Welcome to Yale Cancer Answers with Doctor Anees Chagpar.

Yale Cancer Answers features the latest information on cancer care by welcoming oncologists and specialists who are on the forefront of the battle to fight cancer.

This week it’s a conversation about global oncology with Doctor Saad Omer.

Doctor Omer is the Harvey and Kate Cushing professor of medicine and infectious diseases at the Yale School of Medicine, where Doctor Chagpar is a professor of surgical oncology.

Saad, maybe we can start off by you telling us a little bit about yourself and what it is you do.

I’m the director of the Yale Institute for Global Health. I’m an infectious disease epidemiologist who has had the privilege of working in multiple countries and have done studies in multiple places both in the US and outside the US. My own work is focused on infectious diseases and as you know there are several cancers now that have an association with infectious agents and the most prominent one of them is...
the HPV or human Papilloma Virus association with cervical cancer. So some of my work has focused on HPV vaccines, but you know I work broadly on all sorts of infectious diseases. So let’s talk a little bit about the global implications for cancer. Just recently we heard in the news that a lot of the global work that had been done and a lot of the global strides that had been made in terms of HIV, malaria, and TB took a bit of a hit during the pandemic, and a number of world leaders are now really refocusing their efforts on shoring up those efforts once again. Can you tell us a little bit about the impact of the pandemic on cancer worldwide? One of the things that’s concerning about cancer is how patchy our understanding is with the true nature of disruptions that happened during the pandemic. And it wasn’t just due to shelter in place or shutdown orders. They were very short lived in most of the world.
disruption in screening and treatment of cancer, but the data are a bit patchy and then that’s one of those things where whenever you are able to measure especially in low resource settings you find that there has been a disruption and screening which was already not stellar in a lot of low resource settings and we do not know the full scale of the impact and so you know that’s one side in terms of screening and treatment,

on the prevention side, the HPV vaccine has taken a huge hit in terms of the delay and introduction in new countries and also decline in coverage of the vaccine and that is going to have long term consequences.

when we think about the HPV vaccine one of the things is that even in the US we know that we’ve seen cervical cancer rates decline as there has been more of an uptake in vaccine here, but it’s still not 100%. And one can only imagine that
in low to middle income countries, the uptake rate even at baseline, forgetting about the impact of the pandemic and everything else, may have been lower than it has been in the US. Can you talk a little bit about that and what are the etiologic factors that play into that? I mean, is cost an issue, cultural issues? Access, what?

What are the issues and what have we seen in terms of HPV vaccine worldwide? So the situation with the HPV vaccine introduction and uptake and now what we are calling backsliding, is a little bit nuanced. So initially you know as usual the vaccine was initially introduced in high income countries and the US was one of the earliest countries where it was introduced, very quickly entities like GAVI, the Vaccine Alliance, and full disclosure, I’m on their board. Which is an entity that brings together governments and government funding as well as private donations, large private donations from entities like the Gates Foundation to provide access
0:05:45.781 –> 0:05:48.574 to life saving vaccines around the world.
0:05:48.58 –> 0:05:51.232 So Gavi got involved and prioritized
0:05:51.232 –> 0:05:53.926 as part of their
0:05:53.926 –> 0:05:56.286 current strategy that was supposed to
0:05:56.286 –> 0:05:58.057 be implemented a couple of years ago,
0:06:00.97 –> 0:06:03.7 right before the pandemic to
0:06:03.7 –> 0:06:06.27 increase access to the vaccine,
0:06:06.27 –> 0:06:07.36 a couple of things happened.
0:06:07.36 –> 0:06:10.538 There was a shortage in supply and
0:06:10.538 –> 0:06:13.157 production and so that impacted
0:06:13.157 –> 0:06:15.485 the speed of introduction.
0:06:15.49 –> 0:06:21.35 But also the early pilots in countries
0:06:21.35 –> 0:06:24.583 like India suffered from misinformation
0:06:24.583 –> 0:06:26.795 and disinformation and misunderstanding
0:06:26.795 –> 0:06:30.73 and some kind of intentional
0:06:30.73 –> 0:06:32.946 pushback from some circles.
0:06:32.946 –> 0:06:37.08 And so with that legacy
0:06:38.274 –> 0:06:41.06 we went into as the global community
0:06:41.138 –> 0:06:43.994 into the pandemic where these problems
0:06:43.994 –> 0:06:46.717 were compounded by the fact that
0:06:46.717 –> 0:06:48.582 you can’t introduce new vaccines
0:06:48.582 –> 0:06:50.826 in more and more countries during
0:06:50.826 –> 0:06:53.259 the pandemic which are not COVID-19
0:06:53.259 –> 0:06:55.254 because everyone was focusing on
0:06:55.317 –> 0:06:57.897 COVID and just barely maintaining
0:06:57.897 –> 0:06:59.991 routine immunization of existing vaccines,
0:06:59.991 –> 0:07:00.733 but also
0:07:00.733 –> 0:07:02.217 there was a backsliding,
0:07:02.22 –> 0:07:06.186 there was a reduction in
0:07:06.19 –> 0:07:07.965 this vaccination and
0:07:07.965 –> 0:07:09.74 then so for HPV vaccine,
the vaccination rates declined even in the few countries where it was available, by 15% where these vaccines were already being used. But what we need to remember that 2/3 of girls, if you are just focusing on girls and women, live in countries without HPV vaccine. And the pandemic has hurt this new introduction in these countries of HPV vaccine. And so therefore the coverage of this cancer preventing vaccine is barely 12% around the world. And so this is concerning. One of the things that you mentioned is really a touch point and that when the HPV vaccine was initially introduced, particularly in India, there was a lot of misinformation around that and that was due to a number of things, but you know a lot of these are scary stories and cultural issues and misinformation kind of made it out into the media and it was thought that really played a role in terms of reducing the uptake of that vaccine.
I wonder now that we’ve seen kind of the same misinformation with COVID and I’m hoping that a lot of that has been dispelled whether you anticipate that now HPV vaccine might be able to gain hold again, after we’ve kind of dispelled a lot of the myths around vaccines or whether you think the HPV vaccine holds a special place because part of the misinformation had to do with how the clinical trials were run and part of the misinformation had to do with sexual practices and so on.

So what do you think is going to be the state of affairs for the vaccination rates going forward? Do you think that our experience now with COVID vaccine experience now with COVID vaccine and seeing how effective it was will help HPV vaccines or do you think that HPV is still going to be hit pretty hard in terms of getting public uptake?

There was a bit of a naivety on the part of global public health community when this vaccine was initially introduced. So it was introduced in pilots starting in India and other places. And there was the assumption that if you just brought the vaccine closer
to people than they will vaccinate, it wasn’t proactively paired with an educational and informational component of that introduction program of the public health authorities and entities that were introducing this vaccine and many parts of the world did not pair that with a behavioral response to this, and they did not anticipate proactively that there will be misunderstandings and misinformation and disinformation. And so first of all, there is a legacy of that. But going forward, I think you would be incredibly naive again, if we don’t move forward with a sort of comprehensive behavioral response. If we do that and we do that with respect to communities that have questions and answer them and make an effort to make sure that people are empowered with information but also proactively use behavioral science to make sure that the vaccines are promoted appropriately and so and so forth, I think we can make a dent in preventing this disease, this horrible disease, through vaccination but it’s not going to happen on cruise control. It will require efforts from various
partners and it will require thoughtfulness and it will require, frankly, activism from groups that are impacted by HPV and most importantly, cervical cancer. And so, so that kind of an approach where you are not just deploying it from a technical side but also you have a community engagement component, you have a behavioral science component to it, but also activism from communities who should be an interest group who want to prevent cancer. And so I think it will take an all hands on deck situation as we expand vaccination against HPV. And that especially will play where the HPV vaccine is already available. What about the communities where it’s not available? Why isn’t it available? Why is it that 2/3 of women are living in countries where the HPV vaccine is not available? Is cost an issue? Is Gavi not providing it? Tell us more about what we can do to expand the access to this vaccine worldwide,
because it seems that it’s incredibly effective against a malignancy that nobody wants to get. We should be able to get the world’s people, not just women, but boys and girls vaccinated.

Yeah, that’s a really good question. So it was an issue, cost was an issue. But not anymore. So GAVI has decided and had decided before the pandemic to introduce this vaccine and help countries introduce and no external entity can introduce it on their own. It’s a country level decision and it’s the communities that have to want it to do this. But Gavi came in and said that it will be a priority for introduction in countries, but around that time there was a shortage of this vaccine globally that has since been eased. Now the ball is in the court of those who are responsible for implementing rather than those who are responsible for supplying and providing resources for it. Yeah, it sounds like we’ve heard the story of first there was a shortage and then it’s getting it into the communities. It sounds like this is a repeat
0:14:03.85 -> 0:14:05.568 of something that we’ve seen
0:14:05.568 -> 0:14:07.626 with the COVID vaccine as well.
0:14:07.63 -> 0:14:09.298 We’re going to pick up this
0:14:09.298 -> 0:14:10.742 story learning more about global
0:14:10.742 -> 0:14:12.41 oncology right after we take a
0:14:12.41 -> 0:14:14.189 short break for a medical minute.
0:14:14.19 -> 0:14:15.87 Please stay tuned to learn more
0:14:15.87 -> 0:14:17.82 with my guest, Doctor Saad Omer.
0:14:18.37 -> 0:14:20.38 Funding for Yale Cancer Answers
0:14:20.38 -> 0:14:22.39 comes from Smilow Cancer Hospital,
0:14:22.39 -> 0:14:24.305 where their liver cancer program
0:14:24.305 -> 0:14:26.22 brings together a dedicated group
0:14:26.287 -> 0:14:28.407 of specialists whose focus is
0:14:28.407 -> 0:14:30.103 determining the best personalized
0:14:30.103 -> 0:14:31.87 treatment plan for each patient.
0:14:31.87 -> 0:14:34.93 Learn more at smilowcancerhospital.org.
0:14:37.03 -> 0:14:38.806 Breast cancer is one of the
0:14:38.806 -> 0:14:40.41 most common cancers in women.
0:14:40.41 -> 0:14:41.727 In Connecticut alone,
0:14:41.727 -> 0:14:43.922 approximately 3500 women will be
0:14:43.922 -> 0:14:46.387 diagnosed with breast cancer this year,
0:14:46.39 -> 0:14:48.749 but there is hope thanks to earlier
0:14:48.749 -> 0:14:49.89 detection, noninvasive treatments,
0:14:49.89 -> 0:14:52.29 and the development of novel therapies
0:14:52.29 -> 0:14:53.91 to fight breast cancer.
0:14:53.91 -> 0:14:55.935 Women should schedule a baseline
0:14:55.935 -> 0:14:57.877 mammogram beginning at age 40 or
0:14:57.877 -> 0:14:59.86 earlier if they have risk factors
0:14:59.86 -> 0:15:01.628 associated with the disease.
0:15:01.63 -> 0:15:03.338 With screening, early detection,
0:15:03.338 -> 0:15:05.046 and a healthy lifestyle,
breast cancer can be defeated.
Clinical trials are currently underway at federally designated Comprehensive cancer centers such as Yale Cancer Center and Smilow Cancer Hospital to make innovative new treatments available to patients.
Digital breast tomosynthesis, or 3D mammography, is also transforming breast cancer screening by significantly reducing unnecessary procedures while picking up more cancers.
More information is available at yalecancercenter.org.
You’re listening to Connecticut public radio.
Welcome back to Yale Cancer Answers.
This is doctor Anees Chagpar and I’m joined tonight by my guest, Doctor Saad Omer.
We’re talking about his work in global health and oncology.
And right before the break, we were talking about the HPV vaccine, which is incredibly effective not only in preventing cervical cancer, but a whole host of other cancers, such as anal cancer, head neck cancer.
And the issues that that vaccine has faced in terms of global uptake and how so many women and men quite frankly,
who get these types of cancers reside in countries where this vaccine is currently not available. Another viral etiologic agent to which we have a vaccine that also is related to cancers is hepatitis and HBV. Tell us a little bit more about that, what is the vaccination status worldwide with hepatitis B vaccines and is that making an impact? Yeah, it is making an impact. We have had observational studies that have shown the impact of hepatitis B vaccine. Several countries have introduced this vaccine in their routine immunization schedules often and that’s really helpful often as a multivalent vaccine, often as a combination vaccine. So it’s easier to deliver these vaccines the fewer shots you have to deliver the less cumbersome it is in terms of what we call cold chain, meaning keeping the vaccines at the right temperature, delivery access and all of that stuff. So with that inclusion and with that kind of a focus in several countries we have had an impact on getting this vaccine into kids arms, at a very early stage. However, there are a few
things in several countries it’s a relatively recent development in terms of getting high immunization rates. But early indications from early adopters are countries where there’s vaccine was introduced a while ago, we have seen an impact on cancer incidence, etc. And so that’s encouraging, not surprising. But you still measure, you still sort of assess the impact. So because it takes time from infection to cancer for these kinds of pathways, it takes time to show the impact, but there’s still a big chunk who are unvaccinated, so we will unfortunately see for a few years, that cohort go through the system and that is unfortunate. Obviously if hepatitis B vaccination is successful, one wonders about the concept of pairing it with HPV, which has been to my understanding, less successful in terms of getting uptake. What do you think about that concept of just saying, you know what, this is a package of vaccinations that your kids get at schools? Or when they reach a certain
certain age and this is, you know, a community effort. Yeah, I think that’s a good idea. We already packaged, it’s hep B vaccine with childhood vaccines and we vaccinate earlier for HEB, whereas for hepatitis, for HPV, human papilloma virus vaccine, we vaccinate. These people are pre teens at that age before puberty in certain countries, a lot of countries during teen years. But most importantly you could have catch up campaigns that are combined for those two vaccines. But I think the current strategy of vaccinating kids earlier in life for habits so that they are protected from the whole scope of this illness because the earlier it happens, earlier hepatitis B infection happens, the more likely it is for people to develop cancer later in life. A little bit of a hybrid strategy would be helpful, but pairing it with other routine vaccines, what it does for HEP B is makes it routine. For HPV, I think as the adolescent vaccine platform picks up,
we will have to and we should pair it with other vaccines. With meningitis vaccine, which is done in the US and with some success that if you pair it with other vaccines. Unfortunately in other countries, in many countries, especially in low and middle income countries where by the way the biggest burden of cancer is that there are no vaccines that are given during teenage years. So as that portfolio expands, I think it will be helpful to pair the HPV vaccine with that as well. And it brings up a good point, which is that the largest burden of cancer these days is occurring in low to middle income countries. And when we look at future forecasts it’s thought that that’s where the most increase in the burden of cancer will be. And there are some statistics that say in terms of mortality cancer claims more lives than HIV, TB and other issues. Sorry. And and other issues, infectious issues in low to
middle income countries combined.
And so you know, one wonders as we put more resources into the infectious elements in low to middle income countries, what do you think should be the case for cancer? How do we increase the awareness of NGO’s, of governments, of others about the growing cancer burden in low to middle income countries? So that really rises to the same level as HIV and TB. Yeah, I think as someone who primarily works on infectious diseases including overlaps with infectious causes for cancer, I am a big believer of focus on things like cancer and cardiovascular diseases in terms of our global investments in global public health and and treatment. I think the world can walk and chew gum. It doesn’t have to be an either or situation. It doesn’t have to be a situation where you either have to prevent mortality through malaria, which is horrible for a lot of communities and in the world, or HIV or tuberculosis, etc, and sort of ignore cancer.
0:23:08.38 -> 0:23:09.64 and cardiovascular disease.
0:23:09.64 -> 0:23:11.075 I think we can and we must
0:23:11.075 -> 0:23:12.159 and we should do that.
0:23:12.16 -> 0:23:16.324 And I believe entities such
0:23:16.324 -> 0:23:18.44 as the Global Fund for TB,
0:23:18.44 -> 0:23:22.376 malaria and HIV that provides resources
0:23:22.38 -> 0:23:25.26 to low income countries through funding
0:23:25.26 -> 0:23:26.836 from the US government,
0:23:26.836 -> 0:23:28.412 other developed and developing
0:23:28.412 -> 0:23:29.2 country governments,
0:23:29.2 -> 0:23:32.022 they pool their resources and provide
0:23:32.022 -> 0:23:33.99 treatment for these diseases.
0:23:33.99 -> 0:23:37.609 And the GAVI, the Global Vaccine Alliance,
0:23:37.61 -> 0:23:39.962 which focuses on vaccines,
0:23:39.962 -> 0:23:43.49 a similar model are templates
0:23:43.589 -> 0:23:46.529 for a global cancer moon shot,
0:23:46.53 -> 0:23:48.427 both in terms of not just technology,
0:23:48.43 -> 0:23:50.782 but in terms of actually getting
0:23:50.782 -> 0:23:52.35 treatments and screening and
0:23:52.422 -> 0:23:55.45 diagnostics to low and middle income
0:23:55.45 -> 0:23:57.76 countries.
0:23:57.76 -> 0:24:01.043 A majority of the deaths due to the
0:24:01.043 -> 0:24:03.212 10 million cancer deaths were in
0:24:03.212 -> 0:24:05.138 low and middle income countries in
0:24:05.138 -> 0:24:07.297 2020 and the trend has remained.
0:24:07.3 -> 0:24:09.564 And in fact there will be a higher
0:24:09.564 -> 0:24:11.674 proportion in low and middle income
0:24:11.674 -> 0:24:13.158 countries because the population
0:24:13.158 -> 0:24:15.424 there is increasing and there was
0:24:15.424 -> 0:24:17.249 a bigger disruption in prevention
0:24:17.249 -> 0:24:18.646 and treatment services.
And so I think there should be and there has to be a call for action to say that, you know, communities impacted by mortality due to increasingly preventable mortality due to cancer.

And so I think we need to have that kind of approach that we can and must end. We must address all of these issues that are major causes of death and disease.

Yeah. One of the issues that I think is really difficult when it comes to cancer as opposed to HIV or malaria is the fact that cancer is so complex, right. And in terms of screening, we have good screening for some things, not so good screening for other things, but even if you were to screen and then you know the treatments algorithms do require you know, surgery and radiation and chemotherapy and immunotherapy and various biologics and all of the diagnostics that go with it and it’s not as easy.

And that requires a lot of infrastructure and a lot of resources. So where do you start? Because this is a very complex
onion to peel with so many layers of issues from poverty to education to, you know, other factors, that makes it very difficult for people really to make an impact in terms of cancer care globally. Absolutely correct. But global health is the art of the possible is to look at a problem and say that this is unacceptable and to have that somewhat Pollyannaish way of thinking that all lives are created equal, that inequity in access to care and treatment and screening is not acceptable. And that view is not Pollyannaish. It’s a way of looking at the world. And saying that, you know, there are certain things not everyone has to have the latest Tesla or the latest iPhone, but health is a basic human right and this cannot continue to happen on our watch, at least without an effort. And so when we start with that position, we look for examples of similar seemingly unsurmountable problems and one of the seemingly unsurmountable problem is and was HIV. I remember starting work in the late 90s in early 2000s and going to countries like Uganda and Ethiopia.
and parts of India as well. And seeing that especially in Uganda and Ethiopia that treatment was nowhere to be found.

By the mid 90s some very good treatment options were available in the US and high income countries. And even when we were doing studies for a lot of these patients, we were able to provide some treatment in the context of studies with the hope and the aim to bring those treatments through collective action to the communities we were working with, to the people we were working with and now started a recent phenomenon starting in 2005, 2004, 2005.

The world has made major progress not only in providing treatment but also managing a complex disease like HIV and so therefore I think this is a model that can be a template for cancer prevention, screening, treatment, control, etc.

Doctor Saad Omer is the Harvey and Kate Cushing professor of medicine in infectious diseases and professor of Epidemiology of microbial diseases at the Yale
School of Medicine and director of the Yale Institute for Global Health. If you have questions, the address is canceranswers@yale.edu, and past editions of the program are available in audio and written form at Yale Cancer Center. Dot org we hope you’ll join us next week to learn more about the fight against cancer here on Connecticut Public Radio. Funding for Yale Cancer Answers is provided by Smilow Cancer Hospital.