time of revenue losses in other areas. Visit the SBA's page regarding their [Paycheck Protection Program](#).

One advantage to having a virtual meeting is that the AAPM committee meetings don't have to occur on the same days (e.g., Saturday and Sunday at the Annual Meeting). FINCOM met on June 19th to discuss and make recommendations regarding the 2021 budget, rather than waiting until July.

Twitter: @mmahesh1

Email: mmahesh@jhmi.edu

Phone: 410-955-5115

I would like to thank **Robert McKoy**, AAPM Director of Finance, for his work on this report. Please feel free to reach out to me if you have any questions concerning this report.

TREASURER'S REPORT, Cont.

Another good thing about the virtual meeting is that we must record our talks ahead of time. Generally, many of us wait until the week before the meeting to prepare our talks. This year, this task is already complete because each of us was required to record our talks by June 19th, 2020. I am invited to give three talks; one of them is "Effective Communication is the Key to Medical Physics Leadership" (WE-F-Track 6-7) organized by **Dr. Julianne**

Pollard-Larkin. I consider communication very critical for all of us, both inside and outside our profession. Hence, I have been preparing a Treasurer's Report for each issue of the AAPM Newsletter for the past four years. I consider this an effective way to regularly communicate to the membership, and be transparent regarding the financial affairs of our organization. ■



**AMERICAN ASSOCIATION
of PHYSICISTS IN MEDICINE**

**IHE
RADIATION
ONCOLOGY**

**AAPM would like to thank
the main members that
participate in IHE-RO:**

- Accuray
- Brianlab
- Duke University Medical Center
- Elekta
- Epic
- IBA
- Mevion Medical Systems
- MIM Software
- Mirada Medical
- OSL
- Philips Healthcare
- RaySearch Laboratories
- RefleXion Medical
- Sun Nuclear Corporation
- Standard Imaging Inc.
- University of California, San Francisco
- University of Michigan
- Varian
- Veterans Administration
- ViewRay
- Washington University of St. Louis
- West Virginia University

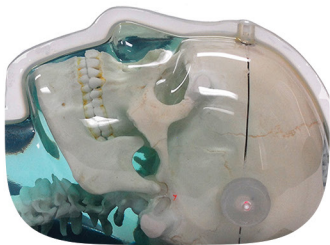
**More information
can be found at:**
[www.aapm.org/
IHERO/](http://www.aapm.org/IHERO/)

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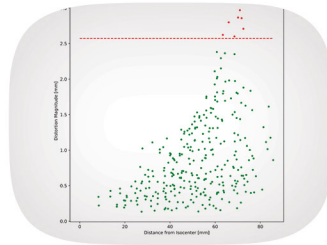
CLOUD SOFTWARE FOR EVALUATION OF IMAGE DISTORTION



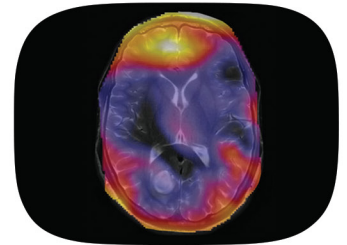
SCAN



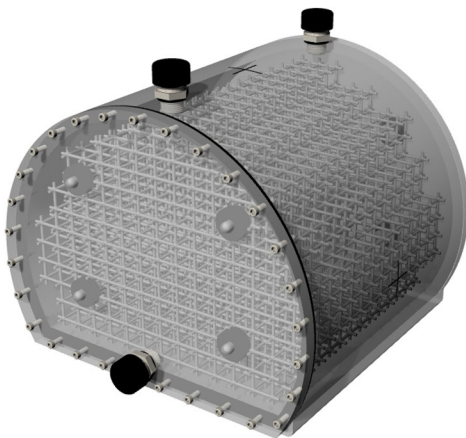
**UPLOAD
IMAGES**



**REVIEW REPORTS
& TREND ANALYSIS**



**EXPORT DICOM
OVERLAYS TO TPS**



**Large Field Grid Phantom
2152 Physical Control Points**

- ✓ CIRS proprietary materials simulate distortion due to susceptibility & chemical shifts typical to clinical patient scans
- ✓ Density of physical control points optimized to bring interpolation close to linearity
- ✓ Cloud based solution frees user of operating system and hardware constraints
 - ✓ Quickly & automatically analyze complete MR data sets
- ✓ Online deployment facilitates collaboration, easy review and portability of results



**Inter-cranial Grid Phantom
335 Physical Control Points**

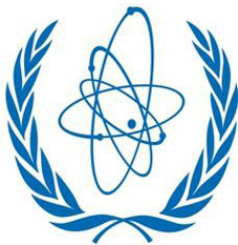


Make a Plan to MAKE A DIFFERENCE

Learn how a charitable gift can support medical physics research and education AND fit into your long-term financial future with **AAPM's new Planned Giving website!**

<https://aapm.myplannedgift.org/>

Announcing...



IAEA

International Atomic Energy Agency

Internship — SAFRON Incident Learning System

to assist The Radiation Protection of Patients Unit in the radiation protection of patient activities.

Additional details can be found [here](#).

#AAPMCOMP2020

EXECUTIVE DIRECTOR'S REPORT Angela R. Keyser | Alexandria, VA



Joint AAPM | COMP Virtual Meeting Improving Health QUALITY. Increasing Global IMPACT.

When members of the Annual Meeting Subcommittee and AAPM HQ team conducted a site visit in Vancouver with our corporate partners in early February, we could never have imagined the world events that were yet to unfold. We were all enthusiastic about returning to Vancouver after a very successful joint meeting with COMP in

2011. Vancouver in July. It will be lovely. One of my biggest concerns at that time was whether meeting attendees would question my sanity for signing a contract that included "axe throwing" as part of the Night Out activities. Oh, to have such trivial worries! (I do think you would have really liked axe throwing...maybe some other time!). Amid these unprecedented times, numerous dedicated AAPM and COMP volunteers and AAPM HQ team members have worked extremely hard to transition the Vancouver meeting to an entirely virtual offering. This has been quite a feat!

Will the meeting be "the same"? No. Will attendees be challenged by great content? Yes. Will we miss being together in beautiful Vancouver? Yes. Will there be technical challenges? They are inevitable. But, please know that countless hours have been spent in doing our very best to give attendees the best experience possible, in less than 90-days! While the current circumstances forcing events to move to virtual might be temporary, the trend of virtual components likely isn't. I expect we will learn much during the process that will allow AAPM to provide increased virtual offerings in the future. And that's not necessarily a bad thing. Attendees of the 2020 Joint AAPM | COMP Virtual Meeting will have access to six tracks of curated content and interactive online ePosters, along with a virtual exhibition and a seventh track of Guided Tours and Vendor Showcases. Sessions will include live Q&A opportunities. Shortly after their scheduled time, all presentations will be available on-demand, allowing attendees the flexibility to view content at their convenience **up to six weeks after the meeting**. We understand that connecting with colleagues is an essential component of any meeting, and the program organizers are working to identify hosts for evening networking social events.

At the same time, virtual meetings are an adjustment. They create new challenges for attendees, like the potential for technical hiccups and the inability to network face-to-face. Whether this is your first time attending a virtual conference, or you are a seasoned veteran, I wanted to share some general tips for making the most of the experience.

Twitter: @AngelaKeyser

Members of the team have homeschooled children, cared for sick loved ones, worked alongside "significant others", roommates and our many "fur children". Even under these circumstances, the HQ Team remains dedicated to serving you, the AAPM membership. The following AAPM team members celebrated an AAPM anniversary in the first half of 2020. I want to thank the entire team and acknowledge these milestones publicly.

TEAM MEMBER	YEARS of SERVICE
Nancy Vazquez	24
Zailu Gao	19
Jennifer Hudson	17
Karen MacFarland	17
Lisa Schober	15
Laurie Madden	13
Viv Dennis	10
Melissa Liverpool	9
Rachel Smioldo	9
Richard Martin	6
Robert McKoy	6
Jill Moton	3
Ashely Zhu	3

EXECUTIVE DIRECTOR'S REPORT, Cont.

- **Be Present**

Treat the virtual meeting as you would an in-person meeting with respect to your calendar and task load. *Prioritize* the time to be *truly present* in the experience, engage with the sessions and presenters, and use the chat and other networking tools regularly to connect with other attendees.

- **Minimize Distractions**

When you're watching alone, it's easy to "multi-task" and get distracted. Instead, try to reduce notifications and get ready to start learning! I heard an interesting challenge to meeting participants that resonated with me: One important way you can distinguish "high performing people" from "lower-performing people" is their ability to extract more meaning from the same data set. It's kind of heady, but I think it's especially impactful for a virtual meeting. If you want to get the most out of the Joint AAPM I COMP Virtual Meeting, engage in the opportunity as deeply as you can to get as much meaning as possible. This meeting will offer chances for distraction or complete focus and comfort, depending on the attendee. And the attendee needs to take responsibility for that.

- **Talk During Presentations**

Yes, you read that correctly! I'm encouraging you to "talk" during presentations! When you're at a face-to-face AAPM meeting, you sit quietly, listening to the speaker. (None of you zone out or work on your smartphone.) Make sure that you take advantage of the ability to chat in real-time with other attendees, share insights and ah-ha moments, and in many cases, interact with the speakers to get more value. This synchronous interactivity isn't easily possible in face-to-face events.

We hope you see this as a great opportunity, especially with the reduced time and financial commitments required to attend. Another thing to remember...the virtual meeting will probably serve better, less expensive coffee!

AAPM Groups Continuing to Do Good Work...Virtually

AAPM groups are meeting remotely, many of them regularly. At a face-to-face meeting, we had a handy Committee Schedule that listed the dates, times, and locations of the groups' meeting in conjunction with the event. Finding out when the virtual meetings are

happening in the past was not easy to do. HQ has created an [Upcoming Virtual Meeting Schedule](#) that is posted on the main webpage.

Get Involved

[Upcoming Virtual Meeting Schedule for those looking to join a group](#)

Interested in joining an AAPM Group? Review the schedule, find something that you are interested in, and then plan to attend the group's meeting. It's also helpful to send an email to the Chair of the group noting your interest and background. After the meeting, if you would like to know more, ask the Chair if you can be added as a guest. This will allow you to participate in online discussions and remote meetings.

2020 AAPM Annual Business Meeting

The **2020 Annual Business Meeting** will be held virtually on Wednesday, July 16, from 6:15 – 7:30 pm Eastern Daylight Time. Historically, members could only participate in this event as part of the Annual Meeting each year. AAPM's President **Saiful Huq** and Treasurer **Mahadevappa Mahesh** will report on the status of the organization. Members will also discuss a proposed By-Laws change to create an International Council. Online participation information can be found [here](#). Make sure to mark it on your calendar!

AAPM's HQ Team...At Your Service!

Who does what on the AAPM HQ Team? See a list of contact information and brief descriptions of responsibilities [online](#). An [Organization Chart](#) is also provided.

Staff Recognition

I firmly believe that part of the success of AAPM HQ operations is our ability to attract and retain an excellent team of high performing association management professionals. Never has this been more evident in my opinion than in the last few months. The HQ team has pulled together, albeit remotely, and worked harder than ever to exceed my expectations.

- Virtual Spring Clinical Meeting: ✓
- Virtual Audit: ✓
- 2020 Joint AAPM I COMP Virtual Meeting: ✓ ■

HIGHLIGHTS OF THE 2020 MEDPHYS MATCH

EDUCATION COUNCIL REPORT John A. Antolak, PhD | Rochester, MN



Chair, Subcommittee on the Oversight of MedPhys Match (SCOMM)¹

The sixth edition of the MedPhys Match (MPM) was completed in March of 2020, and the purpose of this article is to review some highlights from this year's statistics in comparison to prior years.

Summary of 2020 MedPhys Match Results

Yearly statistics regarding the MedPhys Match (MPM) can be found on the [MPM website](#)², and

there were 212 applicants that submitted rank lists this year, which was slightly higher than the 208 applicants that submitted rank lists in 2019. The number of acceptable applicants, defined as those applicants ranked by at least one program, increased slightly from 174 to 187³, the number of matched applicants increased from 131 to 132, and the number of unmatched applicants also increased from 77 to 80. The number of positions offered in the 2020 MPM increased by 5 to 143, and the number of unfilled positions increased from 7 to 11. In general, the number of participating programs and the number of offered positions are rising slightly each year, and the other statistics fluctuate slightly from year to year.

Most programs use the MP-RAP⁴, the AAPM Medical Physics Residency Application Program, to collect applications and we can use the data from this system to gain further insight into matching statistics for applicant subgroups, which has been published in prior articles⁵. Figure 1 shows statistics for the same subgroups, updated for this year's MPM data. For those with a CAMPEP graduate background (degree or certificate program), about 83–98% were ranked by at least one program, which is slightly higher than last year. For those that are ranked at least once, CAMPEP PhD graduates have a match rate of 92%, followed by certificate graduates at 84% and CAMPEP MS graduates at 65%. Compared to 2019, the match rate for CAMPEP-accredited MS and PhD degree holders was a little lower, with certificate holders being a little higher. Similar to prior years, applicants without a CAMPEP graduate or certificate background are at a significant disadvantage, with only 52% of applicants ranked by at least one program and only 73% of those matched to a residency position. The success rate, which is defined as the ratio of matched applicants relative to those that did not withdraw from the MPM, was also lowest for this subgroup.

Twitter: @jantolak61

"... female applicants continue to have an apparent advantage over male applicants with 91% of female applicants being ranked by at least one program and 80% of those being matched to a residency position for a success rate of 73%"

EDUCATION COUNCIL REPORT, Cont.

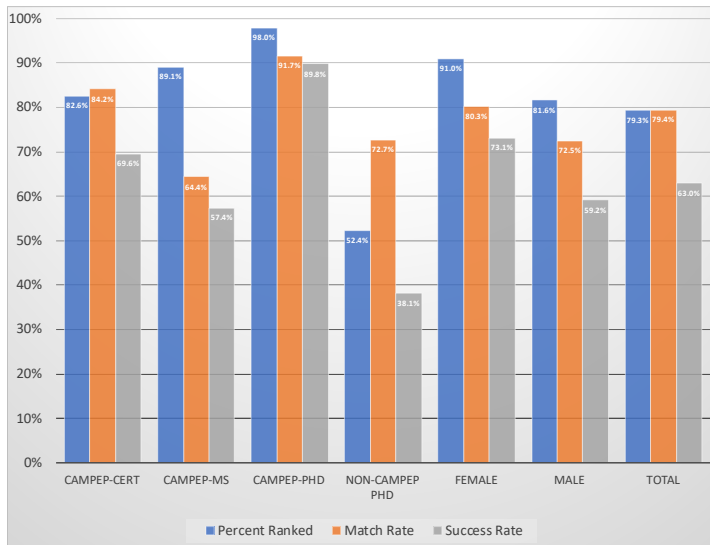


Figure 1. Percent ranked, match rate, and success rate for various subsets of applicants. Percent ranked is the number of applicants ranked at least once by programs relative to the number of applicants submitting rank lists. The match rate is the number of applicants matched relative to the number of ranked applicants. The success rate is the product of the first two quantities, or the number of applicants matched relative to the number of applicants submitting rank lists

If we look at applicants by reported gender, female applicants continue to have an apparent advantage over male applicants with 91% of female applicants being ranked by at least one program and 80% of those being matched to a residency position for a success rate of 73%. For male applicants, 82% of applicants are ranked by at least one program, and 73% of those applicants are matched to a residency position for a success rate of 59%. The number of female CAMPEP PhD applicants was 22 this year (compared to 11 in 2019), which was 45% of the CAMPEP PhD applicants and 20 of them submitted a rank list. Similar to last year, all female applicants with a CAMPEP PhD that submitted a rank list were matched to positions.

Ranking Insights

In last year's newsletter article⁶, we took a look at some summary ranking statistics over the first 5 years of the MPM to provide insight on the length of the rank list needed for applicants and programs to find a match. One of the observations was that an applicant that is ranked by at least 6 programs has at least a 90% chance of being matched, but that being ranked by as many as 14 programs does not guarantee being matched to a

position. The results this year were consistent in that all applicants that were ranked by at least 8 programs were matched to a position and being ranked by at least 3 programs was required to have a better than 50% chance of being matched to a position.

# of First Ranks	Matched 2019	Matched 2020
0	65	59
1	35 (35)	45 (45)
2	18 (36)	12 (24)
3	7 (21)	11 (33)
4	4 (16)	3 (12)
5+	2 (10)	2 (14)

Table 1. Number of first ranks for applicants that were matched to a position in 2019 and 2020. Any number greater than zero guarantees a match unless the applicant withdraws from the MedPhys Match. The number in parentheses is the total number of positions for which those applicants were first ranked.

We also looked at the distribution of applicants that were ranked to match, which means that they were top-ranked (or in the top *n* for programs with *n* positions) by at least one program. The significance of this for an applicant is that the matching algorithm will never fall below that position on their rank list. If an applicant is ranked to match by multiple programs, they will not fall below their top choice of the programs that ranked them to match. Table 1 compares the ranked to match applicants from 2019 to 2020. In 2019, out of the 165 applicants that were ranked by at least one program on their rank list, only 66 applicants (40%) were ranked to match. In 2020, the number of applicants that were ranked by at least one program increased to 177, but the number of applicants ranked to match was 73 (41%), which is almost the same relative number. If we only consider positions that are filled, the number of positions taken by applicants that were ranked to match increased from 50% in 2019 to 55% in 2020.

EDUCATION COUNCIL REPORT, Cont.

	2019	2020
Programs with a single position	65	59
All Positions filled	35 (35)	45 (45)
Ranked to Match	18 (36)	12 (24)
Programs with multiple positions	7 (21)	11 (33)
All Positions filled	4 (16)	3 (12)
Fully Ranked to Match	2 (10)	2 (14)

Table 2. Program Rank to Match data for 2019 and 2020. The first rows are for program that had one open position, and tabulates the number of programs, the number that filled all positions, and the number that were ranked to match. The next part of the table is for programs with multiple (2-4) positions.

On the program side, ranking to match has a similar significance. If an applicant ranks that program as their top choice (and the program ranks them), then the program is guaranteed to get that applicant or someone higher on the program's rank list. For programs with multiple (*n*) positions, they must have *n* applicants rank them as the top program in order to guarantee filling all positions (we will call this *fully ranked to match*). Table 2 shows the number of programs, the number of programs that filled all of their positions, and the number of programs that were fully ranked to match. It was divided up into programs that had only one position and multiple positions to see if that made any difference. For programs with a single position, 67-68% of those programs that filled those positions had at least one ranked applicant that ranked them #1. For programs with multiple positions, 62% (in 2019) and 66% (in 2020) of programs that filled all of their positions in 2019 were fully ranked to match. While the percentage is lower for programs with multiple positions, the difference is probably not significant.

Imaging and Therapy Crosstalk

There have been arguments made that imaging and therapy might be better with their own matches. Anecdotally, I've been told by some imaging programs that if applicants are not 100% committed to imaging, they should not be applying to imaging residency programs. The reality is that the CAMPEP training pathway prepares graduate students and certificate holders for all specialties. While some applicants may apply to only one specialty, it should be expected that some applicants may want to keep their options open.

	2019	2020
Therapy positions	114 (5)	114 (7)
Imaging positions	24 (2)	29 (4)
Therapy-only ranked applicants	131	145
Imaging-only ranked applicants	26	25
Applicants ranked by imaging & therapy programs	17	17

Table 3. Specialty breakdown for 2019 and 2020 (nuclear medicine is included in the imaging category). The number of positions was the total number of positions (not the number of programs), with the number of unfilled positions in parentheses.

Table 3 shows the number of positions offered in the MPM for each specialty, the number of applicants that were ranked exclusively by the specialty, and the number that were ranked by programs in both imaging and therapy. The number of applicants that are ranked by therapy programs is significantly more than the number of available positions in both 2019 and 2020. However, the number of applicants ranked by only imaging programs was just slightly more than the number of positions in 2019, and less than the number of available positions in 2020. Data on the true preferences for those applicants ranked by both specialties is not available, but looking more deeply (data not shown), there were 3 applicants that were ranked by 7 or more imaging programs that were also ranked by at least 1 or 2 therapy programs. However, there were also 3

EDUCATION COUNCIL REPORT, Cont.

applicants that were ranked by 4-5 imaging programs and also ranked by 3-5 therapy programs.

The MPM algorithm takes both applicant and program preferences into account. If an applicant applies to both therapy and imaging programs, but prefers imaging, they are likely to rank the imaging programs higher and the algorithm will try to place them in those positions before their lower preferred programs. The same could be said for academic vs. community practice, east coast vs. west coast, or 2-year clinical programs vs. extended programs with defined research components. If a program finds an applicant to be a good fit, but suspects that the applicant is more interested in something else, they should not rank them lower solely based on that perception. That applicant might be applying to other types of programs just because they want to maximize their chances of getting into a residency position, regardless of the specialty (or location or research component). It is impossible to know the true motivation for an applicant, so I would

encourage programs to give these applicants the benefit of the doubt and trust that the algorithm will figure out the best place for the applicant.

In summary, we are very grateful that the medical physics community has supported the MPM over the last 6 years and hope that the MPM can continue to meet your recruitment needs. Over the years, applicant and program feedback has been quite positive, so I hope MPM will continue to be supported into the future. The SCOMM charge was recently expanded to include oversight of MP-RAP, so if anyone has ideas for improving residency recruitment, please send those ideas to us. We are always looking for ways to improve both the MPM and MP-RAP.

The opinions expressed in this article belong to the author and should not be attributed to his employer or to AAPM. The author welcomes any and all constructive criticism regarding any aspect of the MPM and MP-RAP programs. ■

¹AAPM SCOMM Committee Page, accessed June 4, 2020

²MedPhys Match Statistics, accessed June 4, 2020

³Summary Results for 2020, accessed June 4, 2020

⁴Medical Physics Residency Application Program (MP-RAP), accessed June 4, 2020

⁵AAPM Newsletter 40(3):20-22, AAPM Newsletter 41(5):15-17, AAPM Newsletter 43(4):4-9, AAPM Newsletter 44(3):11-17, accessed June 4, 2020

⁶AAPM Newsletter 44(3):11-17, accessed June 4, 2020

OUR CONDOLENCES

Edward F. Jackson, PhD, FAAPM, FACR of Madison, WI

Arthur E. Burgess, PhD of Vancouver, BC

Our deepest sympathies go out to the family. We will all feel the loss in the Medical Physics community.

If you have information on the passing of members, please inform HQ ASAP so that these members can be remembered appropriately. We respectfully request the notification via e-mail to: 2020.aapm@aapm.org
(Please include supporting information so that we can take appropriate steps.)

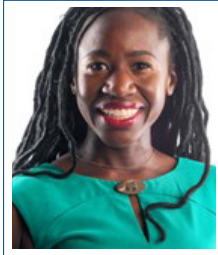
NEW AAPM DIVERSITY AND INCLUSION VIDEOS READY FOR CHANGE

SCIENCE COUNCIL REPORT

Eduardo Moros, PhD | Tampa, FL • Julianne Pollard-Larkin, PhD | Houston, TX



*E. Moros
Vice Chair,
Science Council*



*J. Pollard-Larkin
Chair, Diversity
and Inclusion
Subcommittee*

When we first conceived of these videos two years ago, none of us were aware of what would unfold in the coming months. Our nation is at an inflection point, deciding on how to address pervasive racism, injustice, and violence against African Americans. While the nation decides, AAPM has taken action. Our AAPM leadership has published an official stance, "[AAPM Statement on Racism, Injustice and Humanity](#)." This

statement affirms that AAPM will be part of the solution, and to that end, these newly produced videos, highlighting the spectrum of talent in our organization and reaching out to other new diverse populations of physicists, is a major attempt at putting action behind our words. We stand in solidarity with all of the communities of color, seeking equity and opportunities for academic and career advancement. These films are just one tool in our belt to inform trainees of our diverse pools of role models, mentorship, and research opportunities. Our main goal is to let the viewers know that our field is inclusive, and there is a need and a desire to have participation from underrepresented groups.

We first announced in the [May/June 2019 Newsletter](#), Drs. **Eduardo Moros** (Moffitt Cancer Center, Tampa, FL) and **Julianne Pollard-Larkin** (MD Anderson Cancer Center, Houston, TX) were awarded, on behalf of AAPM's Science Council, an American Institute of Physics (AIP) [Venture Partnership Fund](#) (VPF) grant for the production of a set of videos focused on attracting the next wave of medical physicists. The goal of this one-year project was to produce a series of 2-5 minute videos featuring medical physicists, individually or in groups, discussing why they chose to pursue Medical Physics as a career and how rewarding their experience has been. The purpose of the videos, now released, is to encourage undergraduate students to apply for Medical Physics graduate and fellowship programs to further increase the level of diversity and inclusion within our profession.

The proposal was awarded funding on October 3, 2018, and the videos were filmed during last year's annual meeting in San Antonio, TX, July 14-18. The videos included interviews of AAPM members and footage of already scheduled events, such as the women's luncheon. A call for volunteers (AAPM members) for the videos was made in the same Newsletter article mentioned above, as well as a mass email to all of the Science Council committee members. Arrangements were also made during the annual meeting to encourage AAPM members to participate in the filming of the

Twitter: @JulieLarkin305

Julianne and Eduardo are deeply grateful to the AIP for their support and the assistance of Karin Heineman, Jason Bardi, and Brad Conrad; for B Strong Productions for their outstanding final products; and to Angela Keyser, AAPM Executive Director, and Shayna Knazik, former AAPM Programs Manager, for their constant assistance and encouragement during the entire project, from grant application to posting of the videos on the AAPM website.

SCIENCE COUNCIL REPORT, Cont.

videos as individuals in a room of the convention center where a set was prepared. The room location and filming times were disseminated. Two days of video shoots by B Strong Productions, including the filming/interviewing of 16 individuals, were used as material to compose thematic videos. Project leaders and the video editing team selected individuals reflecting the diverse and inclusive membership of the AAPM. By February 2020, the videos had been composed, reviewed, edited, and finally approved by AAPM executive leadership.

The final approved videos are:

1. [What is the AAPM?](#) — 3:30 min.
2. [Women in Medical Physics](#) — 3 min.
3. [Diversity and Inclusion](#) — 3 min.
4. [Julianne Pollard-Larkin individual interview](#) — 2:25 min.
5. [Stephen Avery individual interview](#) — 1:54 min.
6. [Jaydev Dave individual interview](#) — 3:21 min.

The AAPM membership is encouraged to share and disseminate these videos widely. We are working with the [Society of Physics Students](#) to share these with their membership. ■

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ADMINISTRATION ACCELERATES REGULATORY ROLLBACK

LEGISLATIVE AND REGULATORY AFFAIRS' REPORT Richard J. Martin, JD | Alexandria, VA



On May 19, President Trump signed an Executive Order directing agency heads to identify regulations that may impede economic recovery from the COVID-19 pandemic and take action to eliminate those regulations or provide exemptions for complying with those regulations. The Administration suspended scores of healthcare regulations to address needs of patients and clinicians in fighting the coronavirus. The Executive Order now seeks permanent adoption of positive regulatory changes made during the pandemic

as well as additional shedding of regulations deemed burdensome or superfluous.

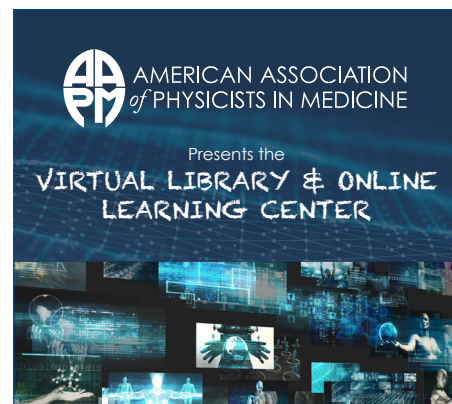
The Executive Order states:

"Agencies should address this economic emergency by rescinding, modifying, waiving, or providing exemptions from regulations and other requirements that may inhibit economic recovery, consistent with applicable law and with protection of the public health and safety, with national and homeland security, and with budgetary priorities and operational feasibility. They should also give businesses, especially small businesses, the confidence they need to re-open by providing guidance on what the law requires; by recognizing the efforts of businesses to comply with often-complex regulations in complicated and swiftly changing circumstances; and by committing to fairness in administrative enforcement and adjudication." See the Executive Order [here](#).

By all accounts, Agencies are taking the directive seriously. Centers for Medicare & Medicaid Services (CMS) has been reported to be assessing which waivers put into effect during the pandemic should become permanent. In addition, the Food and Drug Administration (FDA) has suggested it will permanently adopt COVID-19-driven changes that enable quicker and more efficient reviews and authorizations.

It remains to be seen exactly how the regulatory landscape will be changed during the remainder of this administration. As most can agree, deregulation can be either positive or negative. Proponents may see efficiency where critics decry that benefit is made at the expense of public health and safety. Regulatory changes implemented so far — both in and out of the healthcare arena — have been significant. A number of organizations, including the Brookings Institute and Americans for Reform, have compiled lists of regulatory changes, which offer an interesting perspective on this issue. See the Brookings rollback tracker [here](#); See the Americans for Tax Reform list [here](#).

We will continue to monitor developments on this important issue to look for opportunities to advocate on behalf of medical physicists. If you have questions or require additional information, please contact **Richard J. Martin, JD, AAPM Government Relations Program Manager**, at richard@aapm.org. ■



Unlimited access to the Virtual Library is included as a benefit of AAPM membership at no extra charge.

Presentations Posted in the Virtual Library include:

- Streaming Audio of the Speakers
- Slides of the Presentations
- 2020 Virtual Spring Clinical Meeting
March 30–April 2, 2019
- 61st AAPM Annual Meeting & Exhibition
*San Antonio, TX
July 14–18, 2019*
- 2019 AAPM Summer School —
Practical Medical Image Analysis
*Burlington, VT
June 3–7, 2019*

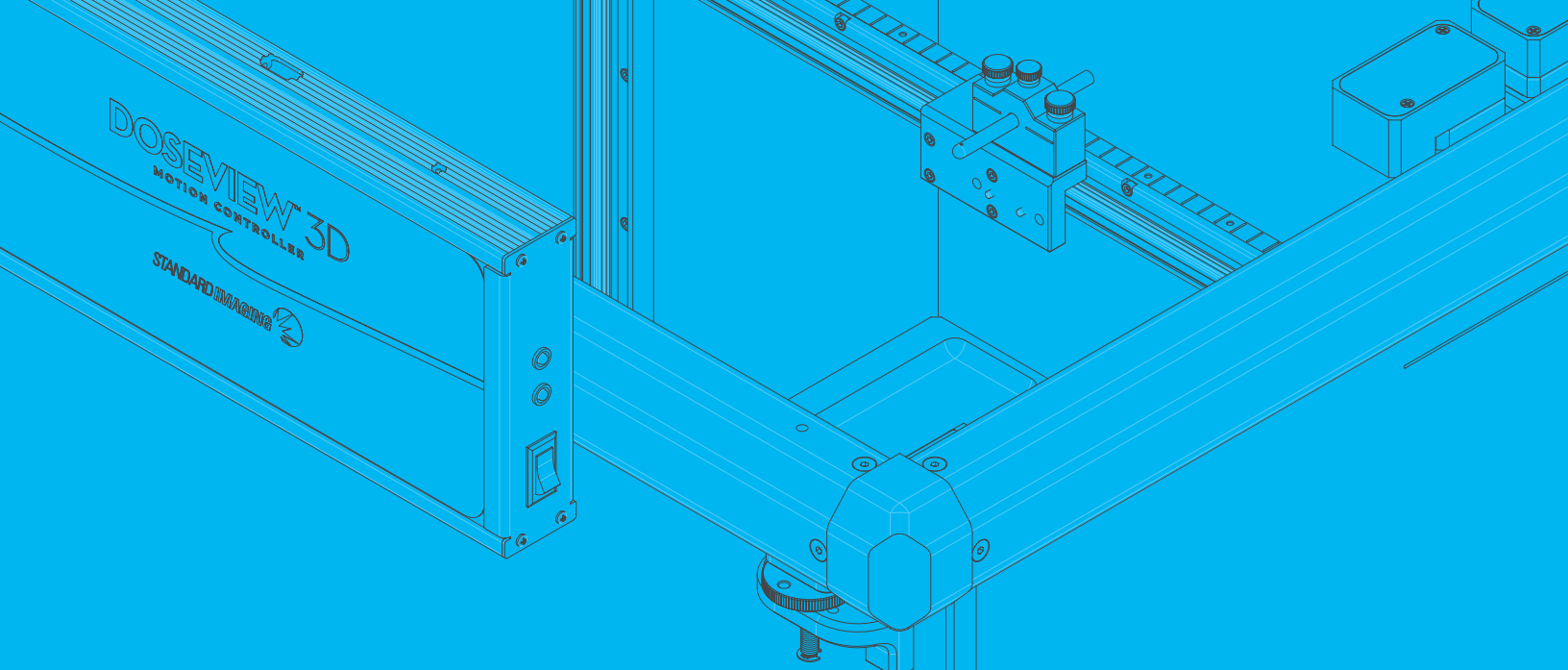
Coming Soon:

- 2020 Joint AAPM | COMP Virtual Meeting
July 12–16, 2020

Need SA-CME or SAM credit?

Join the hundreds of other AAPM members who are using the AAPM Online Learning Center for continuing education needs.

[www.aapm.org/
education/ce/info.asp](http://www.aapm.org/education/ce/info.asp)



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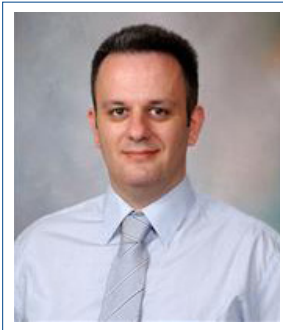
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WEBSITE EDITOR'S REPORT George C. Kagadis, PhD | Achaia, Greece

#AAPMCOMP2020



This issue of the Newsletter is being published just before the 2020 Joint AAPM | COMP Virtual Meeting, which was originally scheduled to take place in Vancouver, BC, July 12–16, 2020. Quite a few of us are recalling the great time we had during the 2011 Joint AAPM | COMP Meeting that was also held in Vancouver, BC, and we were looking forward to meeting there again. Unfortunately, due to the COVID-19 outbreak, our Annual Meeting, as well as other meetings, have now become virtual. Our AAPM Information

Services (IS) team is working hard to prepare a fantastic — as always — meeting. To this end, sessions, presentations, committee meetings, etc. are being prepared to air over the Internet, allowing us to still enjoy our Annual Meeting.

The AAPM IS team has created a channel in Twitter with the hashtag #AAPMCOMP2020.

It is recommended to use this hashtag when somebody posts conference-related content to social media sites. The aim of a discrete hashtag every year is to facilitate searches for all tweets related to the Annual Meeting. The IS team is going to post information about interesting events, talks, and other information related to the Annual Meeting, so please stay tuned for useful updates.

With regard to our social media presence, I am pleased to report that as of June 4, 2020 we have 47,869 images posted to [AAPM's Flickr](#), 12,137 likes on [Facebook](#), 5,569 followers on [LinkedIn](#), 1,672 followers on [Instagram](#), and 8,829 followers on [Twitter](#). ■

Twitter: @gkagad

The AAPM IS team, and I are pleased to serve you and advance the web presence of our society. Please, do not hesitate to contact us should you need any further clarification about the policy and/or the guidelines for posting material on AAPM's social media pages.

I hope you find the AAPM website useful, visit it often, and send me your feedback or contact me directly at george@aapm.org.

Our **virtual booth** is now open.

Take a Tour 

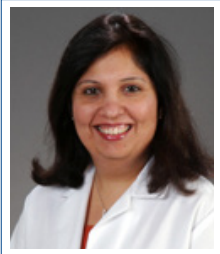
Quick Videos
Timely Webinars
Helpful Resources

Since we're unable to meet at the usual conferences & chapter meetings, we invite you to learn what's new from Sun Nuclear — at your convenience.

From faster QA workflows and remote accessibility to flexible support, we have some important advances we're eager to share. In the meantime, we just want to say: **thank you.**

ABR ON-LINE LONGITUDINAL ASSESSMENT: FREQUENTLY ASKED QUESTIONS

ABR NEWS Kalpana M. Kanal, PhD, ABR Trustee | Camano Island , WA
Robert A. Pooley, PhD, ABR Trustee | Jacksonville , FL



K. Kanal



R. Pooley

ABR On-line Longitudinal Assessment (ABR-OLA) became available for medical physicists in January of this year. For most diplomates it replaces the MOC exam that was required by MOC-Part 3. The program has been very successful with 96.5% of physicists participating in MOC having

answered at least one question. The success of ABR-OLA has generated many questions about the details. To help fill in the gaps, Drs. Kanal and Pooley gave (virtual) presentations at the 2020 AAPM spring clinic meeting. Questions and Answers from the audience at those presentations were captured and are presented below to allow a wider audience to benefit from this information. Useful ABR links are also listed in the sidebar to the right.

Questions & Answers

1. Is there any drawback to answering more than 52 OLA questions a year? Should MOC participants stop answering questions in a given year once they reach the 52 question requirement?

The sooner you answer 52 calibrated questions, the sooner you will have an idea of whether you are meeting the passing standard, which will be displayed on your OLA Dashboard. After you answer 200 calibrated questions, your Part 3 OLA performance will be evaluated. If you answer 104 questions per year, your OLA performance evaluation will occur in approximately 2 years. If you answer 52 questions per year, your OLA performance evaluation will occur in approximately 4 years. After you answer 52 questions in a given year, you will have met your annual progress requirement and you do not need to answer any more questions that year. See [ABR blog](#) on this topic.

2. If I only answer 52 questions then a question is thrown out by the ABR, does that mean I did not answer 52 questions in a year and thus not meeting eligibility?

If a question that you answered is subsequently retired, it is removed from OLA scoring. You receive credit for your answer and progress toward your OLA annual progress requirement.

3. I have seen the following on several questions: "This question was removed from scoring because it did not perform to ABR standards. You have received credit for your answer and progress toward your OLA annual progress requirement." What does this really mean?

All OLA questions are reviewed to ensure they are performing to the highest standards. If a question is not meeting these performance standards, it will be suspended. After a question is suspended, it is no

Twitter: @KalpanaKanal
@rapooley

USEFUL ABR LINKS:

- [General MOC FAQs](#)
- **For all scoring and performance evaluation questions asked below, please refer to the [ABR OLA Scoring and Performance Evaluation FAQs](#)**
- **The ABR continues to monitor the coronavirus outbreak and will provide regular updates [here](#).**
- **If you have any questions about ABR certification, examinations, MOC, OLA or any other ABR topic, please email an [ABR Certification Manager](#) or call **(520) 790-2900**.**

ABR NEWS, Cont.

longer available to be presented to diplomates, is sent to the appropriate OLA committee for review and may be retired. If the question is retired, it is removed from OLA scoring. You receive credit for your answer and progress toward your OLA annual progress requirement.

4. How do you ensure that the questions are valid as time goes on?

All OLA questions are reviewed to ensure they are performing to the highest standards. As part of this process, all OLA question feedback is provided to the volunteer committee that created the question. Additionally, all OLA committees complete a regular review of the question pool to ensure the questions are valid.

5. If you get every question wrong and then get the variants all correct, how does that affect scoring? Basically, do they cancel each other out?

Questions that are answered incorrectly are scored as incorrect. If you answer the variant question correctly, it is scored as correct.

6. What happens when I run out of my 10 declines and then I am presented with a question that is not within my daily practice?

In this situation, you should choose the answer you think is most likely to be correct. If you do not submit an answer, the question will be scored as incorrect.

7. If a question expires is that the same as declined?

No. With the exception of Nuclear Medical Physics, you receive 104 question opportunities each year. Allowing some question opportunities to expire is expected since you only need to answer 52 questions each year. A decline is used if you open a question to answer it and decide that you don't wish to answer. You have 10 declines each year. Check out the [ABR blog](#) with more information on question declines.

8. Is it true that failing a question in a given topic will cause the OLA system to give you more questions on that same topic?

No. You only get 1 more similar question (a variant) within a month on the same topic.

9. Is it common to get questions about specialty procedures that may not be common in many clinics (for example, proton questions or gamma knife

questions)? Is the expectation that these questions will be skipped?

OLA questions should be at the level of "walking-around knowledge" for all diplomates and not only those familiar with specialty procedures. While not all sites will offer all clinical procedures, common clinical procedures available at most sites may be appropriate as OLA questions. In addition, you are allowed to decline up to 10 questions each year.

10. For question raters, can you clarify what a minimally trained physicist "in this area" means? Specifically, does "in this area" mean the area the question is related to or the general practice of MP?

A "minimally competent physicist with training in this area" means training in the general practice of medical physics in the area of radiation therapy, diagnostic radiology or nuclear medicine, and not training in subfields of those areas.

11. Can we get links to PDFs of the references for OLA questions?

We encourage our volunteer committee members to select common references that are accessible in the public domain without the need for a subscription or login. This isn't always possible, but something that we strive for. References are also available in the My OLA History section.

12. I wish there were resources for people who want to better prepare themselves. We are not supposed to study, but what would we study if we wanted to?

There is no published study material for OLA questions. As mentioned above, exam committee members are encouraged to create questions at the level of "walking-around knowledge" from references common in the general practice of medical physics. A review of the references cited for OLA questions already viewed may provide an indication of the level and type of references used by the OLA committees. One of the many benefits of OLA is its formative design, which allows participants to identify gaps in knowledge. Once identified, one may wish to review material to refresh one's memory in these areas. See [ABR blog](#).

13. Why is the time to answer a question so short? Why can't you increase the time to answer questions to 3 minutes? This reduces pressure on people while answering questions.

ABR NEWS, Cont.

All OLA committees have determined standards for the length of time available for questions. A question with a relatively simple stem and options has a 1-minute length of time, and a question with a more complicated stem, a simple calculation, or images has a 3-minute length of time. There needs to be some time limit in order to assess knowledge. The average response times are well under the 1- and 3-minute time limits. See [ABR blog](#).

14. What will the OLA passing level be? Is the OLA passing standard based on the number of questions answered correctly or a percentage of questions answered correctly?

The passing standard is criterion referenced; OLA is not graded on a curve. The passing standard for each OLA question is established individually, and the aggregate rating for your 200 questions defines your passing standard. For example, if 10 question raters review a question and 7 believe a minimally competent physicist would get that question correct, that question receives a score of 0.7. This is done for all questions, so there is a range of question scores. This information is aggregated for all questions answered by a diplomate and then used to set the passing standard for that diplomate.

15. When I provide feedback to the ABR I have not seen any communication back addressing my concerns. Why do I not get a response from the ABR? Have you ever considered providing automatic feedback to end users who submit feedback?

The feedback is compiled anonymously and provided to the specific exam committee to improve the questions. The OLA feedback is not used for ABR personnel to contact diplomates directly. An automated email is sent when OLA feedback is submitted. In addition, if a question that you have answered is retired, a message will be displayed in place of that question in your My OLA History. The message indicates that you will receive credit for your answer and progress toward your OLA annual progress requirement.

16. Will there be a change to the number of SA-CE credits needed? Will the total number of CEs reduce from 75 to 65?

Those diplomates completing the OLA annual progress requirement will only need to complete 15 SA-CE credits instead of 25 SA-CE credits. This will

show up when you are completing your annual MOC attestation after participating for 1 year (2021 MOC annual review). See [ABR blog](#).

The total number of CE credits required (75) will remain the same; only the number of SA-CE will change.

17. For PQI activity, can you please give us examples on clinical activities that can be considered as PQIs?

For PQI activities, see [ABR website](#).

18. How is ABR handling people with disabilities to allow extra time on the exam?

The ABR has options for accommodating those with disabilities under the Americans with Disabilities Act (ADA). Please email an [ABR Certification Manager](#) for more information about how to request accommodations or call (520) 790-2900.

19. Can a person not required to participate in MOC and OLA, because they have a lifetime certificate, sign up to do the OLA questions?

A diplomate not required to participate in MOC may choose to voluntarily participate in MOC. For someone to have a status of "Meeting MOC Requirements," they must maintain all parts of MOC, including Part 3. It is not possible to sign up to answer OLA questions without full participation in the MOC process.

20. Is there a way to make up for questions missed due to technical difficulties?

Yes. Please contact an [ABR Certification Manager](#) by email and they will assist or call (520) 790-2900.

21. Will the ABR evaluate what is involved in clinical MP practice for writing questions to avoid declines?

A Practice Analysis Survey is conducted every three years to evaluate the clinical domain of each area. This and OLA feedback about relevance are some of the tools used to help determine what is the most appropriate content to include.

22. If you are a volunteer question writer, how is COI handled given that you have knowledge of some of the OLA questions?

Unfortunately, this scenario is unavoidable. In time the question pool for each certificate area will be extremely large with most questions in the pool being written by multiple committee volunteers. Each volunteer reviews hundreds of questions and it is impossible to recall the questions and answers when answering the OLA questions. ■

Meet our latest Phantoms and say hello to a new member at the Lab.



Smári



The Phantom Laboratory manufactures dependable, high-precision phantoms and innovative custom solutions for the medical imaging and radiation therapy fields.

We have some new additions, including **Smári** – our automated image analysis service that is included with many of our phantoms.

ACR ACCREDITATION: FREQUENTLY ASKED QUESTIONS FOR MEDICAL PHYSICISTS

ACR UPDATES Dustin A. Gress, MS, Senior Advisor for Medical Physics ACR Quality and Safety | Reston, VA



To all of ACR's accredited facilities:

In this unprecedented time, we want to make sure you know that the ACR is working hard to keep business as usual and be available and provide support to our accredited facilities. We recognize that there will be uncertainty of patient volumes, limited resources, limitations on physics support, etc. that may affect the ability to meet accreditation deadlines and we will provide as much flexibility on accreditation processes as

possible. Thank you for all of your hard work and for providing the safest care possible to your patients.

COVID-19 Radiology-Specific Clinical Resources Page

ACR continues to draft guidance, compile information, and curate its [COVID-19 Radiology-Specific Clinical Resources page](#). Back in May, ACR released its [Statement on Safe Resumption of Routine Radiology Care During COVID-19 Pandemic](#), which includes the following take-home points, among others:

- A comprehensive strategy for the safe resumption of routine radiology care during the COVID-19 pandemic will include consideration of local COVID-19 statistics; availability of PPE; local, state, and federal government mandates; institutional regulatory guidance; local safety measures; health care worker availability; patient and health care worker risk factors; factors specific to the indication(s) for radiology care; and examination or procedure acuity.
- Overriding guiding principle: If the risk of illness or death to a health care worker or patient from health care-acquired COVID-19 is greater than the risk of illness or death from delaying radiology care, the care should be delayed; however, if the opposite is true, the radiology care should proceed in a timely fashion.

The article includes an appendix containing a checklist of questions to help practices assess the risk from healthcare-acquired COVID-19 and also from delaying radiology care.

2020 ACR-AAPM Technical Standards

Three ACR-AAPM collaborative Technical Standards were approved during the ACR Annual Meeting:

- ACR-AAPM Technical Standard for Diagnostic Medical Physics Performance Monitoring of Dual-Energy X-Ray Absorptiometry (DXA) Equipment
- ACR-AAPM Technical Standard for Diagnostic Medical Physics Performance

Twitter: @DustinGress

In each issue of this Newsletter, I'll present frequently asked questions (FAQs) or other information of particular importance for medical physicists. You may also check out the ACR's accreditation web site portal for more FAQs, accreditation application information, and QC forms.

I want to congratulate ACR staff and leadership on a successful virtual Annual Meeting, May 16-19. The dedication and professionalism from ACR staff makes me proud. And it was impossible not to be impressed by how well ACR Council Speaker Rich Duszak, MD and Vice Speaker Amy Kotsenas, MD managed some difficult and passionate policy discussions, all via Zoom.

ACR UPDATES, Cont.

Monitoring of Stereotactic / Tomosynthesis-Guided Breast Biopsy Systems

- ACR-AAPM Technical Standard for the Performance of Low-Dose-Rate Brachytherapy Physics

The DXA and biopsy documents are brand new, and the LDR document is a revision. Those documents are going through some administrative finalization and should be published at acr.org by the end of the summer. There are two additional ACR-AAPM Technical Standards that we hope to have ready for approval at the October meetings of the Board of Chancellors and Council Steering Committee:

- ACR-AAPM Technical Standard for the Performance of High-Dose-Rate Brachytherapy Physics
- ACR-AAPM Technical Standard for the Performance of Radiation Oncology Physics for External Beam Therapy

Quick tip: The easiest way to find a [Practice Parameter or Technical Standard](#) is to bookmark this [Tabular Index of all ACR Practice Parameters and Technical Standards](#), and to a Ctrl+F keyword search.

Updates to ACR Diagnostic Imaging Center of Excellence (DICOE) program

Effective January 1, 2021, the DICOE program requirements document will be updated with several changes. The program updates were arrived upon after our dedicated member-volunteers spent many hours on conference calls discussing how to improve the value and meaning of the DICOE designation.

The DICOE site survey will now include review of routine diagnostic imaging (X-ray) and fluoroscopy. The updated surveys will include focus on the following areas:

- Equipment safety
- Radiation safety
- Use of protocols
- Documenting fluoroscopy radiation dose indices

In addition, each facility must assign a radiologist to provide consultation to ordering providers during the referrers' working hours.

DIR-Fluoroscopy

The pilot phase of the ACR Fluoroscopy Dose Index Registry (DIR) has ended. ACR's DIR-Fluoroscopy Subcommittee, chaired by A. Kyle Jones, PhD, is in the process of working with ACR registries staff to analyze the vast amounts of data collected during the pilot, and the first publication from the pilot, authored by Kevin Wunderle, PhD, has been accepted by the *Journal of Vascular and Interventional Radiology*. This first publication summarized the dosimetric performance of the 48 fluoroscopic planes that were part of the pilot, and collected survey information on the availability and use of radiation protective equipment on fluoroscopes, such as suspended shields and table drapes.

Radiation Dose Structured Reports (RDSR) for more than 100,000 examinations were collected from nine participating sites during the pilot period. At the time this article was submitted, the pilot group members were diligently working to map site procedure names to the ACR Common lexicon. This is a very time consuming process, one with which sites that currently participate in the Computed Tomography (CT) DIR will be very familiar.

At the time this article was submitted, the pilot group and ACR staff were finalizing a participation guide. This article summarizes the steps necessary to sign up and participate in ACR DIR- Fluoroscopy, and offers some pearls and pitfalls learned during the pilot that should make it easier for new sites to get up and running with DIR-Fluoroscopy.

With a little bit of luck, ACR DIR-Fluoroscopy will launch for all sites before the end of summer 2020. Thank you to Drs. Jones and Wunderle for their contributions to this article.

ACR Quality Control Manuals free to public

As of April 1, 2020, all ACR's QC manuals are now available for free in the public domain on our [Medical Physics Resources page](#). By the time ***this*** article is published, we will have published a new revision of the Digital Mammography QC Manual. 😊 ■

SPECIAL INTEREST FEATURE: 2020 Joint AAPM | COMP Virtual Meeting

ANNUAL MEETING SUBCOMMITTEE REPORT

Robin Stern, PhD, Annual Meeting Subcommittee Chair | Sacramento, CA



As summer approaches, I hope all of you and those you are close to have been able to stay safe and healthy.

Normally at this time, we'd be preparing to gather in Vancouver for the 2020 Joint AAPM | COMP Meeting, packing our bags, checking our plane tickets and hotel reservations, looking forward to learning new things, meeting up with old friends and new, and enjoying all that Vancouver has to offer. COVID-19 may have disrupted our lives, but it can't stop a good meeting. Since we can't meet physically, we'll meet virtually. The first-ever 2020 Joint AAPM | COMP Virtual Meeting promises to be a rewarding, educational, and fun experience, all from the comfort of your home or office. Let me tell you a bit about the Virtual Meeting, its format, and its contents.

Meeting Structure

Scientific, Educational, and Professional Program sessions are organized into six parallel tracks. Each track will present 6 hours of content each day, divided into three 2-hour blocks separated by half-hour breaks. On Thursday, there will be two 2-hour blocks for a total of 4 hours of content.

Attendees will be able to move from one track to another between as well as during individual sessions. A slide deck will be displayed during the breaks with information about the meeting and upcoming sessions and events.

Sessions will be presented live 10:30 am – 5:30 pm EDT, corresponding to 7:30 am – 2:30 pm PDT and 2:30 pm – 10:30 pm GMT. Use the handy time zone conversion tool on the AAPM Program Website to convert to your local time zone. While these times correspond to normal meeting times across the US and Canada, we realize they aren't necessarily convenient for everyone. Joining from Sydney, but don't feel like staying up all night to attend? Take advantage of the On-Demand feature, described in more detail below.

The presentation(s) in most sessions will be pre-recorded. Why? Mainly because network connectivity isn't always robust. We don't want to take the chance of a speaker not being able to connect at their scheduled time, or the quality of the connection being so poor that the audience has trouble understanding. The question-and-answer part, however, will be live. Attendees will be able to submit questions at any time during the presentation, and the speakers will answer questions live either at the end of the session (for symposia) or at the end of each presentation (for

proffered talks).

On-Demand is a new feature we're sure will be very popular. With On-Demand, you will be able to view meeting content at your convenience. Every session, from educational symposia to proffered talks, will be posted to On-Demand shortly after the session is finished. All content will be available On-Demand 24/7, not only July 12 – 16, but for a full six weeks after. Interested in a session, but have a conflict with another session, clinical duties, or home and family responsibilities? Access that session later On-Demand when you have time. On-Demand is also great for those of you who will be so busy during the meeting week that you're wondering if it's worthwhile registering for the meeting at all. Even if you can't attend a single session live, you will still be able to view every session of interest On-Demand. You can register any time before On-Demand closes and have full access to all the On-Demand content.

Even better, you will be able to get CE and SAMs credits for On-Demand viewing just as if you were viewing live.

What is a meeting without the Exhibit Hall and the chance it provides to interact with the vendors? The Virtual Meeting will feature a Virtual Exhibit Hall, with a portal for every participating vendor. Click on their tile to view each company's offerings, or make an appointment for a

SPECIAL INTEREST FEATURE [ANNUAL MEETING SUBCOMMITTEE REPORT], Cont.

one-on-one meeting. Our vendors, particularly our corporate sponsors, are important supporters of AAPM and COMP. Be sure to support them as well and visit them at the Virtual Exhibit Hall.

And speaking of our exhibitors, we're introducing a new platform for them to interact with you, the attendees. It's called the Vendor Showcase and consists of 30-minute timeslots purchased by individual companies. Vendor Showcase presentations are scheduled in a 7th, exhibitor-oriented track that runs parallel to the other six tracks and includes Partners in Solutions and the Guided Tours. But unlike Partners in Solutions, which is curated by Annual Meeting Subcommittee members on a topic selected by members and limited to commercially available products, there are no restrictions on the Vendor Showcase presentations. Vendors are free to talk about all or any of their products, including works-in-progress. See **Norman Brown's** article for more information on this exciting new program.

Meeting Content

As always, the 2020 Joint AAPM | COMP Virtual Meeting offers a wide range of high-quality presentations covering scientific, clinical, practical, and professional aspects of Medical Physics through a mix of invited symposia, proffered talks, and ePosters. This year's Specialty Track offers two sessions on the timely topic of Data Science. You're sure to find plenty that will interest you. Every session will be available On-Demand from shortly after the presentation to 6 weeks

after the close of the live meeting on July 16. Continuing Education credits are offered for all sessions, and a total of 88 hours of SAMs credits are available, whether you view sessions live or On-Demand.

The Virtual Meeting will include many of the special sessions and events you're accustomed to seeing at AAPM annual meetings. The President's Symposium on Monday, July 13, at 10:30 AM EDT will explore the meeting theme "Improving Health Quality. Increasing Global Impact." See President **Saiful Huq's** article in this newsletter for more details. Young Investigator's Symposium on Monday, July 13, at 1:00 pm EDT will showcase some of the best new researchers in the field. The AAPM Virtual Awards Ceremony has been moved to Tuesday, July 14, at 5:40 pm EDT, following the end of the last regular session. See **Geoff Ibbott's** article for a more thorough description. And at 6:15 pm EDT on Wednesday, July 15, is the AAPM Business Meeting. The Business Meeting is open to all AAPM members, so even if you don't register for the meeting (which you ought to anyway), join and learn more about the business side of the organization.

We continue to have an exceptional selection of ePosters at the meeting. This year they are divided into three categories. Best in Physics highlights the top five abstracts in each track – Imaging, Multi-Disciplinary, and Therapy – which will be presented within the proffered sessions. Blue Ribbon ePosters are high ranking abstracts that in a regular meeting

format would have been SNAP oral presentations. These ePosters will be accompanied by a short audio clip from the presenting author. General ePoster topics include not only Imaging, Multi-Disciplinary, and Therapy but also Professional as well as Expanding Horizons. All ePosters will be available 24/7 throughout the live meeting and the following six weeks via On-Demand.

Social Opportunities

We will all miss those opportunities presented by running into colleagues in the hallways between sessions, or in the Exhibit Hall, or gathering to go for dinner or drinks in the evening. However, the Virtual Meeting is not without its own social opportunities.

Most exciting is the Special Interest Meetings, or SIMs. The SIMs are after-hours gathering sites for up to 99 registered meeting attendees at a time, with one pre-determined host/moderator. Additional registrants that arrive at the gathering will be placed in a waiting room then given entrance to the meeting as others exit. There will be up to 4 concurrent SIMs each day. At the time of writing this article, the Annual Meeting Subcommittee is still working on the format of these SIMs, but we hope to offer a wide variety of topics from purely social gatherings to round table discussions on scientific issues.

The meeting platform offers several other ways for attendees to interact. Inbox allows a single attendee to directly message one or many other attendees. Chat is available within each session and provides a running chat list available to all

SPECIAL INTEREST FEATURE [ANNUAL MEETING SUBCOMMITTEE REPORT], Cont.

session participants. The Member Engagement Board is a message board/public forum. Any meeting attendee can publicly post a message or respond to any posted message. Or, an attendee can create a private chat from the board. Finally, there are Small Group Gatherings. These gatherings are recommended for small groups on the order of 2–10 attendees, who want to meet and have access to

audio and video capabilities. Each meeting is scheduled in advance and is limited to a maximum of 40 minutes. There must be an Organizer, and the Organizer must send an invitation to each guest.

And finally, to get everyone out of their chairs, away from their computer screens, and moving, there's the AAPM Fitness Challenge. Pick your activity, do it, log it in, and

receive points. It's a win-win — stay in shape and maybe even win a prize!

As you can see, the Virtual Meeting has a lot to offer. And with the reduced registration fee, no travel or hotel costs, and 88 hours of SAM credits available, it's an amazing bargain as well. So put on your meeting t-shirt, log in, and be part of the first-ever Joint AAPM | COMP Virtual Meeting! ■

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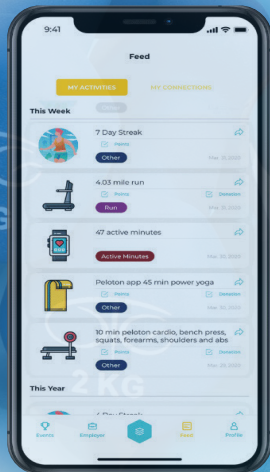
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For more information and to get started, click [here](#).

SPECIAL INTEREST FEATURE: 2020 Joint AAPM | COMP Virtual Meeting

2020 JOINT AAPM | COMP VIRTUAL MEETING: WORDS OF THANKS

Anonymous

It takes a HUGE effort to organize the AAPM Annual Meeting. It involves many volunteers at AAPM in the various meeting coordination committees, our tremendous AAPM headquarters staff and begins many years in advance of the meeting. Last year, especially after RSNA, there were calls for a "virtual meeting" component. Beware of what you ask for...

This year, just as the organization of the joint AAPM | COMP meeting was about to wrap up, the COVID-19 pandemic swept into North America. AAPM formed an ad-hoc committee to deal with the impact of the pandemic on the society's meetings. They made the last-minute decision to move the Spring Clinical Meeting to a virtual format. The big question loomed, what was going to happen to the annual meeting?

As researchers were eagerly awaiting their abstract disposition, there was frantic scrambling behind the scenes. With convention centers converting to hospitals, including the one in Vancouver, it was becoming clearer that a face-to-face meeting

in Vancouver in 2020 would not be realistic and the decision was made to move to a virtual format. **What followed was a most incredible (heroic?) effort by so many (thank you!! thank you!!) to make this happen.** Around 500 hours of just completed (!) physical meeting program needed to be converted into the virtual program that you see today. Headquarters staff found, contracted and worked with a new virtual meeting provider and platform to set up the virtual meeting structure. Decisions needed to be made, and quickly. What sessions to keep, which could be postponed? Re-assigning sessions. Re-contacting session organizers. Re-confirming speakers. Rebuilding the scientific program around suddenly fewer time slots. How to hold a virtual awards ceremony? Last but not least, truly creative solutions to move the entire exhibit hall, complete with booths and vendor programs, into the virtual format. Countless webex calls, a flood of emails. All of this while re-organizing life and work around a new normal.

I want to speak for the membership as I extend my gratitude to ALL who have contributed to this effort. To our

tremendous **Headquarter Staff**, always motivated and ready to give their best to the association. To the **Meeting Coordination Committee members** who, all hands on board, helped steer this big ship. To the **program organizers** who completed a year's worth of effort within two months, pulling out their time turners to complete tasks that needed to be completed yesterday to make the tight timelines. To the **session organizers, speakers and presenters**, who, rather than speaking and engaging with a live audience, have been pre-recording their presentations, alone in their home-office.

I want to speak for the membership that **I am in awe of this team effort.** Thank your peers personally for their efforts (at 6 feet distance, and no hugs this year). Give back to the team - participate in the meeting (lots of opportunities for that!) **Bring your good spirit!** Help us make this the best meeting yet!

Signed,

Anonymous Otter

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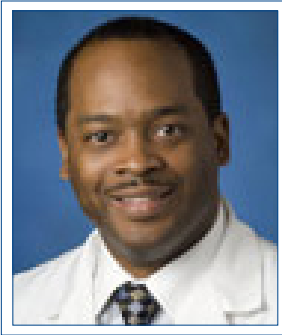
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SPECIAL INTEREST FEATURE: 2020 Joint AAPM | COMP Virtual Meeting

TECHNICAL EXHIBITS SUBCOMMITTEE REPORT

Norman Brown, Jr, HScD, Technical Exhibits Subcommittee Chair | Gulfport , MS



Twitter:
@nlbrownjr

COVID-19 has impacted daily activities around the world. We have

experienced significant

changes in our home and work lives because of travel restrictions and social distancing recommendations. As a result, industries of all kinds had little choice but to change on the spot how they conduct business with the community and each other. This includes the tradeshow/convention industry. The majority of these organizations had either postponed or canceled events to protect the health of attendees, exhibitors, and their employees. However, the AAPM HQ team had the foresight and ingenuity to convert the spring and annual face-to-face meetings to a virtual event; therefore, turning this from a major disappointment into a great opportunity for the organization, its members, and partners. AAPM is committed to providing the meeting attendees with a virtual meeting experience that is comprehensive, captivating, interactive, and unparalleled by any other virtual event.

However, an AAPM meeting, face-to-face or virtual, would not be

complete without the exhibition hall and participation from our exhibitors. The exhibition hall has been a venue where our attendees could engage with exhibitors at their booth about new products and services, receive training, or just meet the rep for a quick chat. The exhibition hall also provides a location for joint AAPM-exhibitor programs that allow our vendors to lead presentations in topic-specific sessions to the attendees. Therefore, the virtual exhibit hall and virtual booths are an essential component of our meeting.

AAPM staff is working with Pathable, a company that offers a platform to host the virtual event. Their technology will allow exhibitors to have their customizable landing pages. Within their page, they will have the ability to embed product videos, provide handout material, and offer live chats. Finally, attendees will be able to schedule appointments for one-on-one meetings with the exhibitors at their booths.

AAPM understands that connecting the attendees with innovative exhibitors is a critical component of the meeting; therefore, in the virtual exhibit hall, we will offer Partners in Solutions, Guided Tours, and the **new Vendor Showcase** in the virtual environment.

- **Partners in Solutions...**a session where exhibitors can participate in a topic-specific diagnostic or therapy continuing medical

education (CME) presentation. This session is intended to provide a physics-level, nuts-and-bolts overview of the workings of the vendor's product(s) including their pros and cons.

- **Virtual Guided Tour...**a topic-specific session in which select vendors are invited to present educational information about their products to the meeting attendees. The Virtual Guided Tour is another session designed to increase opportunities for our exhibitors to interact with our meeting attendees.
- **Vendor Showcase...**premium, purchasable time slots for a vendor to host a 30 or 60-minute presentation. The exhibitor can conduct a non-CME educational demo presentation to discuss acquisitions, new technology announcements, etc. to the meeting attendees.

I would like to acknowledge the following members of the Technical Exhibit Subcommittee and the Guided Tour Moderators because without them none of this would have been possible: **Rachel Smiroldo**, AAPM Exhibits Manager, **Lisa Rose Sullivan**, Director of Meeting and Programs, **Deborah Schofield**, TES Vice Chair, TES members **Yu Lui** and **Christiane Burton** and Guided Tour Moderators **Lydia Wilson** and **Katelyn Hasse**. ■

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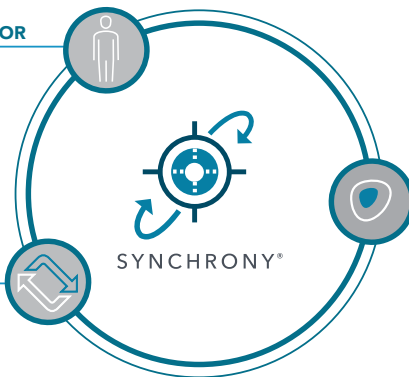


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SPECIAL INTEREST FEATURE: 2020 Joint AAPM | COMP Virtual Meeting

2020 AWARDS AND HONORS VIRTUAL CEREMONY UPDATE

Geoff Ibbott, PhD, Chair, Awards and Honors Committee | Jericho, VT



Twitter:
[@ibbottibbott](https://twitter.com/ibbottibbott)

Conversion of the Annual Meeting to a virtual meeting has required

that we make changes to the annual Awards Ceremony. The ceremony will be virtual, and will be held on Tuesday evening at 5:40 pm EDT. We've moved the ceremony from its traditional day and time because an important element of the ceremony is to award winners of the Young Investigators Symposium. This year, the YIS will be held on Monday, and time is needed for the judges to compile their scores and reach decisions. The

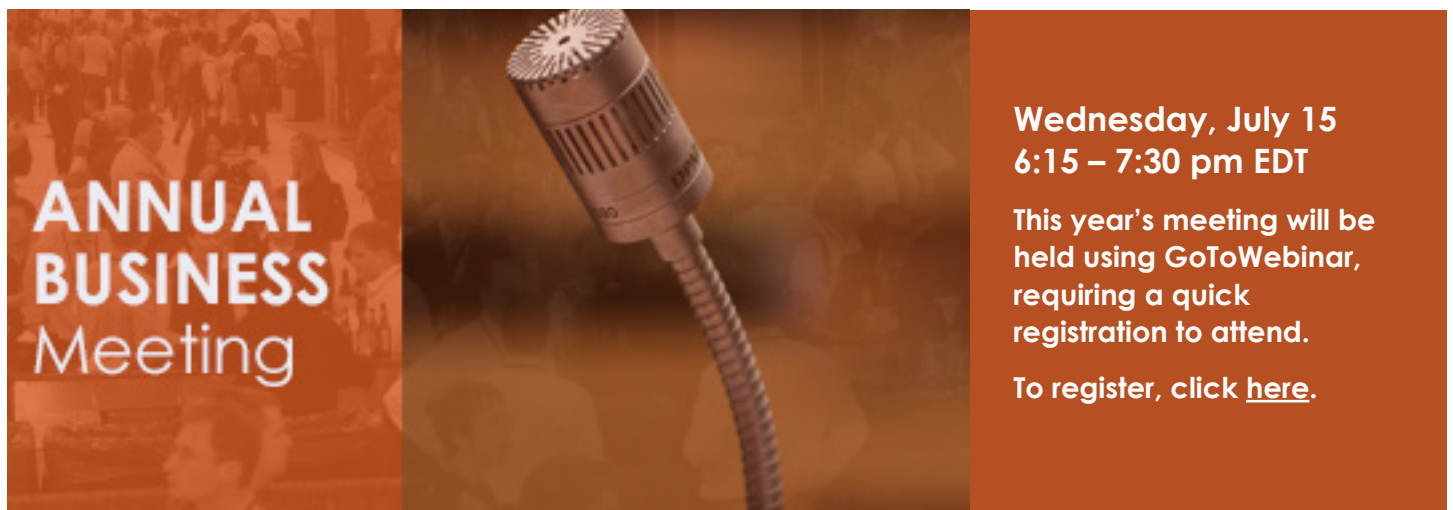
program will be similar to previous years, but will move more quickly because awardees won't be coming up to a stage. And we won't have acceptance speeches from our major award winners, because we felt they would be "shortchanged" in this virtual environment. But see below for our alternate plan.

There won't be a reception following the ceremony, but the Annual Meeting Subcommittee is looking into the possibility of informal chats with some of the award winners, to enable attendees to hear from the honorees in a casual setting.

Because we aren't able to meet and hear from our honorees this year, we have invited some of our award winners to the 2021 Annual Meeting in Columbus. These will

include the 2020 new Fellows, the honorary members, and the winners of the Laughlin, Williams, Quimby, and Coolidge awards. To ensure our 2020 major award winners receive the proper recognition, we are not soliciting nominations for honorary members, or for the Williams, Quimby, or Coolidge awards to be given in 2021. The 2021 ceremony will be restructured to ensure that we honor our 2020 recipients, as well as the 2021 new Fellows, journal awards and the "meeting awards", appropriately, but also efficiently, so that we can all enjoy the reception that follows.

Please join us for the 2020 virtual Awards Ceremony, on Tuesday, July 14, at 5:40 pm EDT, shortly after the end of the scientific sessions. ■



ANNUAL BUSINESS Meeting

**Wednesday, July 15
6:15 – 7:30 pm EDT**

This year's meeting will be held using **GoToWebinar**, requiring a quick registration to attend.

To register, click [here](#).

IAEA Expands SAFRON to Improve Safety in Radionuclide Therapy

Allison Westervelt, IAEA Department of Nuclear Safety and Security



Radionuclide therapy uses radiopharmaceuticals targeting specific tumors in human body. (Photo: L. Dojcanova/IAEA)

The IAEA has recently launched [SAFRON](#) for Radionuclide Therapy, an incident learning system to help medical facilities improve safety of patients and staff. The objective of this new learning system platform is to enhance the planning of radionuclide therapy used to treat, mitigate or control cancer and other diseases by identifying potential safety issues from reported events.

“The complexity of radionuclide therapy could lead to unintended exposure pathways for the patient, worker, or the public,” said Debbie Gilley, IAEA Radiation Protection Specialist. “Sharing information is key to preventing future incidents in radionuclide therapy.”

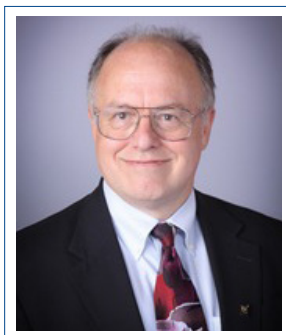
SAFRON, which stands for Safety in Radiation Oncology, is an integrated voluntary reporting and learning system originally created to collect and disseminate information on safety-related events — incidents and near misses — in radiotherapy.

SAFRON has now been extended to include “events” from radionuclide therapy, which utilizes radiopharmaceuticals and micro radiation sources that are administered similarly to radiopharmaceuticals that specifically target diseased cells, thus reducing potential side effects. Due to this and other factors, its use is increasing worldwide.

Radionuclide therapy can be administered in many ways – applying it on selective targets such as yttrium 90 microspheres placed in the liver for the treatment of cancer or systemic uptake in the body to irradiate microscopic metastatic disease such as the treatment of remnant thyroid cancer with iodide 131. There are a host of new radionuclides that provide promising results in the treatment of tumours. But with the benefits of this treatment there are safety challenges based on the radionuclide: How is it prepared? And how is it administered to the patient?

HOW DOES IHE RADIATION ONCOLOGY (IHE-RO) WORK?

IHE-RO REPORT Bruce Curran, Co-Chair, Working Group on IHE-RO | Richmond, VA



IHE-RO is an effort, currently sponsored by AAPM, to improve the interoperability of systems involved in radiation oncology. Structurally, IHE-RO has three main components, the Planning Committee (responsible for identifying interoperability issues and developing use cases describing the issue), the Technical Committee (responsible for developing solutions to use cases identified by the Planning Committee), and the Working Group on IHE-RO, an AAPM Science Council Working Group responsible for overall activity, budgeting, and evaluation of

the effectiveness of the IHE-RO effort.

This is the first of three articles describing current IHE-RO activity. Its focus will be on current activities of the IHE-RO Technical Committee, which will be holding a session during the [2020 Joint AAPM | COMP Virtual Meeting](#) this month. Later articles will describe the work of the Planning Committee and the AAPM Working Group on IHE-RO.

The IHE-RO Technical Committee is composed of medical physicists and software developers, led by a user and a vendor co-chair. The current co-chairs are Scott Hadley (U Mich) and Chris Pauer (Sun Nuclear Corp). As indicated above, the Technical Committee reviews **Use Cases** developed by the Planning Committee, develops a solution to the issue, known as a **Technical Profile**, and then tests applications against the profile as a **Connectathon**. During the **Connectathon**, applications are tested to show that they can correctly interoperate with other applications both up-stream and down-stream in the Technical Profile process flow (as judged by independent monitors, typically medical physicists). Those applications that successfully show compliance with the profile for their application are deemed as passing that profile and can indicate their success in their **IHE Integration Statement**.

Technical Committee meetings, composed of IHE members interested in radiation oncology applications, are generally held monthly. They can either be teleconferences, typically 2 hours in length, or face-to-face (currently virtual) meetings that are held approximately quarterly and last 3–5 days. The [meeting calendar](#) is updated yearly. Interested AAPM members can ask to become guests of the Technical Committee (otherwise known as UN27) by contacting [Jill Moton](#) at AAPM Headquarters. However, only IHE members are considered voting members of the Technical Committee.

The Technical Committee is responsible for the development of **Test Tools**, software applications that allow vendors to test their products against an IHE-RO profile. The results of test tool runs are part of the qualification process prior to participating in an IHE-RO Connectathon.

Twitter: @bhcurran

The IHE-RO Technical Committee is a highly productive committee whose members are dedicated to improving the radiation oncology experience for both patients and members of the radiation oncology team. Please encourage your radiation oncology vendors to participate in IHE-RO as we continue to work to improve product interoperability. Finally, please participate in IHE-RO efforts if you are interested.

IHE-RO REPORT, Cont.

Previous profiles developed by the Technical Committee tested basic radiation oncology external beam planning workflow, multi-modality (rigid) registrations, IMRT plan exchange, and scheduling workflows. Final Text/Trial Implementation profiles can be found [here](#), and all profiles are available [here](#).

Current Technical Committee profile development efforts include exchange of dose information, compositing doses from multiple systems, quality assurance information and process, Treatment Delivery Workflow, and improving treatment plan content exchange. The Technical Committee also has several focus groups working on new profiles. These new profiles include the following:

- Deformable Image Registration (UN45)
 - Defines a process for treatment planning systems (TPS) to exchange registration objects
- Treatment History (UN57)
 - Allows Treatment Information Systems to communicate delivered treatment information to another TPS or TMS
- Hospital Information Systems (UN31)
 - Creates HL7 messages for informing HIS systems of documents / events in a TMS
- Discrete Patient Positioning and Delivery Workflow (UN30)
 - Allows exchange of control and positioning information in a multi-vendor setting for patient set-up and treatment delivery
- Brachytherapy Plan Content (in cooperation with DICOM Working Group 7)
 - Standards-based treatment plan information exchange between a TPS and an HDR / PDR system.
- Ion Therapy Plan Content (in cooperation with DICOM Working Group 7)
 - Standards-based treatment plan information exchange between a TPS and a proton therapy device. ■



2019 IHE-RO Connectathon Participants (Stockholm, Sweden)

ERROR MANAGEMENT RESOURCES

WORKING GROUP FOR PREVENTION OF ERRORS IN RADIATION ONCOLOGY REPORT Michelle Wells, MS | Atlanta, GA



Are you interested in developing error management and patient safety measurements in your radiotherapy practice? Did you know the Working Group for the Prevention of Errors (WGPE) in Radiation Oncology maintains a [Links of Interest](#) page on the AAPM website that can assist? The page is divided into the topics of the psychology of human error, guidelines, safety culture, risk assessment, and well-being and resilience. References to previously reported incidents are also available.

Explore why an error may occur, tools to help prevent errors, and how to recover from an error when reviewing the references. Updated quarterly, WGPE welcomes suggestions on items to add to the site. Please submit recommendations via email to [Grace Gwe-Ya Kim](#), WGPE Chair.

Several references that have been recently added to the website are listed below with a brief summary.

1. [Johnson, J., Ford, E. et. Al. Peer support: A needs assessment for social support from trained peers in response to stress among medical physicists. *J Appl Clin Med Phys.* 2019; 20 \(9\): 157-162.](#)
Awarded the 2020 AAPM Michael D. Mills Editor in Chief Award of Excellence for an Outstanding General Medical Physics Article, the paper explores how medical physicists might use social support networks in times of stress to reduce burnout. Based on a survey of over 1000 AAPM members, the results demonstrated that medical physicists seek and desire the social support of colleagues. The article correlates peer support with wellness and resiliency which directly impacts error reduction. Recommendations for additional research in this area are also provided.
2. [Jairam, V. et al, Error Types and Associations of Clinically Significant Events Within Food and Drug Administration Recalls of Linear Accelerators and Related Products. *Pract Radiat Oncol.* 2020; 10: e8-e15.](#)
Detailing the findings of a retrospective study of the FDA Medical Recalls database, the authors found that LINAC control software has a four times higher rate of errors related to dose delivery than the errors with the LINAC itself.
3. [Sundararaman. S. et al, Improving patient safety in the radiation oncology setting through crew resource management, *Pract Radiat Oncol.* 2014; 4: e181-e188.](#)
The paper describes how treatment deviations have been eliminated through the use of communication improvements, cross-checking

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WGPE REPORT, Cont.

processes, and routinizing specific procedures with the introduction of Crew Resource Management (CRM) into a busy clinic.

4. Cox, B. et al. [Prospective Peer Review in Radiation Therapy Treatment Planning: Long-Term Results From a Longitudinal Study](#). *Pract Radiat Oncol*. In press 2020.
A prospective peer review evaluation system before treatment planning that includes review of clinical suitability for RT, prescription, contours, and written directives is presented with the results that indicate positive impact on the treatment planning process.
5. Stachelek, G. et al. [Improvements in Physician Clinical Workflow Measures After Implementation of a Dashboard Program](#). *Pract Radiat Oncol*. 2020;10:151-157.
This paper concludes that the use of an individualized physician dashboard improves radiation oncologists' compliance with treatment planning duties.
6. Paradis, K. et al. [The Fusion of Incident Learning and Failure Mode and Effects Analysis for Data-Driven Patient Safety Improvements](#). *Pract Radiat Oncol*. In press 2020.
The article outlines how the TG-100 technique of FMEA can be utilized in a retrospective review of incident learning systems to identify clinical process improvements.
7. Hartvigson, P.E., et al. [A Radiation Oncology-Specific Automated Trigger Indicator Tool for High-Risk, Near-Miss Safety Events](#). *Pract Radiat Oncol*. 2020; 10:;142-150.
The work explores automated trigger tools in radiation oncology software systems to increase error detection and to reduce the reliance of self-reporting of errors.
8. Mullins, B. et al. [Human Error Bowtie Analysis to Enhance Patient Safety in Radiation Oncology](#). *Pract Radiat Oncol*. 2019; 9: 465-478.
The authors conclude, via the use of bowtie analysis of incorrect site setup, that individual controls to mitigate errors may not be as robust or reliable as originally assumed.
9. Kisling, K., Johnson, J, et al. [A risk assessment of automated treatment planning and recommendations for clinical deployment](#). *Med. Phys.* June 2019 46 (6): 2567-2574.
Using FMEA, the study identifies three key areas to consider — (1) user training on potential failure modes; (2) comprehensive manual plan review by physicians and physicists; and (3) automated QA of the treatment plan — for safe implementation of automated planning. ■

THE WORK OF THERAPY PHYSICS COMMITTEE AND OPPORTUNITIES TO JOIN

THE THERAPY PHYSICS COMMITTEE REPORT Jean M. Moran, PhD, Chair | Ann Arbor, MI



The Therapy Physics Committee (TPC) is a committee of the Science Council and has responsibility over all AAPM scientific activities pertaining to radiation therapy physics. The Therapy Physics Committee achieves its broad goals primarily through its Subcommittees, Working Groups, and Task Groups. Over the past few years, we have made some changes in our processes within the committee itself as well as in conjunction with Science Council and some of its committees to make our work more transparent to all AAPM

members. In addition to working with Science Council leadership and other committee leaders, **Sonja Dieterich**, Vice-Chair of TPC, and I also work with **David Gierga**, Chair of the Practice Environment Subcommittee to have reviews of task group reports from the perspective of Professional Council. Sonja and I are fortunate to receive HQ support from **Jill Moton** to aid in moving our many activities forward.

I joined TPC in 2008 as a member of the site visit review team (3-year commitment) of what was then known as the Radiological Physics Center (RPC), which has become IROC-Houston at MD Anderson Cancer Center. TPC provides scientific oversight to IROC-Houston with one of the main ways being through the annual review of IROC-Houston activities by 3 members of TPC (1st, 2nd, and 3rd-year reviewers participate). TPC holds its winter/spring retreat at IROC-Houston, and it is an important opportunity for all TPC members to hear first-hand from the IROC-Houston Director, David Followill, PhD, about both the work and the quality challenges facing IROC-Houston at that time. Through the annual retreat and the TPC's site visit team report, we have made recommendations to IROC-Houston on a variety of topics such as the balance between in-person visits and virtual visits, encouraging an increase in its publication especially related to credentialing, the importance of modern algorithms for dose calculations in clinical trials, and we have learned about challenges that IROC-Houston faces on the front line in terms of credentialing for motion management in protons, its phantom program, and funding to achieve its mission in support of clinical trials. Please take a moment to keep up to date on IROC-Houston's activities through their website and regular newsletter. IROC-Houston performs such as critical service for clinical trials which often extends into supporting quality and safety for all patients through their independent credentialing program.

TPC consists of members, liaisons to several organizations such as IROC-Houston, IAEA, IED, NIST, NCI, and NRG, and its subcommittee chairs who either directly oversee the creation of task group proposals or through oversight of

Twitter: @JeanMoranPhD

"I am a staunch advocate for diversity, equity, and inclusion and continue to look for ways to make the activities of TPC more transparent."

TPC REPORT, Cont.

the work groups that report to its subcommittee. I often encourage members interested in the activities of TPC to take a moment to go to our committee tree on the AAPM website and take a look at our 8 subcommittees. From there, you can look at our work groups. At each level, you can see the members of the committees. If you haven't been involved in a task group before. Please take a closer look at the activities of a specific group and if you are willing to participate in the critical work of reviewing reports, please reach out to the group's chair about getting involved.

The main focus of TPC is on the reports created within its subcommittees and workgroups. Within the AAPM, we are so fortunate to have so many members who are willing to serve each other by participating in the writing of task group reports. I have a tremendous amount of respect and appreciation for the members of those groups and especially to the chairs and vice-chairs of those groups who commit to keeping a multi-year scientific, volunteer effort pointing forward.

For reports within TPC, we have worked to standardize some aspects of reports as recommended both within our committee and from Science Council. You can see an example of the Key Recommendations section in the recently published AAPM Task Group 275 report (Strategies for effective physics plan and chart review in radiation therapy: Report of AAPM Task Group 275, chaired by Eric Ford). In 2019 we requested formal guidance on incorporating risk assessment into Task Group reports. We were fortunate to have Jennifer O'Daniel lead this effort, which included representatives of both TPC and the WG on implementation of TG 100 (in Administrative Council) on the incorporation of risk analysis within task group proposal's created after that time. This work supports

consistency in our reports and aids in furthering the important work of how we adopt the risk analysis methods from AAPM's Task Group 100 (The report of Task Group 100 of the AAPM: Application of risk analysis methods to radiation therapy quality management, chaired by Saiful Huq) into our clinical practice in support of patient safety.

I am a staunch advocate for diversity, equity, and inclusion and continue to look for ways to make the activities of TPC more transparent. Last year, we used the AAPM Classifieds to post for open membership positions on the committee. In addition to expertise, a volunteer should have prior experience with Task Group reports as well as reviewing those reports, such as through experience in a Work Group or Subcommittee. We plan to have a similar advertisement this year for positions. In the past few years, we have also been fortunate to have a few participants from the Science Council Associates Mentorship program participate as reviewers. Due to our positive experience with this program, we have been encouraging more junior and mid-career members of the AAPM to participate as reviewers of task group reports.

In TPC, we are currently overseeing approximately 40 reports anywhere from recently approved proposals through approval from our committee undergoing a final review by Science Council, EXCOM, and/or Medical Physics. (See the report on the Work Group on Task Group Review Streamlining for information about changes to the review process.) For those of you interested in the work of TPC or its groups, we encourage you to participate in one of the upcoming teleconference meetings. The vitality and success of our organization depend on you! I hope that you will consider volunteering to be considered for TPC, a subcommittee, or a work group. ■

ESTABLISHING AN INTERNATIONAL COUNCIL WITHIN AAPM

AD HOC COMMITTEE TO ESTABLISH AN INTERNATIONAL COUNCIL REPORT

Frederic H. Fahey, DSc, Chair | BOSTON, MA



In 2019, the Ad Hoc Committee for Defining the Structure, Charges and Budget for 2020 of the International Committee discussed the structure of AAPM's international activities and came to the conclusion that a new International Council should be formed. Consequently, the Ad Hoc Committee to Establish an International Council within the AAPM developed a proposal and the required revisions to the By-Laws and Rules. In April, this Ad Hoc Committee presented its report to the Board of Directors and moved to revise AAPM's By-Laws

and Rules to establish the International Council which was enthusiastically endorsed. *A vote to amend AAPM's By-Laws necessary to establish an International Council will soon be before the membership.* This summary of the Ad Hoc Committee's report is to assist membership in making an informed decision on the proposed By-Law change.

AAPM has always been engaged in international affairs across every aspect of its organization, partnering with over 30 international organizations including the International Organization for Medical Physics (IOMP) and the International Atomic Energy Agency (IAEA). Approximately 20% of AAPM's membership live outside the U.S. Over 20% of AAPM Annual Meeting attendees and 60% of submissions to *Med Phys* and *JACMP* are from outside the U.S., respectively. Beyond outreach, AAPM works with the International Electrotechnical Commission (IEC), establishing international standards for imaging, therapeutic, and dosimetric devices. Such international engagement is mutually beneficial as AAPM members face many similar issues encountered by colleagues globally. Discoveries and new technologies in one country can advance science and clinical care everywhere through international partnerships.

Thus, the Ad Hoc Committee adopted three foundational principles, essential for AAPM and its members, to guide its work.

1. International partnerships strengthen AAPM and, thereby, its membership.
2. International collaborations strengthen the science, education, and professional practice of medical physics in the US.
3. International collaborations have the potential for contributing to improved quality and safety in healthcare, not only in the US, but also abroad.

Presently, much of AAPM's international activity falls under the International Affairs Committee (IAC, under Administrative Council) and the International Educational Activities Committee (IEAC, under Educational Council). Also, international collaborations are managed by EXCOM while joint Task Groups with international societies are overseen by Science Council (Figure 1).

“Centralizing international activities under a new International Council (Figure 2) will enhance efficiency, minimize duplication of effort, yielding greater potential for success and long-term benefit. This will provide a single point of contact for all things international. The administration of existing and new programs will involve metrics to assess success, ensuring sustainable, measurable, and meaningful impact on the practice of medical physics here and abroad.”

AD HOC COMMITTEE TO ESTABLISH AN INTERNATIONAL COUNCIL REPORT, Cont.

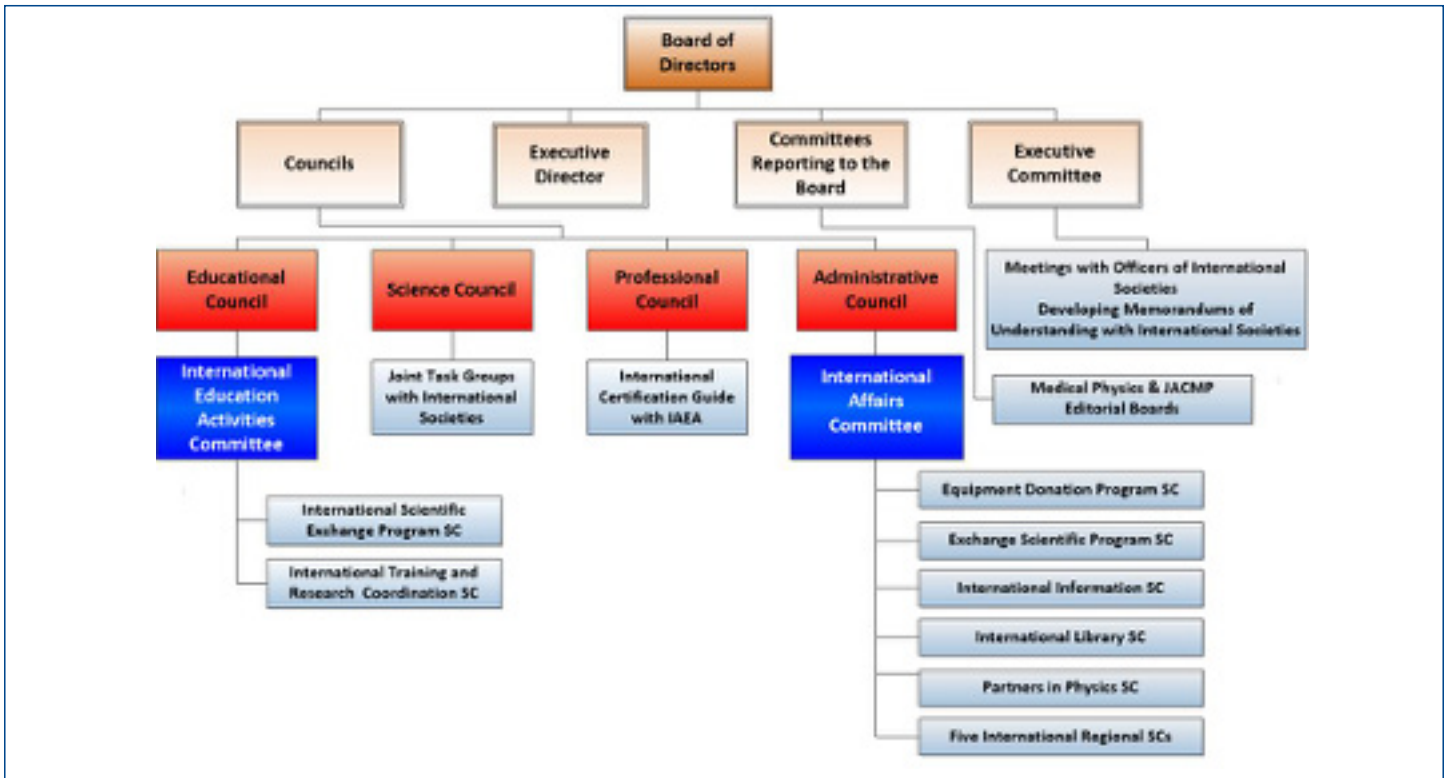


Figure 1. AAPM international activities (dark and light blue) are currently distributed across all councils, journal editorial boards, and EXCOM.

The primary weakness of this paradigm is a lack of coordination of international endeavors stemming from their fragmented distribution within AAPM leading to:

- Duplication of effort
- Lack of standardization and metrics assessing impact
- Ineffective sharing of information with partner organizations
- Ineffective response to changing landscapes
- Suboptimal presentation of AAPM as a global leader in development of safety/quality standards
- Ineffective communication of international efforts and international volunteer opportunities to AAPM membership

An easy fix to this is not possible within the current AAPM structure. An International Council would provide coordination, consistency, rigorous oversight, and the ability to strategically develop and prioritize AAPM's global activities.

Centralizing international activities under a new International Council (Figure 2) will enhance efficiency,

minimize duplication of effort, yielding greater potential for success and long-term benefit. This will provide a single point of contact for all things international. The administration of existing and new programs will involve metrics to assess success, ensuring sustainable, measurable, and meaningful impact on the practice of medical physics here and abroad.

International activities require coordinated oversight to ameliorate the potential for bias and conflicts of interest and to ensure broader access for volunteer opportunities. The review of proposed activities will:

- Assess their relevance, impact and likely success
- Demonstrate how they build on prior work; establish a platform for future engagement
- Summarize how they will benefit AAPM members directly
- Prepare detailed budgets identifying volunteer time, financial and staff support
- Identify the most qualified participants

As with other councils, there will be modest administrative costs associated with the International Council including

AD HOC COMMITTEE TO ESTABLISH AN INTERNATIONAL COUNCIL REPORT, Cont.

a staff liaison for program management assistance (estimated 30% of an FTE, approximately \$25,000) and other expenses similar to the existing councils (estimated at about \$45,000). Thus, the anticipated financial resources needed for the new council are approximately \$70,000 per year, 0.6% of the 2020 AAPM budget. These are in addition to the expenses for international activities that are established and approved through the standard budgetary processes. These expenses will NOT result in increased membership dues. It is anticipated that these will be offset by increased operational efficiency and additional revenues from increased international memberships, journal subscriptions and support from

industrial partners engaged internationally.

For AAPM to maintain its status as the premiere medical physics organization in the world, our participation in international activities must be done in a comprehensive and organized manner. By doing so, AAPM will accomplish its Mission of “advancing medicine through excellence in the science, education and professional practice of medical physics,” on a domestic and global scale. ■

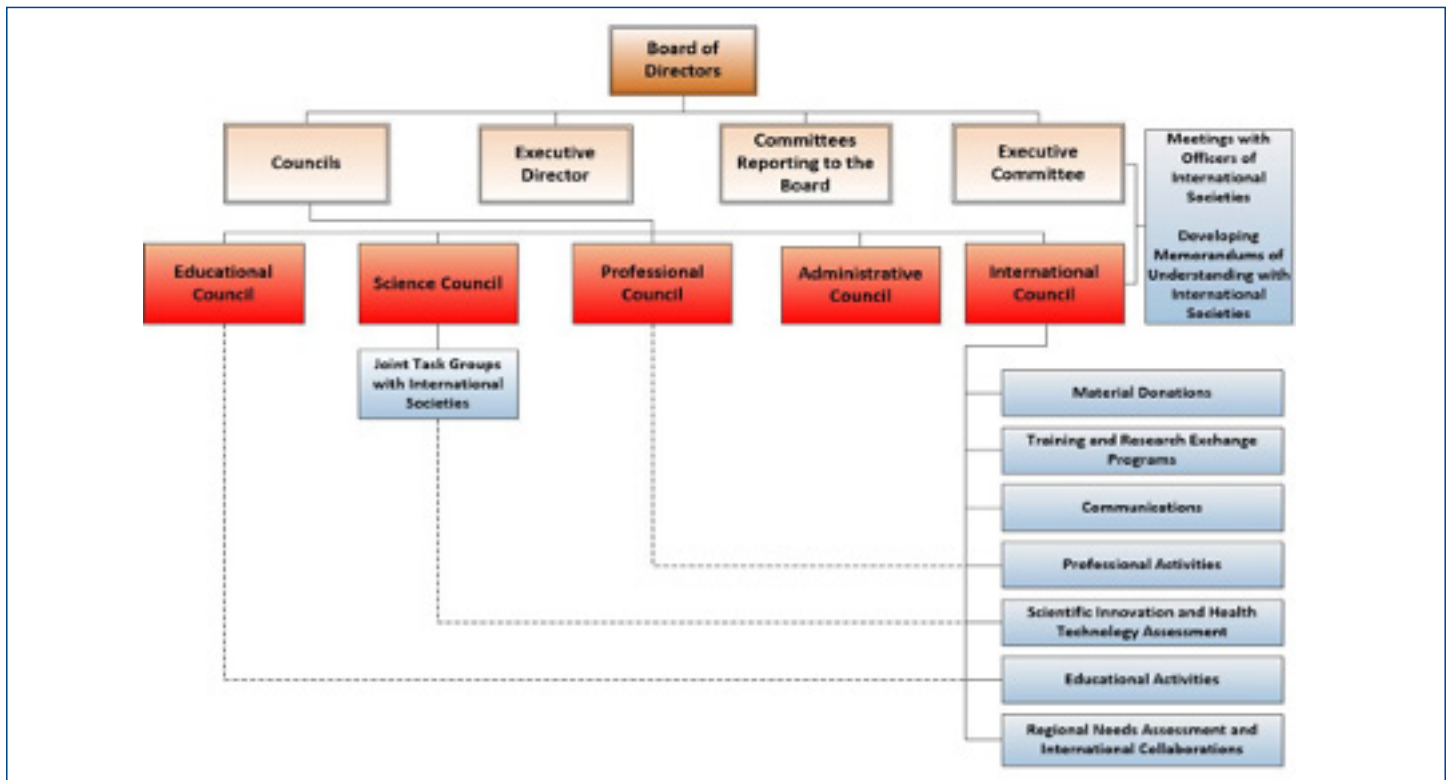


Figure 2. Proposed organization of AAPM international activities (light blue) under a new International Council which will include one member from each council for cross-council communication (examples shown by dotted lines).



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