THE CANCER LETTER

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Cancer Centers: A Reinvention

Centers Form Big Ten Research Consortium With Access to Over 30,000 New Patients a Year

By Matthew Bin Han Ong

Steven Rosen traces the "a-ha!" moment to Feb. 16, 2011, the night before the annual cancer center directors' retreat at NIH.

"I was just channel surfing after a long day, and I saw the Big Ten Network," recalls Rosen, director of the Robert H. Lurie Comprehensive Cancer Center at Northwestern University. "There was this sporting event on, and they featured one of the universities, as they often do on the Big Ten Network.

B1G Cancer Research Consortium

"It just was like one of those moments where you say, 'Oh my God,' what an opportunity to bring the cancer centers together in a similar way that an athletic consortium comes together around the Big Ten.

"So many of us have NCI designation, and what a powerful voice it would be, with the potential to create an entity that would advance research, enhance clinical care, and have the potential to market the activities in a very effective manner, because of the Big Ten image and the network."

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Conversation with The Cancer Letter

Kantarjian: Why Drugs Cost Too Much And How Prices Can be Brought Down

Oncologists should spearhead efforts to bring down the prices of cancer drugs, said Hagop Kantarjian, chair of the Department of Leukemia at MD Anderson Cancer Center and lead author of a recent paper on drug pricing, published in the journal Blood.

The next item on Kantarjian's agenda is to organize a summit on drug pricing, tentatively scheduled for October.

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A recording of the interview is available on The Cancer Letter website

In Brief

ASCO to Present 2013 Special Awards

THE AMERICAN SOCIETY OF CLINICAL ONCOLOGY will present most of its **Special Awards** during the annual meeting beginning May 31 in Chicago.

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Midwest Cancer Consortium To Be Announced at ASCO

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The next morning, at breakfast, Rosen bounced the idea to five cancer center directors from the Big Ten institutions. They liked it.

"It seemed to resonate with everyone," Rosen said. "Then, a group of us started to communicate, and there was fairly universal enthusiasm."

The Big Ten Cancer Research Consortium's "kickoff"—as the organizers call it—is scheduled for 6:30 p.m., June 1, at the University Club of Chicago, during the American Society of Clinical Oncology annual meeting. Last November, the athletic conference allowed the consortium to use its name. Joint programs are yet to be determined, organizers say.

The consortium is part of a nationwide trend toward consolidation of and collaboration between cancer research institutions as they seek access to larger populations of patients (The Cancer Letter, April 19, Jan. 4, Jan. 11).

Designed to accrue patients with specific disease and molecular characteristics from across institutions, the Big Ten consortium aims to initiate studies efficiently to address questions of interest to academic researchers and industry. An established CRO—the Hoosier Oncology Group—will develop common contracts and is working to streamline the IRB process. All of this is intended to make it easier for pharmaceutical companies to work with the consortium. Also, the consortium will provide much-needed opportunities for young faculty to serve as PIs. (These opportunities have diminished as the cooperative groups contracted in recent years.)

Finally, cancer centers may be able to raise money through the Big Ten name.

Altogether, the consortium cancer centers see 31,356 new cancer patients per year. The centers are:

• Indiana University (Indiana University Melvin and Bren Simon Cancer Center)

• Northwestern University (Robert H. Lurie Comprehensive Cancer Center)

• Penn State University (Penn State Hershey Cancer Institute)

• Purdue University (Purdue University Center for Cancer Research)

• Rutgers University (The Cancer Institute of New Jersey becomes part of Rutgers on July 1)

• University of Illinois (University of Illinois Cancer Center)

• University of Iowa (Holden Comprehensive Cancer Center)

• University of Michigan (University of Michigan Comprehensive Cancer Center)

• University of Minnesota (Masonic Cancer Center)

• University of Nebraska (Fred & Pamela Buffett Cancer Center)

• University of Wisconsin (Carbone Comprehensive Cancer Center)

The Big Ten Name

Working closely with Rosen, Patrick Loehrer, professor of medicine and director of Indiana University Melvin and Bren Simon Cancer Center, started to design the blueprint for the consortium after initial discussions in February 2011.

In July 2012, ten cancer centers voted to join, appointing a steering committee.

"The notion of collaboration between institutions is now being endorsed by the NCI," Loehrer said to The Cancer Letter. "The Big Ten institutions are close enough that we can get together, but we are far enough apart that we don't have to feel like we are competing with each other."

The centers have committed to putting in some money—$14,000 a year—to cover the consortium's general infrastructure costs.

"We need to deliver, and we'll deliver in the next two to three years," Loehrer said. "We hope industry will support these trials.

"If we can get the Big Ten Network to do

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the commercials for us, to have the kids help with fundraisers and the ticket sales, we think, theoretically, we can capitalize on the name of the Big Ten to help raise money for this.

"Say you've got a football stadium full of 50,000 people—if they give 25 cents, that's still $10,000, if they give a buck, that's $50,000 dollars.

"You can have a competition that says, 'Indiana University hates Purdue, but both IU and Purdue hate cancer worse,'" Loehrer said. "There's competition on the field, but together we're competing against the bigger foe that is cancer.

"So we can take the biggest rivalries and capitalize on that—there's a lot of different avenues of coming at it.

"All of us old docs have been around for a while and have contacts with various people at institutions and coaches—we help them out, they're going to help us out too, so I've got no doubt about that."

The Big Ten name gives the consortium an opportunity to draw philanthropy, said Max Wicha, director of University of Michigan Comprehensive Cancer Center.

"Each of us have quite large groups of athletic departments, and many of us have actually worked in our cancer centers already with athletic departments to do fundraising with different kinds of cancer," Wicha said to The Cancer Letter.

"But we thought that the Big Ten consortium would enable us to do it in a more organized way and help to do some joint fundraising with our athletic departments, and maybe even approach the Big Ten television network to see if they might have an interest once we get this underway and announce this."

Although the consortium has not been officially presented to any university's athletic department, cancer center directors say that anecdotal feedback has been positive.

"I have talked to the president and provost of Northwestern who are enthusiastic supporters, I had one brief conversation with a commissioner of the Big Ten who was actually at a separate event unrelated to this activity—just mentioning what our idea was," Rosen said. "He seemed enthusiastic, and hopefully we'll have them engaged."

The University of Michigan athletic department, too, is supporting programs at the institution's cancer center.

"They've put on events for us individually and this is a way of doing it even more," Wicha said. "I'm sure that both the athletic department and the cancer centers will want to publicize this, because I think it's actually good for both."

The goal is to get the consortium up and running in three to four months, Loehrer said.

"I can't tell you specifically when the first Big Ten trial will open, but I think this ASCO meeting in Chicago will be a great time—not only to talk when the industry comes in, but also to see where the wealth of ideas may be coming out of the meeting," Loehrer said.

"We are going to try to remove all the obstacles we can ahead of time, particularly with the contract negotiations. We want to make it as minimal as we can, but it realistically takes awhile."

Cancer center administrators hope that fans of the Big Ten athletics would recognize a noble cause when they see it.

"People recognize the importance of conquering cancer and doing it fast, and everyone that I know, including myself, and I'm sure people who are watching whatever game that's going on, have family members or relatives or friends or neighbors who are affected by cancer," said Maha Hussain, a steering committee member for the consortium.

Hussain is associate director for clinical research at the University of Michigan Comprehensive Cancer Center and associate chief for clinical research at the Division of Hematology/Oncology and a past chair of the FDA Oncologic Drugs Advisory Committee.

"So while it may not be the most pleasant subject to bring in while the team is playing, it certainly is a subject that has a huge impact on people's lives," Hussain said to The Cancer Letter.

Trust and communication is essential to the success of the consortium, and that, Rosen said, already exists among the Big Ten cancer center directors.

"The beauty is that not only is there an academic connection, but on a personal level, we all like each other, we get along well, and so I have great confidence that this is going to flourish," Rosen said.

A Sales Pitch for Pharmaceutical Companies

The greatest selling point of the consortium is the combined scientific strength and proven track record of individual institutions in clinical research, as well as Hoosier Oncology's reputation for being able to manage networks of institutions doing clinical research, said George Wilding, director of Carbone Comprehensive Cancer Center at the University of Wisconsin.

"We hope that would be very attractive to industry and we hope that it provides us with the platform to bring our research into the clinic to apply things like molecular imaging and genomics," Wilding said.

One of the consortium's goals is to harmonize contracts and scientific review processes to expedite clinical trials.

"Right now, phase I and II trials involve multiple institutions," Wicha said. "Each of that has to be negotiated separately the way it's set up now and it takes such a long time to actually get these open in multiple institutions.

"We want to have one contract so that if a pharmaceutical company signs a contract with the Big Ten network, it will automatically be accepted in all of the Big Ten institutions," he said. "So the pharmaceutical group won't have to work with 11 different institutions—they could work with one and get it all accepted."

"Industry wants to make sure that if they are going to do a trial, it will be a rapid turnaround," Loehrer said. "So we want to facilitate research, make it easier and take the burden out of what has become very, very complex, in terms of conducting research."

The consortium pools together talent and patient populations from more than ten institutions and states—an attractive resource for companies looking to test compounds specific to rare tumors and mutations, and that want to screen large numbers of patients for small molecular subtypes.

Each institution also brings unique expertise. For instance, Purdue University Center for Cancer Research is strong in basic science; the University of Michigan Comprehensive Cancer Center has experience in cancer stem cell research; and the University of Illinois Cancer Center has a phase I unit and a number of unique drugs in development.

"We also have a patient population that is one-third African-American, one-third Hispanic and one-third 'other,'" said UICCC Director Howard Ozer. "This allows us both to provide unique trials and translational questions and to test those among minority patients.

"We also have nanotechnology, veterinary treatment, and two of the natural products centers of five in the country."

"Awesome People"

Asked about her cancer center's unique contributions to the consortium, Hussain said: "I mean, awesome people? How about that?

"We have first-class expertise in molecular and genetic analyses that we have started implementing in clinical trials and for discovery purposes," Hussain said. "I'm sure other institutions have talents in areas that are complementary that we can then leverage."

A program called Cancer Care Engineering may be the key to managing the vast amounts of clinical trial data that will be collected by the consortium.

"I've been working with Purdue for the past five or six years and the CCE project had various different laboratories doing analyses on colon cancer—some in Purdue, some in Notre Dame, some in Bloomington, some in Indianapolis—and they created a CCE hub that is able to take all of the information," Loehrer said. "It becomes open access, so investigators will get all of the pieces of data."

"It allows us to do modeling, not just based on proteomics but actually a combination of several different omics, that might be the best predictive model for a particular disease.

"So I could anticipate that this hub will actually serve as the repository for the various different laboratory pieces that are coming into clinical trials.

"This will be the fun part of the whole Big Ten—we'll find talent and opportunities that each of these institutions have to offer.

"It will serve industry to be able to complete a trial quicker, we can have young researchers doing investigator-initiated trials, and it serves the patients because they can get treatments closer to their home instead of flying across the country."

Filling a Niche in Clinical Research

The consortium will only focus on phase 0 to II trials because larger trials—even a randomized phase II trial—are difficult to conduct at a single cancer center.

"Many of the trials that are being done now are looking at rare tumors or molecular findings of common tumors," Loehrer said. "If we do more molecular-based therapy and genomics and particularly, phase I programs, we may be able to characterize a certain mutation, a rare mutation.

"By sharing that information and letting people know what studies are open, we can also try to develop some phase II studies."

Trials conducted by the consortium would have a co-principal investigator from at least two institutions

in the Big Ten—one of whom is an assistant professor-level junior investigator.

"We all face the same kind of challenges—as we start to characterize tumors at a molecular basis, we wind up getting small groups of patients within different kinds of cancer that may share common genetic profiles of mutations," Wicha said.

"So that if we're going to want to do clinical studies with targeted therapeutics, it's going to be necessary for organizations to work together, because any one organization is only going to have a limited number of patients with a particular molecular defect in a particular cancer."

Some molecular defects may go across cancers, and researchers are trying to think more in terms of pathways and inhibitors across the pathways, Wicha said.

"All of us at cancer centers have now been working with pharmaceutical companies who also are thinking in the same way. Now it's clear to them that their drugs target the pathways in multiple cancer types.

"And so, there needs to be kind of an opportunity for a good marriage now between molecular analysis of tumors and targeted therapeutics that would be done by a group of cancer centers together who would agree to cooperate to do these kinds of trials in a careful but very efficient manner.

"We figured that the niche for this is to do exactly these molecularly-annotated types of trials that involve a high amount of scientific correlation along with the trials," Wicha said.

"And we thought that within the Big Ten cancer centers, we had lots of expertise in that different cancer centers actually brought specific areas of expertise that could be shared among other Big Ten institutions."

Many of the directors of the Big Ten cancer centers often get to see each other at directors' retreats or various meetings, Wilding said.

"So it was no big burst of sunlight when the idea came up," Wilding said. "A lot of times it would be three or four of us sitting, having breakfast together someplace in Washington, D.C. or what not, kicking the idea around and saying, 'Well, what do you think?' and 'What would be the focus of this, how would we structure it?' and so it evolved over the past couple of years.

"There are always studies ongoing at each of the institutions that probably involve one or two or three other institutions, so there's always been this activity going on—so why not formalize it and make it more structured and actually use those relationships to collectively do research and attract more research?" Wilding said.

Using the strength of the Big Ten, the cancer research consortium can hope to affect public policy and communicate messages relevant not only to member institutions, but the national mission related to cancer care, Rosen said.

"We have the potential to do so many other things besides clinical trials because of the association from training and educational initiatives to sharing resources."

Hoosier Oncology Serves as CRO for Consortium

Conducting clinical trials across so many institutions requires a centralized clinical research infrastructure that is facile in multi-institutional and community-based research.

Hoosier Oncology, a working association of over 400 community and research center physicians, and clinical research practitioners, was selected in October 2011 as the CRO for the consortium.

Formerly a subsidiary of the Walther Cancer Institute, Hoosier Oncology is now a separate non-profit organization for which Indiana University has served as the research base.

"Although Hoosier Oncology is clearly associated with Indiana University, it has a separate structure and it already has done linkages with many other different academic institutions around the world, so it's suited to do this," said Loehrer, one of Hoosier Oncology's founding fathers. "They're going to be the facilitators to help serve this board and make it happen.

"They're trying to arrange between every institution and they're uniquely suited to do this, but this is not a Hoosier Oncology-run organization, rather Hoosier Oncology is serving this organization to facilitate the research among the leadership."

Since its inception in 1984, more than 3,000 patients have been enrolled and treated in over 120 trials conducted by Hoosier Oncology.

"I think we all agree that we could use the expertise of that type of multi-institutional clinical research base to essentially be the research coordinator," Wicha said. "Hoosier Oncology will provide the infrastructure for that with the understanding that we will work on things across institutions.

"That will greatly facilitate things and make it a lot quicker."

Hoosier Oncology will also coordinate research development, program management, data systems and support services.

"Hoosier Oncology has the expertise of getting things approved within just a few months of getting

them into the system," Wicha said.

"I was actually delighted that the team, both the business and the lawyers of Hoosier Oncology, have been in communication with our own contracting and IRB at the University of Michigan and are making really good progress with trying to get all of the approvals in place.

"Because what this is, is taking an exemplary institution who can do things in a very good way and then saying, 'We're going to apply that across the whole Big Ten.'"

Participating cancer centers have a lot of confidence that Hoosier Oncology's strong infrastructure can take care of the business aspect of the consortium, Wilding said.

"If we had to start that from scratch, that would take quite some time, and that was the attractiveness of using Hoosier Oncology as our operations center."

A PI Opportunity for Junior Investigators

There is an immense void for junior faculty for their career development and their ability to lead trials, particularly in phase I and II, and this is where the consortium comes in, said Noah Hahn, BTCRC interim executive officer and assistant professor at the Division of Hematology/Oncology at the Indiana University Melvin and Bren Simon Cancer Center.

"Their avenues to conduct such trials are evaporating," Hahn said to The Cancer Letter. "The national cooperative oncology groups have largely become phase III trials.

"Investigators can spend often well over seven to ten years before they can get into a position where they can lead such a trial.

"There was recognition that there was a need for the career development of a lot of junior faculty at the cancer centers that was not being filled by the disease-specific research venues and not being filled by the national cooperative oncology groups."

The chances of coming up with an idea, pitching it, and having it approved in a cooperative group and getting it done before an investigator's offer of tenure—is nearly impossible, Loehrer said.

"So in my mind, this is not about old guys getting together," Loehrer said. "It's really trying to create a clinical laboratory for young investigators so they can grow."

The idea is to bring in fresh blood and fresh ideas and translate those in a faster way, said Hussain.

"If you have an idea that, if you do it alone, it might take you four years to get to the results—how about if you work with five or six or ten other institutions and somehow finish it in a year and a half and get the answer to the idea you proposed?" said Hussain.

"The reality of it is this: we cannot afford to spend more time and be inefficient in getting to the goal to hopefully cure or significantly impact mortality from cancer soon, and make life better for our patients," Hussain said.

"I do think that the days of doing trials at one institution are probably not gone—however, any time you have an idea that capitalizes on the intellectual thrust of lots of smart people collaborating with either the federal agencies or pharmaceutical companies to try to answer questions in a meaningful and timely way is a win-win for everybody."

Conversation with The Cancer Letter

The Next Step: A Summit

(Continued from page 1)

"I think, realistically, we have to end up with the solution where cancer drug prices almost never exceed $30,000 to $50,000 a year, and on average they should be in the range of $5,000 to $10,000 a year, reversing the pace of the cancer drug prices to what they were 10 years ago," Kantarjian said.

Kantarjian spoke with Paul Goldberg, editor and publisher of The Cancer Letter. An audio recording of the conversation is available on The Cancer Letter website.

Paul Goldberg: *It's really quite a landmark to see doctors calling for moderating prices of drugs. I guess my first question is why are you doing this, and why now?*

Hagop Kantarjian: My involvement in the high cancer drug prices was triggered by two events. The first one is that we've been working with three chronic myeloid leukemia drugs over the past several years—bosutinib, ponatinib and omacetaxine—and we are very fortunate to have these three drugs approved for different indications in CML by the FDA in 2012, but I was really shocked that all of them came at an annual price of over $100,000 per year.

Also, by digging further, I found out—and I was shocked because I'm a CML expert, so I would prescribe imatinib on a daily basis—I was shocked to learn that in January 2013, that the price of imatinib that came at about $25,000 to $30,000 in 2001, has increased in the past 10 years to over $90,000.

This is despite the facts that the initial price of imatinib had accounted for all the costs of research, the population-at-risk was expanding because patients were living longer, and there were new indications that were approved. So, there was really no reason for imatinib to increase in price, except to make more profit—which, in my view, appears to be a situation where we are crossing a fine line between reasonable profit for companies, and a situation that could be described as profiteering.

PG: *I don't really think of you as an anti-industry person. In fact, every time I see you it's been at ODAC, where you've been presenting data as part of NDAs for drug companies. So the evolution of your thought might be just looking at the price tags; is that correct?*

HK: First, I'm not an anti-industry person. I think people have different roles in cancer research, but we are all aiming for the same thing—to discover new cancer drugs that help patients improve their prognosis and prolong their survival, and hopefully, in time, to cure the cancers. So I've worked extensively with drug companies.

I view myself as a pro-industry person, because we've had very positive relationships. If you look at my career and my career of cancer research at MD Anderson, we have developed different drugs for different indications—in CML, with the tyrosine kinase inhibitors, in ALL, with other drugs, and in myelodysplastic syndrome, with decitabine, and so on. So, the relationship has been a very positive one.

But what I worry about is that there is a recent trend that is a negative trend. And it is negative not only for the patients, but also for the drug companies, because if you look at the cancer drug prices before 2000, they used to come at about a price of about $5,000 or so.

Gleevec set the pace for a significant increase in higher drug prices—$25,000 to $30,000 per year—and at that point in time, the CEO of Novartis [Daniel Vasella] wrote in his book justifying the high price.

So, following the imatinib experience, in 2005 you start seeing the cancer drug prices come at a range of $30,000 to $50,000. Today, they all come for over $100,000. This is a negative trend, because it looks at the short term profit of the companies, but it doesn't look at the long term potential of these drugs if you have a better penetration into the market.

When we talk about drug prices, we have to ask ourselves three basic questions. One, are the cancer drug prices too high? The obvious answer is yes.

Are they harming the patients and the healthcare system and are they harming our society? Again, I think it's an unqualified yes.

And can we as cancer specialists do something about it? I think we have to remember that our first obligation is to our patients. We have the Hippocratic Oath that says, "First, do no harm," so if we believe that the patients are being harmed by the high cancer drug prices then it is our obligation to do something about this.

I am not anti-industry; I'm pro-industry. I think the industry may have been misled by economic experts, who convinced them of two possible fallacies. The first one is that if you lower cancer drug prices you don't increase the population being treated and you don't increase the profits, which is false.

The second one is the fallacy that states that oncologists do not care about cancer drug prices—they care only about efficacy and toxicity. One, I think that's not true because when you look, for example, at recent abstracts by Ezekiel Emanuel [professor of health care management and a professor of medical ethics and health

policy at the University of Pennsylvania], he states that 90 percent of oncologists will chose a cheaper cancer drug over a more expensive one if efficacy and toxicity are similar.

PG: *I see from the Blood paper that you've become something of a student of economics. And based on what you see as an economist, or an armchair economist, whatever you wish to call yourself, how are drugs actually priced? Is it value pricing? Is it what the market will bear? What's the pricing approach?*

HK: There is no doubt in my mind that the prices of cancer drugs are extremely high and they are harming the patients and our society. When you ask about how cancer drug prices are set, people refer to three arguments.

The first one is that they are very highly priced because the cost of developing a drug is a billion dollars. And this figure—which includes the cost of development of all failed drugs, salaries, bonuses, etc.—this figure, which is quoted as almost truth, comes from one source, which is the researchers at Tufts University who are funded by the pharmaceutical companies.

When you look at independent experts such as Donald Light [professor of comparative healthcare at the University of Medicine and Dentistry of New Jersey], they put the costs of research to as low as 5 to 20 percent—so not $1 billion, but as low as $100 million or less. If the cost of research is actually 10 percent of what is quoted, then I think cancer drug prices could be reasonably set at 10 percent of what they are now, which is a range of $10,000 to $20,000 per year.

When you bring this argument, they say that is not true—we don't price the drugs based on the costs of research. We price them based on the cost of relative benefit, meaning an improvement in survival, an improvement in the quality of life, reductions of pain, and so on.

And again, when you do an analysis, you find that there is no correlation of the actual cancer drug price and its real benefit.

And the third argument is that cancer drug prices reflect what the market will bear—and in a free economy they will settle at a reasonable level. Again, what you see is that this is not happening, because for many cancer indications there are five to eight cancer drugs that provide the same benefit and toxicity profile with minor differences, but all those prices continue to stay very high.

So, in my opinion, there may be what is called a gaming doctrine. And this was described by Joseph Stiglitz [university professor at Columbia University] in his book The Price of Inequality. What he says is that for certain commodities, even though you have a competitive market, somehow there's a collective, collusive behavior that keeps the prices high for a very long time.

Now, why is this happening in the cancer drug prices? I think again it is the bad advice given by the economic experts. I had a conversation with one of the CEOs of a drug company following that article, and that company has a drug that came fifth on the market for a cancer indication. The market is over a billion dollars per year. So coming fifth on that indication, they anticipate selling $10 to $20 million next year.

I said to him, "Wouldn't it be logical—since your drug is similar to the other four or five—why don't you price your drug half of that of the others? And then we could go out and say that, in fact, those drugs are the same, and then you can publicize the truth that your drug is cheaper and you can maybe capture, for the same year, a $200 million market?"

And he was still not convinced that that's the right thing to do. I'm surprised that companies compete for everything except for the drug price. They spent 20 percent of their revenues to publicize the relative benefits of their cancer drugs, but they do not want to gain more of the market by cutting down on the drug prices.

PG: *I'm not an economist, so it's possible that what I'm about to say is wrong, but it seems that prices of drugs go up all at once. They kind of skip from level to level, and it almost looks like drug companies are jumping while holding hands, all together. There was a $30,000 jump that you mentioned, then there was a $50,000 jump, and now we are at the $90,000 level or so. So why is this happening or is this actually happening—and while you are thinking about it, what's the next jump?*

HK: I'm not an economist either, so I do not know really why this is happening, except to say again that I think there is some kind of force in the free market economy that is not making market competition work

as it should.

I must say that if you look at cancer drug prices, there are two kinds of cancer drugs. The generics, where the market forces are working too well, so the prices of drugs go so low that generic companies get out of the competition.

There, you get a situation where you have drug shortages—of course there are other causes, FDA rules, the short supply of the basic ingredients to make these drugs, and so on. Also, the possibility of the black market, so the distributors hoard the generic drugs when they know that there is a generic company that has some trouble.

For the generic companies, the market forces are working so well that the prices are so low that there are shortages. And, by the way, shortages in cancer generics in Europe happen much less often, because the generic prices are higher than what they are in the U.S.

The opposite happens for the patented drugs here—you do not see market competition on prices, so the prices are too high. So what's the solution? I think we need to come to some sort of agreement that the market forces are not working and we have to come up with a solution that works for both the generic and the patented drugs.

Now, for the generics, we have published on this and proposed solutions. One of them is not to allow the generic drug price to fall below a certain level where it makes it not profitable for generic companies to compete. So you could say, well if a patented drug price is $20,000 or $30,000 and a generic comes at let's say 5 or 10 percent, so maybe a range of $2,000 to $5,000—but it shouldn't go below $500 a year.

PG: *Well, if we are talking about Europe, the difference between the U.S. and Europe is that their governments sit down with drug companies and negotiate the baskets of goods of the entire thing. In the U.S. there is no negotiating.*

HK: Well, that's the problem. When you talk in the U.S. about some form of price oversight people start screaming about socialized medicine, and the communistic system, and how bad it's going to be, and this will generate major shortages and it will stifle innovation, and so on. So any time you talk about some form of oversight, you have all these counter arguments.

But when you are dealing with health, with life and death, and with suffering, I think we have to consider that the price of cancer drugs has to be more of a fair price than what the market will bear. Obviously, the free market economy in cancer drug prices has not worked, so we have to find alternative solutions. And those solutions should not be considered a form of socialism.

It's not socialized medicine—it's more of a form of societal medicine, where we want companies to profit, and we want to continue to foster innovation, but at the same time we want to set a price that would give good profits but will be affordable to the patient.

It would not result in drug shortages, but at the same time it would not result in a situation where the patients cannot afford to pay for the drugs and therefore would die.

And you pointed out that in Europe and Canada there are some forms of government oversight; and, in fact, for patented drug prices, the price of these drugs is sometimes half, or less than half, of what it is in the U.S.

To give you an example, the price of imatinib in the U.S. is $90,000 a year. In many European countries it's between $30,000 and $50,000. In Korea it's $30,000.

This brings another question. People do not realize this, but most of the basic research is paid through taxpayers and public funds. If you look at the basic research, which are the essential steps toward innovation and discoveries, 85 percent of that basic research support comes from public funds and taxpayers' money.

If you look at the support of pharmaceutical industries given to basic research, not to clinical research, it's only about 1.3 percent of their revenue. So if we are funding the basic research, encouraging the innovation, and producing those discoveries mostly in the U.S., why is it that once these drugs are approved we are still paying twice as much as other countries? It's like a double jeopardy for the U.S. citizen and the U.S. patient.

PG: *I think about the example of one drug, Zaltrap, as a proof of principle of a company's vulnerability to efforts by doctors and major institutions to lower the price of drugs. So, a recap: Memorial Sloan Kettering Cancer Center excluded Zaltrap from its formulary because the drug cost twice as much as Avastin without attributing comparator to Avastin so the company responded to this by slashing the price by 50 percent* (The Cancer Letter, Nov. 2, 2012, and Nov. 9, 2012, and Nov. 16, 2012).

So, listening to Zaltrap, what does Zaltrap say to you?

HK: The Zaltrap experience was unique.

I think, to my recollection, it was the first example

ever where a cancer drug company responded to the advocacy of oncologists on behalf of their patients. And this is what encouraged us to do the Blood article, where we used a different approach.

We used the collective pressure of a group of 100 CML experts who argued that the prices of cancer drugs are too high. But if you look at the Zaltrap experience, or incident, it is a bit unique—because the new drug, which was almost identical in efficacy and equivalence to the existing drug, was priced twice as high.

So the pressure led them to reduce the price of Zaltrap to the one equivalent to Avastin. They really didn't do any big favors to the community, except to say that if we want to sell our drug we are going to price it the same as the drug that exists, which already has a very high price.

Now, does this mean that we cannot put on pressure, or that we can't have a dialogue with the pharmaceutical companies? I think we can.

You brought up the issue of what's next—I think what's next is something we are preparing. We would like to propose what we would call a Summit on Cancer Research, Care and Economics.

What I propose is that the summit will involve all the experts in cancer research and care—so people who are involved in the bureaucracy of cancer research and the cost of cancer research, the lawyers, the regulators, the oncologists, the patients and their advocates, the pharmaceutical companies, and the insurance companies. We will sit at the same table over a period of one to two days and we will discuss the various components of that puzzle that causes the high prices of cancer drugs and cancer care.

Then we have to come up with a realistic solution that cuts down the prices of cancer drugs, and the cost of cancer healthcare, which will have implications on healthcare in general.

PG: *My favorite word in your Blood paper is "dialogue," and you're calling for this dialogue in drug pricing, but who is in charge of the dialogue? Who is setting the table that you are referring to? Would it be you?*

HK: We're all in this together, so we as oncologists cannot set the pace of the summit and those discussions. I think what I'd like to do is invite all the various constituents or components who are involved in cancer care and cancer drug prices and sit together and decide what we want to do.

I think, realistically, we have to end up with the solution where cancer drug prices almost never exceed $30,000 to $50,000 a year, and on average they should be in the range of $5,000 to $10,000 a year, reversing the pace of the cancer drug prices to what they were 10 years ago.

Because nothing has changed if you look at the average income of a U.S. family; it has not changed over the past 10 years. If anything, it has decreased a little bit, except for the top 1 percent or 10 percent, where their income has increased. But for the average citizen their income has remained the same.

If income has remained the same and patients develop cancer all the time, the prices of cancer drugs should be reasonable compared to what they were 10 years ago.

PG: *I guess what I'm really imagining is some kind of committee of concerned physicians. Is that what you are imagining? Because that's kind of what I'm hearing.*

HK: Ultimately, I think what we have to do for the cancer drug prices is have some form of an agreement—that, for cancer drugs, when they receive FDA approval, there should be a committee or a group of people who involve not only the oncologists, but also the people from the FDA, the NIH, the regulators, the Congress people, the pharmaceutical companies, and the insurance companies, and say, well, that's a reasonable of this price of this drug, based on its comparative efficacy to what exists and the comparative price to what exists.

We have to come up with a solution like this, because, when you think about it, we think of cancer as uncommon—but the reality is that cancer will hit one out of three individuals in their lifetime.

This is going to hit very close to home. It's going to affect our parents, our spouses, our children, and our dear friends, and it's going to affect us repeatedly. Even if you have the best insurance, the rate of bankruptcy among people who develop cancer, even when they are fully insured, is much higher than somebody than someone who doesn't get cancer.

If cancer will affect one in three individuals, you see the social, personal, financial, and family impact of cancer drug prices on individuals—and it's going to happen to every family we know.

We have to discuss the cancer drug prices as one of the most serious issues. Sandra Swain [ASCO President and professor of medicine at Georgetown

University] called it the big elephant in the room that nobody's willing to address. We have to address the high cancer drug prices.

PG: *I guess what I'm really asking is, how will you make the other side come to the dialogue? Who are the other parties in the dialogue?*

HK: I think there is not one side or the other, we are all in the same game, and we want to cure cancer. So the research by the pharmaceutical companies, academic centers and researchers have the same aim: to develop cancer drugs that cure cancer.

With the current situation in cancer drug prices, suppose you find a cancer drug that cures 100 percent of the cancers but it is affordable to only 10 percent of the patients. Then, in my opinion, you have not found the cure to cancer.

The price of cancer drugs is an integral component to the cure of cancers and what we have to do is come together—and that includes the pharmaceutical drug companies—to decide on a reasonable strategy to price both generics and patented drugs so that there are no high prices for patented drugs and no drug shortages for generics.

PG: *The part I'm not really clear on, and maybe it's just not the right time to ask this question, maybe it's going to come up later, is who is negotiating on your side? What is your side?*

HK: We are the oncologists. I think our mandate is to put our patients first, and the rest will settle itself. I view the situation in the U.S. today as a situation where the high cancer drug prices are harming our patients. Our mandate is to protect our patients from harm.

Rather than accept that high cancer drug prices are a necessity, we should say that the high cancer drug prices are a recent trend that is harming the patients—and we have to start advocating and vocalizing our concerns so that we have a situation where we have a dialogue that can reduce the cancer drug prices.

As I said, cancer drug prices over $100,000 a year are an impossibility—they are very harmful, and my realistic expectation is that those cancer drug prices should be at least a third of what they are today.

PG: *When you spearheaded the efforts that lead to the Blood paper, did you feel that this was crossing the Rubicon, that there would be no way back?*

HK: No. On the contrary, I think that the relationship of cancer experts with pharmaceutical companies is a collaborative one.

We have to continue the alliances, because the research will end up being supported at the clinical research level by big money that comes from pharmaceutical companies.

I don't think I've crossed any Rubicon. I think what I've done is simply disagreed with the cancer drug prices as they are today, which I believe is a recent matter on the part of the pharmaceutical companies, because of bad advice by their economics experts.

All we have to do is simply convince pharmaceutical companies to look at the long range rather than the short range for profit. Their financial interests and wellbeing in the long term is tightly linked to the financial and physical wellbeing of patients with cancer, and to the wellbeing of the healthcare system. Reasonable drug prices are a win-win for all concerned, including the pharmaceutical companies.

And no there's no crossing of the Rubicon; I think there is a simple disagreement of one issue, which is the current cancer drug prices are an aberration that needs to be rectified.

PG: *Has this been an education in politics?*

HK: No, I'm a novice in this arena and hope to remain so.

I've been involved in cancer politics or economics twice in my professional lifetime. The first time was two years ago, when the cancer drugs were in shortage, and we advocated for solutions, and today with the high cancer drug prices for patented drugs, because I feel that they are really affecting the care of my patients and harming them.

Again we have to remember that our only mandate is to our patients. They come first, everything else will follow. As soon as we rectify this issue with the high cost of care in cancer and in cancer drug prices, I would like very much to go back to my primary passion which is leukemia research.

PG: *In a nutshell, what have you learned so far?*

HK: What I've learned so far is that you can change things. We do not have to accept things as they are. High cancer drug prices are not something we need to accept. Cancer drug shortages are not something we should accept. Once we see problems that are harming our patients, we should speak out. We should publicize the issues. We should try to find positive solutions.

Turmoil in Texas

More Bad News for AVEO As Tivozanib Partner Bids Adieu

By Paul Goldberg

Astellas Pharma Inc., the Japanese partner of AVEO Oncology Inc., said it would not submit a European application for the drug tivozanib and would not sponsor any more clinical trials of the agent.

AVEO reported the pullout in an SEC filing—Form 8-K. The filing reads:

"On May 17, 2013, AVEO Pharmaceuticals, Inc. was informed by its partner, Astellas Pharma Inc. that Astellas no longer intends to submit a Marketing Authorization Application to the European Medicines Agency for tivozanib for the treatment of patients with advanced renal cell carcinoma. Astellas also informed the company that it does not intend to fund any future trial(s) in RCC under its strategic collaboration with the company.

"In February 2011, the company entered into a collaboration and license agreement with Astellas, pursuant to which the company and Astellas share responsibility for continued development and commercialization of tivozanib in the United States, Canada and Mexico and in Europe under a joint development plan and a joint commercialization plan, respectively.

"The company is currently evaluating the effect of Astellas' decision on the clinical and regulatory path forward for tivozanib in RCC."

AVEO Oncology isn't taking questions from the media until the time when FDA announces its final decision on tivozanib.

The agency is expected to act before July 28. However, there is little doubt about what the agency will do. It will likely take the advice of its Oncologic Drugs Advisory Committee, which voted 13 to 1 earlier this month to recommend denying approval of the agent (The Cancer Letter, May 3).

FDA has never approved any drug that demonstrates lower overall survival. A year ago, on May 18, 2012, MD Anderson Cancer Center President Ronald DePinho, one of AVEO's founders and until recently a member of its board, touted the company's stock in an appearance on a CNBC show for investors. He did not mention—and says that he didn't know—that six days earlier, FDA had told the company about its concerns about lower survival on the tivozanib arm in the company's pivotal trial (The Cancer Letter, May 10)

DePinho left the AVEO board last year, and acknowledged having sold some stock since stepping off the board.

Last year, the UT System directed DePinho to place his holdings in a blind trust. However, this process is yet to be completed.

On May 15, AVEO and Astellas announced the presentation of tivozanib data at the upcoming meeting of the American Society of Clinical Oncology.

In Brief

ASCO to Present Special Awards At Annual Meeting in Chicago

(Continued from page 1)

The 2013 Special Awards Honorees are:

• **Martine Piccart** was named recipient of the David A. Karnofsky Memorial Award and Lecture. She is a professor of oncology at the Université Libre de Bruxelles and director of medicine at the Jules Bordet Institute, in Brussels.

Piccart is a leader in international breast cancer research collaboration and drug development, and serves as the principal or co-principal investigator for numerous clinical trials. She is co-founder and chair of the Breast International Group, uniting 49 international academic research groups and running more than 30 trials. She is president of the European Society for Medical Oncology and president-elect of the European CanCer Organization. She is also a Fellow of the American Society of Clinical Oncology.

Her award will be presented at the meeting's opening session, Saturday, June 1 at 9:30 a.m. at McCormick Place in hall B1.

• **Charles Sawyers** was named recipient of the Science of Oncology Award and Lecture. He is head of the Memorial Sloan-Kettering Cancer Center Human Oncology and Pathogenesis Program. Sawyers is president-elect of the American Association for Cancer Research and past-president of the American Society of Clinical Investigation, and serves on the NCI Board of Scientific Councilors. He is also a Member of the Institute of Medicine of the National Academy of Sciences.

His laboratory is investigating how prostate cancers progress to castration resistance. Their first breakthrough came from studies of isogenic castration-sensitive and castration-resistant xenografts, where they found that increased androgen receptor expression was both necessary and sufficient to confer resistance.

His award will be presented during the plenary

session, Sunday, June 2 at 1 p.m. in hall B1.

• **Kenneth Offit** was named recipient of the ASCO-American Cancer Society Award and Lecture. He is chief of the Clinical Genetics Service at Memorial Sloan-Kettering Cancer Center, a member of the Program in Cancer Biology and Genetics at the Sloan-Kettering Institute, and a professor of Medicine and Public Health at the Weill College of Medicine of Cornell University.

In 1996, his research group discovered the most common genetic mutation associated with inherited breast and ovarian cancer, occurring among Jews of European ancestry. Offit's lab also discovered or described recurrent mutations causing increased risk for colon and prostate cancer. In 2002, his group was the first to prospectively measure the impact of preventive ovarian surgery in individuals carrying BRCA mutations.

His award will be presented Monday, June 3, at 4:45 p.m. in room S100a.

• **Arti Hurria** was named recipient of the B.J. Kennedy Award and Lecture for Scientific Excellence in Geriatric Oncology. Hurria, a geriatrician and oncologist, serves as the director of the Cancer and Aging Research Program at City of Hope.

She is also chair of the National Comprehensive Cancer Network Senior Adult Oncology Panel, editor-in-chief of the Journal of Geriatric Oncology, and vice co-chair of the Alliance Cancer in the Elderly Committee. Hurria is also a former grant recipient of the Conquer Cancer Foundation and a graduate of the ASCO Leadership Development Program.

Her award will be presented Monday, June 3, at 3 p.m. in room S100a.

• **Eduardo Cazap** was named the recipient of the Distinguished Achievement Award. He is the founder and first president of the Latin American and Caribbean Society of Medical Oncology, the immediate past president of the International Union against Cancer, and the recently designated deputy chair of the Developing Countries Task Force of the European Society of Medical Oncology.

In 2011, largely due to the work of the UICC and other international cancer organizations, the United Nations held an unprecedented high-level meeting on cancer and other noncommunicable diseases. Cazap served as co-chair of the United Nations Civil Society Task Force to advise the president of the United Nations General Assembly. In September 2010, Cazap was designated by the Argentinean government as a member of the Executive Board of the newly created National Cancer Institute of Argentina.

His award will be presented during a private function.

• **Larry Norton** was named the recipient of the Gianni Bonadonna Breast Cancer Award and Lecture. Norton is the deputy physician-in-chief for Breast Cancer Programs, and medical director of Evelyn H. Lauder Breast Cancer at Memorial Sloan-Kettering Cancer Center. He is the founding incumbent of the Norna S. Sarofim Chair of Clinical Oncology at MSKCC and a professor of medicine in the Weill Medical College of Cornell University.

He was an appointee to the National Cancer Advisory Board and served as chair of the Budget Subcommittee. He is a founder of The Breast Cancer Research Foundation and is its scientific director. Norton is a past-president and a fellow of the American Society of Clinical Oncology. His personal research has focused on the use of medicines to treat cancer and he has been involved in the development of several effective agents including paclitaxel and trastuzumab.

His award will be presented at the 2013 Breast Cancer Symposium, Sept. 7-9, in San Francisco.

• **Bella Kaufman** was named recipient of the Humanitarian Award. Since 2001, she has headed the breast cancer unit at The Chaim Sheba Medical Center at Tel Hashomer, which is affiliated with Tel Aviv University, and is a founder and leader of the Israeli Consortium for Hereditary Breast Cancer.

She sits on various committees that consult and advise the Ministry of Health as well as the Israeli parliament on key issues affecting oncology-related health policy. She was formerly the secretary of the Israeli Breast Group and is currently a member of the Israeli Cancer Association's research committee and steering committee.

Her award will be presented during the opening session, June 1 at 9:30 a.m. in hall B1.

• **Howard Soule** was named recipient of the Partners in Progress Award. He is executive vice president and chief science officer of the Prostate Cancer Foundation. Soule is a senior fellow of the Milken Institute and is a member of the Department of Defense Prostate Cancer Research Program Integration Panel.

His award will be presented during the Highlights of the Day session, Monday, June 3, at 8:00 a.m. in E Hall D1.

• **Garrett Brodeur** was named recipient of the Pediatric Oncology Award and Lecture. He is an associate chair for research in the Department of

Pediatrics, and an associate director of the Abramson Cancer Center in the Perelman School of Medicine at the University of Pennsylvania. He holds the Audrey E. Evans Endowed Chair in Pediatric Oncology at the Children's Hospital of Philadelphia.

He is actively investigating the role of CHD5, which encodes a neural-specific chromatin remodeling protein, in regulating neuroblastoma growth and differentiation, as well as its interaction with MYCN.

His award will be presented Friday, May 31, at 2:45 p.m. in room S504.

• **Richard Pazdur** was named recipient of the Public Service Award. He is the director of the Office of Hematology and Oncology Products in the FDA Center for Drug Evaluation and Research. This office was formed in 2005 to consolidate the review of drugs and therapeutic biologics for the diagnosis, treatment, and prevention of cancer as well as the review of drugs and therapeutic biologics for hematologic diseases and for medical imaging. He was the director of the Division of Oncology Drug Products from September 1999 to May 2005.

His award will be presented during the plenary session, Sunday, June 2, at 1:00 p.m. in hall B1.

• **Otis Brawley** was named recipient of the Special Recognition Award. He is chief medical officer for the American Cancer Society. He serves as a professor of hematology, oncology, medicine, and epidemiology at Emory University and is a member of the Centers for Disease Control and Prevention Advisory Committee on Breast Cancer in Young Women. He has previously served as co-chair of the Surgeon General's Task Force on Cancer Health Disparities and assistant director of the NCI.

His award will be presented at a private function.

The society will also recognize seven members as Fellows of the American Society of Clinical Oncology for their volunteer service, dedication, and commitment. Their awards will be presented during the meeting's opening session on Saturday, June 1, at 9:30 a.m. in hall B1. They are: **Stephen Cannistra, Michael Carducci, Eduardo Cazap, Martin Murphy, Joan Schiller, George Sledge Jr.,** and **Everett Vokes**.

LYDA HILL, a Dallas philanthropist, pledged $50 million to MD Anderson Cancer Center's **Moon Shots Program**.

The gift is the largest single private philanthropic contribution to the signature program of MD Anderson President Ronald DePinho.

In recognition of Hill's pledge, the institution will name the Lyda Hill Cancer Prevention Center in her honor.

"[The Moon Shots Program] represents a different direction for research that crosses disciplines and offers new hope for breaking cancer's codes," Hill said in a statement. "I'm pleased to offer my support to this historic effort."

Hill's gift will support:

• The lung cancer team's efforts to develop more reliable, low-cost screenings that can be available in community clinics, including blood-based biomarkers to detect the disease at its earliest stages;

• The breast/ovarian cancer team's integrated program to screen patients for BRCA1 and BRCA2 genetic mutations and to prescribe new personalized therapies.

Her gift also will support moon shot platforms, which provide infrastructure, systems and strategy in a variety of areas, such as cancer prevention and control, data analytics and research genomics.

Hill is president of LH Holdings and the Lyda Hill Foundation. She is a senior member of the MD Anderson Cancer Center Board of Visitors.

LOVELL JONES announced his plans to retire from MD Anderson Cancer Center and join **Texas A&M University**.

Jones is director of the MD Anderson Center for Health Equity and Evaluation Research, cofounder of the Intercultural Cancer and founder of the Biennial Symposium Series on Minorities, the Medically Underserved and Cancer.

Jones announced his plans in an email:

"I am gradually letting the word go forth that I am retiring from the University of Texas M.D. Anderson Cancer Center after 33 plus years. As I have said to a few others, eight years ago the institution decided to take another path when it established the Department of Health Disparities Research and started new minority research center, the Center for Community-Engaged Translational Research supported by Duncan Family Institute Funds.

"At the time, I pointed out that this was duplicative in terms of what the Center for Research

on Minority Health was doing. But my words fell on death ears.

"Let me state that I am not saying that this is effort is wrong, but that it was duplicative. That they made their decision and it is time for me to move on and not continue to beat my head against a brick wall. I came to Anderson to change the face of cancer, and this I have done. However, it is time to not only change the face of cancer, but that of health disparities. In that this is an American problem and not one of just the underserved.

"If everything goes according to plan, I will start on Sept. 1, 2013 as the executive director of the Trans disciplinary Center for Health Equity Research and Professor of Health and Kinesiology at Texas A & M University, with the ultimate goal of establishing a system wide institute for health equity. I also looking to have a part-time position at UTMDACC to continue to work on those grants of which I am the PI and are cancer center based."

CITY OF HOPE was **renewed as a comprehensive cancer center** by NCI, marking the institution's 30th year with an NCI designation.

The amount of the accompanying grant was not announced.

KENNETH COOKE was named director of the **Sidney Kimmel Comprehensive Cancer Center's Pediatric Bone Marrow Transplantation Program.**

As a professor of oncology and pediatrics, Cooke also will hold the Herman and Walter Samuelson Chair in Oncology at Johns Hopkins University.

He was the Ohio Eminent Scholar and Leonard P. Hanna Professor of Stem Cell and Regenerative Medicine and served as the director of the Pediatric Blood and Marrow Transplantation Program at the University Hospitals Case Medical Center, as well as co-director of the Hematologic Disorders Program at Case Comprehensive Cancer Center.

ANDREW GODWIN was named deputy director of **The University of Kansas Cancer Center**. Godwin was recruited to the center in 2010 where he served as associate director for translational research for nearly three years.

He currently serves as director of the center's biospecimen repository, as professor of pathology and laboratory medicine, and as director of molecular oncology at the University of Kansas Medical Center.

His research focuses on the concept of obtaining a molecular definition of a tumor to define its treatment-sensitive elements, with a long-standing interest in the fields of cancer genetics, molecular targeted therapeutics, predictive biomarkers, early detection and biobanking.

He has served as translational science co-chair or collaborating scientist for many Gynecologic Oncology Group clinical trials evaluating molecularly targeted agents in recurrent ovarian cancer patients, and as a member of the experimental therapeutic committee of the Eastern Cooperative Oncology Group.

THE AMERICAN COLLEGE OF RADIOLOGY elected its president and named several officers during its annual meeting in Washington, D.C.

Albert Blumberg was named president of the college. Blumberg is a fellow of the ACR, serves on the ACR Executive Council, and is immediate past-chair of the ACR Commission on Radiation Oncology.

He is vice chair of the Department of Radiation Oncology at Greater Baltimore Medical Center and a practicing radiation oncologist. Blumberg has served as president of the Baltimore County Medical Society and MedChi, the Maryland State Medical Society.

Geoffrey Smith was named vice president. Smith recently served as chair of the ACR Commission on Membership and the Committee on Chapters. He is a fellow of the ACR and is a former member of the ACR Board of Chancellors, the ACR Council Steering Committee, and the RADPAC board. Smith is a practicing radiologist at Casper Medical Imaging in Wyoming.

Kimberly Applegate was elected to a two-year term as council speaker. Applegate is a fellow of the ACR, a member of the ACR Council Steering Committee, ACR Board of Chancellors, ACR Executive Committee and of the Image Gently Steering Committee. She is a former chair of the ACR Member Engagement Committee and College Nominating Committee. Applegate is director of practice quality improvement in the radiology department at Emory Healthcare and Emory University School of Medicine.

William Herrington was elected to a two-year term as council vice-speaker. Herrington is a fellow of the ACR and was a member of the ACR Council Steering Committee. He has served on the ACR Committee on Leadership and Practice Development, ACR Governance Committee and ACR Human Resource Committee. Herrington is a practicing radiologist with Athens Radiology Associates in Georgia.