To this week’s character center Grand rounds, we have two speakers today, both from Yale will give us some exciting discussion of some of the work we’re doing here. Our first speaker is Mario Strozza busco. He’s a professor of medicine, director of the liver center. He received his medical and PhD degrees in Italy and then had a number of leadership positions at the University of Milan before joining our faculty. He’s an expert on the care of
patients with liver cancer, is internationally known for his work and hepatology. Liver transplantation is a member of several scientific societies in Europe in the United States. His current research relates to the pathophysiology of biliary tract disease is repaired. Biology of liver repair, liver transplantation, liver cancer in healthcare management, and so today we’re going to hear from Mario and tell of his talk is liver cancer, clinical care and research at Yale.
So Mario, you’re up. Thank you very much, Dan, for the introduction and thanks for the Cancer Center for the Invitation Ann. And thanks a lot for this Milo. Cancel. After the program has received during this year, I’m really only as a spokesperson for a group of colleagues that are interested in India in the liver cancer and treating liver cancer. So I’m just the messenger. So what do we do in the liver cancer program we take? We take care of patients with liver masses either benign or malignant are,
and the two most frequent. Primary liver cancer are able to sell cash.
You know my also called HTC and Intraparticle Angela carcinoma and I focus my talk today mostly on ATC, which is the most important primary. Cancer of the liver. The liver is an organ which is located in the abdomen, but really here it is. The main regulator of the whole body, metabolic coma stasis, and in fact if the liver fails we actually, the patient suffered of a syndrome which is very bad.
Absolutely Poly systemic syndrome. As you can see here. And the important thing to understand is that 85% to 90% of the patient with able to sell casino. They are also cirrhotic in the liver and not only that, but if we follow a cohort of patients with viral induced liver disease either B or C for enough time, we see that the main the. When they die, most of them they died with the in a particular casting armor as shown here. So why what the about the circus number is actually only rise.
NOTE Confidence: 0.79450005
00:03:08.358 --> 00:03:11.358 worldwide and the estimate are there.
NOTE Confidence: 0.79450005
00:03:11.360 --> 00:03:14.629 There are 830,000 cases recorded every year,
NOTE Confidence: 0.79450005
00:03:14.630 --> 00:03:16.970 with the mortality that almost
NOTE Confidence: 0.79450005
00:03:16.970 --> 00:03:18.374 approached the incidents.
NOTE Confidence: 0.79450005
00:03:18.380 --> 00:03:22.079 And why is that? Well, this is the.
NOTE Confidence: 0.79450005
00:03:22.079 --> 00:03:25.917 A result of a number of worldwide the
NOTE Confidence: 0.79450005
00:03:25.917 --> 00:03:29.289 epidemics that are also risk factor
NOTE Confidence: 0.79450005
00:03:29.289 --> 00:03:32.702 for chronic liver disease and among
NOTE Confidence: 0.79450005
00:03:32.702 --> 00:03:37.042 them we can mention viral appetite is B&C.
NOTE Confidence: 0.79450005
00:03:37.042 --> 00:03:40.294 You see that they the infection
NOTE Confidence: 0.79450005
00:03:40.294 --> 00:03:46.549 from viral potatis is hundreds
NOTE Confidence: 0.79450005
00:03:46.549 --> 00:03:49.318 of millions of people I call is
NOTE Confidence: 0.79450005
00:03:49.320 --> 00:03:52.015 another important work by the.
NOTE Confidence: 0.79450005
00:03:52.020 --> 00:03:52.646 diabetes?
And more and more, we realize that if 50 important risk factors are due to inequality’s patient population that are underserved and they have difficulties in reaching and being reached by the best care, other risk factors, smoking alpha toxin and aflatoxin as well. And this is important to understand that the combination of risk factor increases. And actually the risk. So in every patient that we see, we need to look for all of them. This risk factor are distributed unequally in the world wide. For example, aflatoxin is more frequent.
as it goes in in the African continent,

but if we go to the US, All told,

this publication shows Nash is a main factor.

It is actually we have all the

respect or combining here because

we have Nash with alcohol,

we have appetite is C.

And so on. And in fact,

if we look at the distribution of

the incidents of ATC in the US.

We see that is actually particularly

We see that is actually particularly

8 Per 100,000 in the.

Massachusetts, Connecticut and New York.

So if we look back more.

In depth into it,
we see that in the US the liver cancer incidence has increased almost three times in the last 30 years, and the mortality is increased almost two times as shown. Also in this graph on the right, if we look at the numbers and compare the number with two big, GI killers in their digestive system, like bankers and call, and we see that in Connecticut we have a record of 480 cases per year and this is a combination between HCC and intrahepatic carcinoma, really minority.
00:06:09.200 --> 00:06:12.840 so we have 480 new cases and $320

00:06:12.840 --> 00:06:15.557 unfortunately and this is a figure

00:06:15.557 --> 00:06:18.125 which is similar to another big

00:06:18.223 --> 00:06:21.258 killer like the pancreatic cancer.

00:06:21.260 --> 00:06:26.630 730 and 520. So what?

00:06:26.630 --> 00:06:28.590 How does the molecular

00:06:28.590 --> 00:06:31.230 pathogenesis of apples for casino?

00:06:31.230 --> 00:06:33.258 We have said it.

00:06:35.310 --> 00:06:37.722 Most of the patients have cirrhosis

00:06:37.722 --> 00:06:40.667 and in fact the main theory is

00:06:40.667 --> 00:06:42.757 that in the cirrhotic nodule

00:06:42.757 --> 00:06:45.426 there are Even so happens that

00:06:45.426 --> 00:06:47.616 brings to Korando casino man.

00:06:47.620 --> 00:06:49.517 I’m in one of these is the.

00:06:51.700 --> 00:06:52.870 Alter the.
TR T promoter that basically.

Blocks the ability of the liver
cell under information to undergo
senescence and among them.

There are other possible.

But the genetic event like P53,
which is basically associated with aflatoxin,
better cotton imitation,
and so on and so forth.

But this is a scenario that
is not very well understood.

All we can say for now is as
there are two different classes,
one name proliferation,
the other non proliferation that are
different in terms of their prognosis.
and in terms of their ability to respond eventually to immunotherapy.

So I put the cell carcinoma is a very peculiar cancer because he has a dual personality. It's a cancer in a failing vital organ and it can be seen from a biological perspective. There are inflammation induced phenomenon, oncogenic viruses, literally natural general mutational landscape and this brings to a complex tumor phenotype with the witch's aggressive. It is a terror generals with a high recurrence rate.
When is Sonic Liquor point of view?

We have any plastic disease and the liver disease, and so the street.

The treatment strategy has to be tailored according both to the tumor stage and the function liver disease, and this creates some of the peculiar things in that management of this disease. So we don’t have one single way to manage it that you have resection manage it that you have resection.

Ablation came embolization value or addition therapy. Systemic therapy still has a.

At growing Bastille small role,
we have the possibility to transport the patient.
The only solid organ that can be transplanted and most of these patients actually die because of liver failure and in fact one professional figure that is involved in this is the hepatologist. What, because of all this, different professionals involved in this in the treatment, the entry points usually are multiple and this multiple entry points in the system creates different trajectory for the patient with way.
Dispassion of resource is an an can
impact on the outcome because there is a
confusion and you don’t really know what
the part where the patient should follow.
And this is one of the reason why it
is important to have a team work.
So to give an example,
probably will take the whole day to this
guy to figure out how to change the tires,
whereas the Formula One team can
do it exactly in 2.5 seconds.
Which is amazing and is this love?
Is this out of their coordination of care?
So treatment of Apple Circus nominees,
coordination of care,
and this is the trajectory that the
00:10:04.881 --> 00:10:07.107 program has followed through the year.

00:10:07.110 --> 00:10:09.870 So we started as a conference and I

00:10:09.870 --> 00:10:12.390 remember this few people with me wrong.

00:10:12.390 --> 00:10:13.572 Salom Jeff Pollack.

00:10:13.572 --> 00:10:15.936 Jeff Wayne Rubber Dam part starting

00:10:15.936 --> 00:10:17.913 this little room and then he

00:10:17.913 --> 00:10:19.423 grew to a tumor board.

00:10:19.430 --> 00:10:21.398 Thanks to Tamar Daddy and then

00:10:21.398 --> 00:10:23.310 now it’s becoming a program.

00:10:23.310 --> 00:10:25.360 And maybe it’s really it’s

00:10:25.360 --> 00:10:27.910 it’s ready for the next step.

00:10:27.910 --> 00:10:30.154 So when it became a program

00:10:30.154 --> 00:10:32.550 we designed in IDL structure,

00:10:32.550 --> 00:10:35.497 which is the patient can come into

00:10:35.497 --> 00:10:38.038 the system through a single point.

NOTE Confidence: 0.84268975

00:10:38.041 --> 00:10:41.594
Still working on that aspect, and then it’s actually discussing the tumor board where they treat him, allocation happens and is allocated to the different specialty according to the best treatment are an. After that it gets follow-up because we need to treat the risk factor. We need to mind the liver. Help us some chemo prevention protocols and mirroring this clinical operation. There is also research component which is again a team effort. So where are we? So we begin with the. This is a map of the Smiler Care center. OK and this is the two main site for
liver care here at again you have in hospital and the VA off without but through the recent year there was open a site in in Bridgeville with magnetic so insight in the ambari came to stand for my shift key. James Mattis T is, you know, the westerly side and soon Alan Jaffe will go to West for now. This is in combination with with the transplant team the with the transplant team with which we have a very good long standing collaboration. Now it really takes a village to treat
00:12:03.526 --> 00:12:06.149 Not all of their colleagues that participates and I have to say it’s a real privilege to be able to work with these individuals, and they are extremely skilled. All of them are leaders in their own right are in their own field, so the discussion that we have are so enlightening and we follow a structure of discussion going through and analyze the reception, the transplant candidacy, the OR whether we need to use local regional treatment like ablation, criminalization, radiation.
It’s I don’t have the time to go into this, but it’s every single all of this possible treatment is very complex and the decision making is even more complex because it depends from systemic and local factors, and in fact we really an. We basically follow the Barcelona Liver cancer treatment, which is a. Used by master Lever Societies an but it really has a lot of troubles. OK, there are changes. This is the latest version and takes into account liver function, performance status and then
atomic location of the cancer.

But really there are lot of troubles and we cannot be so strict with the categories and for example this was written in 2019.

Now the first line treatment cannot be only confined to patient at about to die, as in this staging system, so a lot of things have changed and that made difficult by the fact that we have multiple theology at the underlying liver disease.

The frequent comma abilities in fact, this is a cancer.
That picture above 65 years of age.

Multiple treatment option and 70% of them have a recurrence of the cancer in the next 20 months.

We have liver transplantation and other actors, so the only way to maintain a structure approach this is to present strange cases is really the machine Ann and the credit for this goes to my colleague and friend Mark Addy, who set it up and now we discussed 13 cases each week.
Last year we even with the kovit. We discuss 520 cases and one of the busiest actually tumor Board 2 of 200 of them with new cases we have. 300 patient and follow up. 150 new cases and these actually treated in several different ways, but this is not the venue to go through the volumes or to their substantial. The tumor board is also where we got ideas for research and ideas for improvement and innovation. This is that list of items that we discussed at the last steering committee. For example, several of this question that I’m
00:15:06.390 --> 00:15:10.530 not going to read all of them, but.

00:15:10.530 --> 00:15:13.498 Generate. Recent opportunities.

00:15:13.498 --> 00:15:15.550 Anne Anne, Anne,

00:15:15.550 --> 00:15:18.150 Anne and also great care I I wanna

00:15:18.150 --> 00:15:20.180 go briefly through this case.

00:15:20.180 --> 00:15:22.665 This was a patient. Refer to doctor.

00:15:22.670 --> 00:15:24.770 She’s key for transfer evaluation

00:15:24.770 --> 00:15:27.328 he had actually liver cancer.

00:15:27.328 --> 00:15:29.248 And Moran had infiltrative hepatocellular carcinoma with with

00:15:29.250 --> 00:15:30.930 And Moran had infiltrative hepatocellular carcinoma with with

00:15:30.930 --> 00:15:32.610 the tumour portal vein thrombosis.

00:15:32.610 --> 00:15:34.849 So we discussed the case at the tumor board and it was decided that

00:15:34.850 --> 00:15:37.818 there was no other option rather than
medical treatment or offering a trial.

NOTE Confidence: 0.81663

00:15:50.266 --> 00:15:52.110 softening by the beginning, I,

NOTE Confidence: 0.81663

00:15:54.532 --> 00:15:56.935 and so it happened at Stacy

NOTE Confidence: 0.81663

00:16:01.370 --> 00:16:03.300 which is now you know,

NOTE Confidence: 0.81663

00:16:05.982 --> 00:16:09.229 in that time was actually we were

NOTE Confidence: 0.81663

00:16:11.965 very lucky that we could offer

NOTE Confidence: 0.81663

00:16:14.300 In the graph of plotting

NOTE Confidence: 0.81663

00:16:17.500 the alpha fetoprotein,

NOTE Confidence: 0.81663

00:16:19.500 he had a complete response.

NOTE Confidence: 0.8041078

00:16:21.850 But in the next two years,
this patient was completely and the quality of life of this patient, which was completely altered by recurrent severe episodes of portosystemic several opathy. As you can see here from the ammonia and actually in during one of these emission it also discussion these emission it also discussion about goals of care was initiated, so we had a patient who was treated by with you from this malignant tumor. But he was dying because I believe this is an act. very bright hepatologist wanagas intervals with system are in,
another is stalled.
Slacker, which is an interventional hepatology calling, decided to embolize his plane arena. Shanta and now the patient is functional cancer free, happy. And when he refers to what happened with the insurance, he quotes wisdom churches saying pessimist sees difficulty in every opportunity, an optimist sees opportunity in every difficulty. So this is a case which we learn a lot about it an an in fact. Now particularly,
one of the things that was interesting in the Gary case was that he never had a recurrence an will. I said occurrences, something that playing sour patient 6070% of them in there. In their first two years, so that prompted the opening of a try again by Stacy and D'istria will actually try to address the role of adjuvant treatment after surgery or ablation. Another tria is being brought here by David Madore. Fu actually addresses and
other nuances of this,
NOTE Confidence: 0.8041078
so he his aim is to understand
NOTE Confidence: 0.8041078
whether there is a benefit in what
NOTE Confidence: 0.8041078
we call combination treatment.
NOTE Confidence: 0.8041078
So the idea to combine came
NOTE Confidence: 0.8041078
embolization with the.
NOTE Confidence: 0.62811226
Even on Koleji, in combination with a PKI.
NOTE Confidence: 0.62811226
And another important aspect of the
NOTE Confidence: 0.62811226
program is the fact that we really tried
NOTE Confidence: 0.62811226
to record and measure the outcomes.
NOTE Confidence: 0.62811226
Ariel’s affair with John awfully.
NOTE Confidence: 0.7676826
My tarantula Shapiro at there are curating
NOTE Confidence: 0.7676826
a database of 1000 patients in India
NOTE Confidence: 0.7676826
and the survival code divided by BCSC
NOTE Confidence: 0.7676826
states that you see, here are our own.
NOTE Confidence: 0.7676826
Outcomes so we can really.
Make the termination letter based on.

Now our environment in expertise and is simple example that the outcome is outstanding up to more than three years for this campaign patient with initial cancer, things are changing after this and there's a lot to be discussed in among these patients and I don't have it here, but if anybody has a doubt about transplantation, I can tell you that the code was transferred stations like this so outstanding long term. Result for the few patient again get it, but this is a very
very important aspect of what we do

an it’s going to be so complex

that in fact Julius with Jim Duncan

Manderly and John actually very much involved in trying to understand

the use that we can have artificial intelligence in the diagonal.

This characterization treatment of this Council and we expect that this would be a great aid to our decision making and also discovery of new approaches.

So what the liver cancer program doesn’t have a formalized? 

Visas program but is actually the assembly of of several different interested people.
What have we done to put together these people so the first thing that we have been doing with Julius De Mar is these liver cancer talks their monthly in the late afternoon on Thursday. Each of them with two or three percent Asia and this has to be ongoing. Research are now published work. It covers all the aspects, clinical, translation and healthcare and this actually this approach Spark collaboration. There were paper grant application and also a big step. Forward was at last October when again
with the help of the Miami Justice Ann,

and thanks to the help of Gary Honeycutt’s

we put forward the first liver cancer

Super Summit which is called pre

Where was Virtu are,

but the mission was to address the

Uncle logic challenges or liver cancer

to the collaboration amount of abide.

Spectrum will be a faculty.

And I’m gonna really run through

some of this visa suspect and what

in what I call the Commonwealth to

liver cancer is at yeah OK because

it’s not again formalized structure,
but is the gathering of interested people coming from the medical school, the School of Public Health? the VA system involving departments like surgery, internal medicine, the Cancer Center, the year, liver cancer, the Department of Pathology and so on and so forth. But all these people actually. In a 2019-2020 publish it 72 papers, an 38 of them original article 7R position paper 14 reviews and 14 of them are actually publishing in journals with an impact factor around or above 20,
which I think is pretty remarkable.

So just a very quickly glancing through it.

The number of our faculties are actually involved.

In studying the different risk factors that I mentioned before, we have outstanding work performing virally theology, interaction with aging, the HIV. We have food program that addresses the obesity, diabetes and alcoholic liver diseases in other regions branch which is growing an Ann and also health care disparities.
An example.

Razor, ocean and other faculties are addressing.

Some of the differences that we see even in Connecticut.

So for example, as you can see here.

The incidence of HCC is clearly higher in this panic and black population and hopefully will will try to nail down what the causes are.

So outstanding results in outcome research, mostly addressing the role of surveillance and all of.

Antiviral treatment and the growing group of faculties are
also interested in concert cost,

We do a lot of things,

but we don’t really know their value in terms of cost effectiveness,

so this is another growing area.

Translation studies that also growing and just to mention several faculties in Basic,

more basic studies are interested in the transition between Nashville, roses and and cancer and in human

Hansa ran and a lot of people is actually interesting in the.

Role of the tumor micro environment.

Which this is, I think, very interesting.
This is staining for Alpha, SMA, identifying fiber, cancer, associated fibroblasts in cholangiocarcinoma and in hepatoma. You see two very different. Pathology Ann and these are correlated to two very different aggressiveness. Also the tumor let me very briefly mention some of our work in the macro environment or the calendar carcinoma showing the central role of calf or the Cancer Society fiberglassed in determining several of the aspects of the two Moran now our Co other.
colleagues are addressing this using single cell transcriptomics. This is also an interest of our colleagues in radiology. They’re trying to use. The tools of radiology to generate reliable imaging biomarkers for immunotherapy. I think, it’s granted or proposed for the NIH by David Matter of MGM Duncan interest on the metabolic aspect is also. Followed by Michael Nathanson, and here is work from Emma tells where I’m like nothing. So I’m looking at the IP3 receptor and mitochondrial functionality in 80C and CCA,
and they’re all in the chronic affect like existence of up doses or generating up talking factor of this was published very well last year and and finally mentioning.

Tell you who, just join and the chair of pathology is, you know, a very well renowned liver cancer researcher and is doing several things. Among this he explaining to detect circulating metallated DNA as an early diagnosis. Wait, you see, and we’re really looking forward very much to this study is an an also.
He is trying to use Kartiana Glypican 3 as a target. Hopefully not that big of a TC and I'm gonna finish now because the time is over. But you know this is just an example of the richness of the research that we have. And really this is and I have to thank all the department that are involved in this enterprise and. You know each of these department. There are some hepatologist hiding there and this is what will I call your liver, which is a very old tradition. Here is going to celebrate
the Diamond Jubilee.

Next year and I thank you for your attention.

Thank you very much, Mario.

Very interesting talk. Are there any questions from the audience?

I can start with one.

So recently drugs have been developed that will cure hepatitis C virus.

People are being treated by these drugs.

What fraction of people in this country are affected?

People are being treated by these drugs.

And what’s the effect on liver cancer?

Tell the the strategy would be worldwide application of of HPV and therefore I would say that a growing
amount of patients she is being treated should be treated that has had like a slowing down during the COVID crisis but should resume full time. The question of the effect on liver cancer is a very good question because there has been a great controversy because a lot of patients After eradication of the virus, have the path surprised that delivered Carson happens. Anyway, this is happening in patients that were treated already with significant fibers in their liver. And it was initially proposed that actually the allocation of
the virus would get rid of some kind of beneficial information, but further studies have shown that actually the risk is decreased, but it’s not zero. So why is not zero is something that we need to understand. My personal opinion is that we are simply eliminating one of the many risk factors. You know the regular guy is a guy that didn’t know to have actitis is a little overweight, has smoked. Is drinking, you know, not drunk but enjoying the wine.
It just doesn’t know it an an therefore yeah, will you ever you have four risk factor of which you eliminate one?

This is why this is a internal medicine. This is right because you really have to address all the risk factor in every single patient. Otherwise, you may fail like like the eradication of appetite is C shows in certain patients and so the basic clinical recommendation is that the patient that you were ever advocated while he was erotica still needs to undergo the six months. Screening and surveillance for ACC.
Are there other other questions?

OK, with that I I do see the vineyard behind your folder there in moderation.

Yeah moderation, OK thank you.

Thank you very much.

Thank you very much.

So our next speaker today is Jonathan Levinthal.

Jonathan is assistant professor of Dermatology and the director of the Yale Uncle Dermatology Clinic.

He received his MD degree from New York University and is residency here at Yale.
He specializes in caring for patients with skin cancer, beginning with skin screening programs to detect cancers and sun damage and optimize prevention and therapy. The clinic serves a dermatologic needs of cancer patients dealing with a variety of skin issues, including skin changes due to chemo therapies, can infections, cancer involvement in the scan, radiation, dermatitis, and other changes due to radiation, so we’ll hear that today. So Jonathan I’m looking forward hearing you talk. Thank you.
Thank you so much and it’s a real pleasure to be here today. So today I’m going to talk about dermatologic conditions in cancer patients, and I’m going to provide updates from the ankle dermatology program. So here is a list of my disclosures, mostly from serving on advisory councils with fellow Aqua dermatologist throughout the country looking at skin toxicities as well as some clinical trial research funding. So the objectives of the talks I wanted to start by introducing you to the Aqua dermatology program.
Then I wanted to discuss the importance of cutaneous toxicities and how they can impact patients' quality of life as well as their cancer therapies. When severe, I wanted to highlight some of the most common toxicities that I see from select targeted and immune checkpoint inhibitors and traditional chemotherapy as well and discuss the role that aren't with their mythology.

So for some background, the Uncle Dermatology program was established by my great mentor and friend, Jennifer Choi.
Shortly after she graduated residency and then I had a great opportunity when she got recruited to Northwestern as a chief resident to start seeing patients in the clinic for which I've led the clinic ever since. And we've really seen a tremendous outgrow of support from so many colleagues in Metanx terjung Radon, an anthology, and the clinic has really grown dramatically over the years. It's a very robust, busy clinic. Some days we see up to 50 patients. And I just have a great team of
00:32:14.568 --> 00:32:16.511 nurses residents as well as research
NOTE Confidence: 0.82274705
00:32:16.511 --> 00:32:18.982 fellows and and support from the Yale
NOTE Confidence: 0.82274705
00:32:18.982 --> 00:32:20.906 Center for Clinical Investigation.
NOTE Confidence: 0.82274705
00:32:20.910 --> 00:32:22.860 So the field of supportive Uncle
NOTE Confidence: 0.82274705
00:32:22.860 --> 00:32:24.160 Dermatology really blossomed in
NOTE Confidence: 0.82274705
00:32:24.213 --> 00:32:26.306 the 1990s with the advent of many
NOTE Confidence: 0.82274705
00:32:26.306 --> 00:32:27.820 different targeted kinase inhibitors,
NOTE Confidence: 0.82274705
00:32:27.820 --> 00:32:29.704 which skin toxicities were so common
NOTE Confidence: 0.82274705
00:32:29.704 --> 00:32:31.694 in almost the majority of patients
NOTE Confidence: 0.82274705
00:32:31.694 --> 00:32:33.394 and it really encompasses many
NOTE Confidence: 0.82274705
00:32:33.394 --> 00:32:35.060 different things that we service,
NOTE Confidence: 0.82274705
00:32:35.060 --> 00:32:36.860 so there’s definitely all the toxicities
NOTE Confidence: 0.82274705
00:32:36.860 --> 00:32:39.330 that we see from the systemic therapies,
NOTE Confidence: 0.82274705
00:32:39.330 --> 00:32:39.996 radiation therapies,
NOTE Confidence: 0.82274705
00:32:39.996 --> 00:32:41.994 graft versus host disease as well
NOTE Confidence: 0.82274705
00:32:41.994 --> 00:32:43.280 as complications from cancer.
Going to the skin with metastases, but there’s really a lot of other indirect complications that we treat in clinic and that includes paranoia. Plastic disease, infectious complications, especially in patients who are immuno suppressed as well as being part of the survivorship program. For many patients who have survived cancer now, an increased risk for developing cutaneous carcinogenesis and then also part of the umbrella is that the Melanoma program I’m part of. It falls under the umbrella of
Uncle Dermatology and so a lot of what I do is also high risk in cancer screening to diagnose and treat many different types of skin cancers and also collaborate with the cancer genetics program to obtain tissue for genetics. So wanted to start by discussing the cutaneous toxicities are not just cosmetic. These are really important issues that impact patients quality of life and there's been many studies over the years looking at validated quality of life surveys.
toxicities to impact in both physical as well as emotional domains and so one interesting concept is that women seem to be affected greater than men in terms of their quality of life and it’s probably because of the types of regiments they did receive for breast and other gynecological cancers which frequently impact the here in the nails, and so this can affect women’s self image, cultural identity, sexuality as well as mental health, and a loss of control over their body.
The hallmark examples

Chemotherapy induced alopecia, which we see from the cytotoxic agents,

In particular an one homework study, showed that almost 60% of women with breast cancer preparing for chemo considered this to be the worst possible associated side effect and almost 10% even considered declining treatment in fear of it.

So these are real, very real and important issues, and there's been so many other studies looking at the acne reform, ranch hand, foot rashes, nail changes in mucus, itis.
all of which I’m going to discuss in which can impact quality of life. So the study on the left kind of highlights an important concept that it’s not just those main toxicities that can impact patients quality of life. In this study of targeted agents in breast and colorectal cancers, you’ll see that things like itching, dryness of the skin, easy bruise ability, pigmentary changes, they can all be associated with poor quality of life and the study on the right looked at different types of chemotherapy and
how they impact quality of life.
Not surprisingly.
A lot of the more novel, targeted therapies, especially the EGFR inhibitors, were associated with an increased number of skin toxicities, but also those which impact quality of life greater than some of the traditional chemotherapeutic agents. Unfortunately, there's mounting data showing that early dermatologic intervention can really make a difference, and so Uncle dermatology programs have been showing up at most of
the premier cancer centers in the States and abroad, and one study from MSK show that with outpatient Uncle dermatologic involvement, patients on immunotherapy were less likely to have interrupted treatment 5% versus 30% to those managed without dermatologic intervention. In a recent study by the Harvard Group similarly showed. The inpatient konsult can also decrease the chance of patients receiving systemic immune suppression and immune therapy discontinuation. Now,
we haven’t performed a comparative study.

We did perform a very large study recently that was published of over 100 immunotherapy.

Rash is 1/4 of which presented to my clinic, often with disruption of immunotherapy.

But with early dermatologic intervention, over 90% of these patients were able to remain on their treatment.

So wanted to start by focusing on some of the toxicities that I see from targeted therapy.

I mean there’s so many different types of agents to discuss,
review some of the main ones.

In the interest of time so the EGFR inhibitors are a class that are commonly associated with cutaneous toxicities. Not surprisingly, as the epidermal growth factor receptor is expressed in the skin, hair and nails, and really important for homeostasis and some of the monoclonal antibodies likes to talk some mad panitumumab as well as the 1st and 2nd generation drugs.

Presents with cutaneous toxicities in the majority of cases. Fortunately, the third generation...
drugs like OC murdered him

for a lung cancer patients.

They don’t seem to get the rest,

the rest nearly as often,

probably less than 30%,

and so the most common toxicity

that we see is the papulopustular

for the acne or form rash,

and this usually manifests on patients face,

scalp, chest and back.

Although it could be widespread

and one common misconception is

that it’s just a sterile technique.

Reform drug eruption, which is true.

However,

I find a large percentage of these patients.
Especially when they get to higher grades, often have coinfection with staff. Both M RSA an MSA, so that’s a good therapeutic Pearl to obtain wound cultures and hear examples of the Packers and pustules. Note all this year is crusting. It was all in petition eyes with staff. Oreius is a more typical scenario in one of the more robust severe toxicities that might require more aggressive treatment, which I’ll discuss. We see lots of nail infections paronychium and because of the
piercing of the nail plate into the hyponychium patients can get this friable granulation tissue known as pyogenic granulomas. These can be exquisitely tender and painful and definitely impacts patients quality of lights. It’s not uncommon to see her growth abnormalities, including elongated eyelashes. Some patients have a hard time trimming their eyelashes, which are curving inward and irritating their eyes, so they’ll just see me analysis them with with cutting their
00:38:13.373 --> 00:38:15.893 eyelashes we see lots of dryness and
00:38:15.893 --> 00:38:17.750 painful cracks and fissures too.
00:38:17.750 --> 00:38:19.330 There is an example of,
00:38:19.330 --> 00:38:21.058 you know a patient who presented
00:38:21.058 --> 00:38:23.288 with a neck near former option which
00:38:23.288 --> 00:38:25.322 was in petition eyes with staff.
00:38:25.330 --> 00:38:27.226 She responded quite well to Doxie,
00:38:27.230 --> 00:38:28.494 cyclin topical steroid ointments,
00:38:28.494 --> 00:38:29.126 antibiotic ointments.
00:38:29.130 --> 00:38:31.069 And I’m a big fan of antiseptic
00:38:31.069 --> 00:38:33.868 a serious crusting.
00:38:33.870 --> 00:38:35.760 Here’s another example of a patient.
00:38:35.760 --> 00:38:37.380 Also recently from the Lung Cancer
00:38:37.380 --> 00:38:39.441 Group who also had quite a severe
acne deformed mesh occasionally in very severe circumstances there can actually be associated alopecia as well. She responded very well to dermatologic intervention. I wanted to highlight that. While the acne reformers typically presents during the first few weeks on the head, chest and back, we have seen uncommon presentations as well, which are described in the literature and those are prepared drug eruptions which likely fall into the category which likely fall into the category of the late acne reform toxicity. In these cases usually present many months into treatment,
and they often present on the lower extremities in the buttocks, and as you can see with these perperek looking lesions, and they’re also frequently infected with staff on Moon culture. Here’s an example of a patient with head and neck cancer who responded to dermatologic intervention. And here’s an example of a patient who has pretty typical pyogenic granuloma with Paronychium, who responded to the topical beta blocker timolol gel. Many of these cases are non-responsive.
to conservative approaches and sometimes
NOTE Confidence: 0.78627217
procedural intervention may be required,
NOTE Confidence: 0.78627217
like using silver nitrate to court arise
NOTE Confidence: 0.78627217
to argue these granulomas or even nail avulsion
NOTE Confidence: 0.78627217
for the really recalcitrant cases will do.
NOTE Confidence: 0.78627217
So there’s many hot topics around EGFR
NOTE Confidence: 0.78627217
inhibitors one over the years has been
NOTE Confidence: 0.78627217
looking at pre emptive versus reactive
NOTE Confidence: 0.78627217
therapy and there’s various phase two
NOTE Confidence: 0.78627217
trials which have shown that doc see
NOTE Confidence: 0.78627217
cycling Minocycline with with topical
NOTE Confidence: 0.78627217
steroids and moisturizers can actually
NOTE Confidence: 0.78627217
reduce the severity of the rash.
NOTE Confidence: 0.78627217
The overall incidence is probably not
NOTE Confidence: 0.78627217
affected and I think the approach towards
NOTE Confidence: 0.78627217
the rest differs depending on the program.
Here they’ve been looking at lots of new novel approaches for treating the rash, none of which are really gained widespread use. Some of the data is very mixed with these drugs and so we definitely need New approaches and then I just wanted to briefly mention that there’s a few clinical trials which we’re doing here. Studying the rash one is currently recruiting and I really appreciate my awesome collaborators in the head and neck and thoracic group which are helping to recruit patients. And that’s to better understand the
00:40:32.258 --> 00:40:40.312 microbiome of the populations or option
NOTE Confidence: 0.78627217
00:40:34.058 --> 00:40:37.697 and see how changes in the microflora
NOTE Confidence: 0.78627217
00:40:35.780 --> 00:40:39.761 can be associated with the severity of
NOTE Confidence: 0.78627217
00:40:37.697 --> 00:40:40.205 the rash and response to rash treatment.
NOTE Confidence: 0.78627217
00:40:39.761 --> 00:40:44.128 And then there’s a company that we’re
NOTE Confidence: 0.78627217
00:40:42.113 --> 00:40:46.205 working with that’s developing a
NOTE Confidence: 0.78627217
00:40:44.128 --> 00:40:47.921 novel probiotic with staff epidermal
NOTE Confidence: 0.78627217
00:40:46.205 --> 00:40:51.008 disappointment to look to see if
NOTE Confidence: 0.78627217
00:40:47.921 --> 00:40:50.580 this is going to reduce secondary
NOTE Confidence: 0.78627217
00:40:49.716 --> 00:40:53.257 infections with staff wareus,
NOTE Confidence: 0.78627217
00:40:51.010 --> 00:40:55.654 which are commonly associated
NOTE Confidence: 0.78627217
00:40:53.260 --> 00:40:58.699 with severe rashes.
NOTE Confidence: 0.78627217
00:40:55.654 --> 00:41:00.450 And so this is in development
NOTE Confidence: 0.78627217
00:40:58.700 --> 00:41:04.212 hoping to do this trial next year.
NOTE Confidence: 0.78627217
00:40:59.642 --> 00:41:01.212 So shifting gears,
NOTE Confidence: 0.78627217
00:41:01.212 --> 00:41:03.258 I wanted to briefly discuss
other targeted agents, which we see a lot of toxicities from in the breast group. They heard two inhibitors as well as American hitters used for various cancers can actually share some of the properties of the EGFR inhibitor. Reactions will often see folliculitis, eruptions and acne or form rashes. However, they usually less severe and less frequent. I wanted to talk about another very important toxicity which comes to clinic and that’s the hand foot skin reaction.
So these usually develop from the anti angiogenesis agents, some of which we just heard about which are used in the under cellular carcinoma such as the anti veg F agents. And here's a list of the FDA approved ones and so this seems to be one of those toxicities which just so frequently impacts patients quality of life. They have a hard time being able to work to do their daily routine. It very often impacts their activities of daily living. Patients usually present early on. We just kind of thickening or hyper keratosis of the palms and soles.
but then over time they get these very painful.

Callous is, sometimes they are inflamed and then in the severe cases we even see blisters develop as well.

This rash can be associated with very painful dysaesthesia with sometimes will use gabapentinoids like pre gabelein or gabapentin to help assist with at this stage as well.

These drugs also are associated with genital eruptions as well as splinter hemorrhages on the nails. So we don’t really have great treatments
00:42:27.264 --> 00:42:29.966 for the hand foot skin reaction right now.
NOTE Confidence: 0.7819162
00:42:29.970 --> 00:42:31.274 Unfortunately, many patients don’t
NOTE Confidence: 0.7819162
00:42:31.274 --> 00:42:33.230 respond to moisturizers and karata lytic,
NOTE Confidence: 0.7819162
00:42:33.230 --> 00:42:34.810 or topical steroid ointments and
NOTE Confidence: 0.7819162
00:42:34.810 --> 00:42:36.820 so dose reduction is often needed.
NOTE Confidence: 0.7819162
00:42:36.820 --> 00:42:39.244 So we're doing a study looking at a
NOTE Confidence: 0.7819162
00:42:39.244 --> 00:42:40.669 novel topical nitroglycerin ointment
NOTE Confidence: 0.7819162
00:42:40.669 --> 00:42:43.308 to treat grade two or grade three
NOTE Confidence: 0.7819162
00:42:43.308 --> 00:42:45.457 hand foot skin rash and the first
NOTE Confidence: 0.7819162
00:42:45.457 --> 00:42:47.904 phase is going to be comparing it to
NOTE Confidence: 0.7819162
00:42:47.904 --> 00:42:49.860 vehicle and then the second phase.
NOTE Confidence: 0.7819162
00:42:49.860 --> 00:42:51.156 Comparing pyren lower percentages
NOTE Confidence: 0.7819162
00:42:51.156 --> 00:42:53.496 and so if you have any patients
NOTE Confidence: 0.7819162
00:42:53.496 --> 00:42:55.524 who present with hand foot skin.
NOTE Confidence: 0.7819162
00:42:55.530 --> 00:42:57.532 On these approved drugs on the left
NOTE Confidence: 0.7819162
00:42:57.532 --> 00:42:59.995 who have great to her Grade 3 and
really most patients eventually get to grade 2 because it's almost always interfering with her activities of daily living. Please I'll refer them to our study. We definitely need to do better in managing this toxicity. In interest of time, I'm just gonna highlight that really many different classes can do it. Since you were on or Brewton if for...
CLL often get perperek eruptions, folliculitis patients with breast cancer on PR, 3 kinase inhibitors, and get really terrible. Morbilliform exanthems some requiring the use of Prednisone so wanted to turn now to immune checkpoint inhibitors. Because I think you pennis toxicities are really important. To discuss with this class of cancer cancer therapy. And so all great rash, plus parictis it kind of tally. It all can occur in up to 50% of patients on checkpoint inhibitors at one point in time during their treatment.
00:43:58.100 --> 00:44:00.050 This is especially true of patients

00:44:00.050 --> 00:44:01.630 who are on combination CTL,

00:44:01.630 --> 00:44:03.622 a foreign PD one therapy and the way

00:44:03.622 --> 00:44:05.619 that I think about the toxicities

00:44:05.619 --> 00:44:07.414 from the checkpoint inhibitors is

00:44:07.414 --> 00:44:09.547 a categorized them into those that

00:44:09.547 --> 00:44:11.902 are the most frequent that we see

00:44:11.902 --> 00:44:13.507 which are the morbilliform rashes,

00:44:13.510 --> 00:44:14.608 the lichenoid rash,

00:44:14.608 --> 00:44:17.597 which I’ll discuss a bit more about the

00:44:17.597 --> 00:44:20.437 exame and the parictis as well as psoriasis.

00:44:20.440 --> 00:44:22.366 And then there’s the whole category

00:44:22.366 --> 00:44:23.979 of autoimmune disorders which occur

00:44:23.979 --> 00:44:25.611 as immune related adverse events such

00:44:25.611 --> 00:44:27.627 as diddle I go and bullous pemphigoid

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which I’ll discuss more about as well.

Fortunately, the severe rashes, the life threatening Stevens Johnson ones we’ve seen them,

but they’re not. They’re not common,

and then there’s kind of the miscellaneous category of those that are granulomatis like sarcoid for those involving the panniculus or the fassia.

So this is actually one of the largest studies out there.

Looking at the different branches looking in therapy that we published a couple of years ago and it was a retrospective retrospective study.
of over 100 rashes that we saw in the ankle during clinic and we found is that they really have many different clinical and histopathologic morphologies here and a lot of them resembled idiopathic dermatosis that that we treat in dermatology. For patients who are not on checkpoint inhibitors. If you take a look at the yellow box I highlighted kind of the top five and what’s interesting about this is that a lot of these common rashes actually develop many months into therapy. The most common one can be sometimes...
six months into treatment, and I think that’s important because patients don’t always realize or put together that their new rashes because of their immune therapy, and in some of the oncologist who are less familiar with these toxicities, also may not. And so I think that’s important to keep in mind that you can definitely get late toxicities to write. This is a very prominent feature. In most of these containers, toxicities fortunately were able to manage these patients in the vast majority of time,
00:45:45.400 --> 00:45:47.560 topically by 20% of patients required Prednisone because of the severity of the rash and 25% had disruption at some point, sometimes before they saw me in clinic, or sometimes because the rash progressed.

00:45:47.560 --> 00:45:49.333 Prednisone

00:45:49.333 --> 00:45:51.326 of immune therapy at some point,

00:45:51.326 --> 00:45:53.294 sometimes before they saw me in clinic,

00:45:53.300 --> 00:45:55.596 or sometimes because the rash progressed.

00:45:55.600 --> 00:45:57.568 But really, the vast majority can remain on immune therapy.

00:45:57.570 --> 00:45:58.228 But really,

00:45:58.228 --> 00:45:59.873 the vast majority can remain on immune therapy.

00:45:59.873 --> 00:46:00.860 on immune therapy.

00:46:00.860 --> 00:46:03.500 It was just the cases of Stevens Johnson, a really bad bullous pemphigoid where immune therapy was discontinued and another important concept here is for the rashes.

00:46:03.500 --> 00:46:05.630 a really bad bullous pemphigoid where

00:46:05.630 --> 00:46:07.708 immune therapy was discontinued and another

00:46:07.708 --> 00:46:09.829 important concept here is for the rashes.

00:46:09.830 --> 00:46:11.070 That do recur after

00:46:11.070 --> 00:46:12.620 Prednisone or that persist.
Targeting the dermatosis in a more efficient way is probably going to be the future of how these rashes are treated and so we've had a great deal of success using things like asset reading for the psoriasis or lichenoid rash Om Alisme after methotrexate for the Bulls tend to glide and the TNF inhibitors for Stevens Johnson, which is how we treat it typically. More recently for the cases that are not associated with checkpoint, I wanted to take a moment to discuss that the lichenoid dermatitis.

81
00:46:41.405 --> 00:46:43.509 is we throw around the term lichenoid
00:46:43.509 --> 00:46:45.195 alot in dermatology and I’m not
00:46:45.195 --> 00:46:47.172 sure if the if our colleagues in
00:46:47.172 --> 00:46:48.792 meddock or familiar with it and
00:46:48.792 --> 00:46:50.888 so like in what looks like like in
00:46:50.888 --> 00:46:52.665 which an Organism that grows on
00:46:52.665 --> 00:46:54.782 trees kind of scaly and crusty looks
00:46:54.782 --> 00:46:56.564 kind of like the rash does.
00:46:56.570 --> 00:46:58.232 And then there’s the histologic term
00:46:58.232 --> 00:46:59.979 of lichenoid dermatitis which is an
00:46:59.979 --> 00:47:01.449 interface dermatitis with the bandlike
00:47:01.449 --> 00:47:02.590 infiltrate of lymphocytes ANAN.
00:47:02.590 --> 00:47:04.708 This is the most common histopathologic
00:47:04.708 --> 00:47:06.899 finding that we see in the skin.
00:47:06.900 --> 00:47:08.986 And so the lichenoid rash can occur

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in up to a third quarter to 1/3 of patients on PD one and PD Wagon one agents.

And this is kind of a more severe example highlighting the pink violaceous scaly patches and plaques.

Here’s a patient who responded to Acitretin were very persistent Palmer planter involvement and he did not do as well with topical steroids or even a short course of Prednisone. I also wanted to highlight that this lichenoid rash can involve the mucosa, and when that occurs, it can really be quite severe with ulcerations on the genitals as well as the oral mucosa.
Anan this this this clearly is very painful and we were very low threshold for Prednisone in these cases. Sometimes we try things like hydroxychloroquine in those that persist. So in addition to the lichenoid rash from checkpoint inhibitors, we can also see eczematous presentations. Sorry, acid form presentations. And then there’s patients that just have terrible parictis even without an associated rash. So here’s a typical scenario of a patient with psoriasis, then goes on checkpoint.
inhibitor therapy and flares, and she responded very well to phototherapy, which is a really nice non-systemic option for these patients. Here’s an example of widespread eczema, and here’s a patient that I share with Doctor Goldberg who just developed just severe itch and she comes to clinic, covered in bandages and explorations and she eventually. Did somewhat better with prednisolone and phototherapy, so just highlighting that the different spectrum of these papulosquamous rash as we call them from dermatology. So both paperboy is one of those
rashes which is not common, but it’s a very important one because it has a great deal of associated morbidity with it and so for those who aren’t familiar with it, it’s an autoimmune blistering disease with deposition of Ig G and compliment at the dermal epidermal junction is seen here in my patients tissue sample and patients also make autoantibodies against BP 180, so we conducted a study a few years ago at our uncle during clinic and we found that about 1% of the patients on checkpoint inhibitors...
Based on our pharmacy develop this rash so it’s not common, but it definitely can be quite extensive and the latency is usually four to six months. Clinically, patients will often present with just worsening queritis even before the onset of rash. Then they get these urticaria lesions with tense vesicles and bullae, which can become eroded, and you can also get mucosal involvement as well.
00:49:33.020 --> 00:49:35.627 rash is unlike a lot of the more
NOTE Confidence: 0.79664147
00:49:35.627 --> 00:49:37.307 common exanthems and lichenoid rash.
NOTE Confidence: 0.79664147
00:49:37.310 --> 00:49:38.750 These typically require Prednisone due
NOTE Confidence: 0.79664147
00:49:38.750 --> 00:49:40.668 to the severity of the presentation
NOTE Confidence: 0.79664147
00:49:40.668 --> 00:49:41.518 with blisters.
NOTE Confidence: 0.79664147
00:49:41.520 --> 00:49:43.506 We’ve also had cases which have
NOTE Confidence: 0.79664147
00:49:43.506 --> 00:49:44.830 persisted even after immunotherapy
NOTE Confidence: 0.79664147
00:49:44.886 --> 00:49:45.738 has been stopped,
NOTE Confidence: 0.79664147
00:49:45.740 --> 00:49:47.678 and even after a Prednisone taper
NOTE Confidence: 0.79664147
00:49:47.678 --> 00:49:48.647 likely do too.
NOTE Confidence: 0.79664147
00:49:48.650 --> 00:49:50.516 I’m just immune activation and so
NOTE Confidence: 0.79664147
00:49:50.516 --> 00:49:52.540 for those cases things like Rituxan,
NOTE Confidence: 0.79664147
00:49:52.540 --> 00:49:53.188 MAB formalism,
NOTE Confidence: 0.79664147
00:49:53.188 --> 00:49:54.808 Maverick dupilumab which are biologics,
NOTE Confidence: 0.79664147
00:49:54.810 --> 00:49:58.688 I’ll discuss later might be very helpful.
NOTE Confidence: 0.79664147
And the one question about that comes up a lot is when to worry about a typical macular papular example, when should you worry about progression of Stevens, Johnson, and so? My advice with these cases is obviously, you can grade it based on the body surface area, but when the rash is pink and pure Riddick. It’s very reassuring when the rash starts to become this more dusky color. It’s when you really have to worry about a progression to a more severe cutaneous reaction, especially if there is any coastal.
involvement or blisters or any systemic signs or symptoms really have a low threshold for Prednisone and watching carefully, we’ve definitely seen these very atypical scenarios where an example just progressed and slowly over the course of several weeks progressed to a Stevens Johnson type of scenario. And that’s been that’s been published with checkpoint inhibitors, which is actually very different than classical Stevens. Johnson would just takes off. At a very rapid tempo nears examples of examples that we’ve seen,
00:51:01.112 --> 00:51:01.676 Hippie Niveau.
00:51:03.830 --> 00:51:05.636 An I think the future direction
00:51:05.636 --> 00:51:07.612 for it for treating these cutaneous
00:51:07.612 --> 00:51:10.090 toxicities is is looking at a more
00:51:10.090 --> 00:51:11.810 efficient way to shut them down.
00:51:11.810 --> 00:51:13.082 Basically treating the dermatosis
00:51:13.082 --> 00:51:14.672 in the most targeted approach.
00:51:14.680 --> 00:51:16.290 There’s definitely a good amount
00:51:16.290 --> 00:51:17.900 of data suggesting that the
00:51:17.956 --> 00:51:19.456 use of systemic steroids is,
00:51:19.460 --> 00:51:20.560 in general, fine, inappropriate,
00:51:20.560 --> 00:51:22.629 and it has has not been shown
00:51:22.629 --> 00:51:24.434 to impair tumor response when
00:51:24.434 --> 00:51:25.517 treating cutaneous toxicities,
00:51:25.520 --> 00:51:27.110 but for those cases that
are just recalcitrant,
I think we’re going to find the use of anti aisle 413 drugs like the pillow mab or anti Ige. He antibodies like oh Melissa Matthews more frequently. We already have plenty of biologics used in psoriasis and I think there is mounting data in case series of these being used for checkpoint rash as well as TNS for Stevens Johnson. Here’s an example of a patient I share with Sarah Weiss who had bullous pemphigoid which kept flaring when we slowly taper the Prednisone.
Eventually, with the concomitant administration of Melissa Map were able to get the patient off criticism. And so in the final moments, I just wanted to highlight it’s not the forgotten child, because we see lots of toxicities from the cytotoxic drugs. But these I think you’re probably more familiar with because they’ve been around for a long time, but definitely, alopecia mucositis are kind of your hallmark toxicities. Nail changes are really important.
and he’s come up a lot to my clinic, specially young women with breast cancers on taxanes or anthracyclines. They get very painful paronychia subungual hemorrhage. They can lose the nail plate they can become. Co infected, and so I think these toxicities are really important and then there’s the toxic rash of chemotherapy which can be hand foot syndrome or malignant intertrigo flow under the umbrella of toxic erythema of chemo and these reactions occur.
through the ecrivain excretion of chemo in the skin of echoing glands. And we just wanted to do a brief shout out to my awesome research fellow who just matched into dermatology at Cornell. Rihanna and she was very interested in looking at the cutaneous toxicities in patients we’ve seen with skin of color which really make up a large proportion of our clinic. And while the diagnosis in general is similar to patients without skin of color, there’s clearly a very prominent finding of hyperpigmentation, which is very bothersome and very,
very prevalent after a rash
are examples of that.
Patients who get fatal,
I go with darker skin.
It’s obviously a lot more noticeable,
and then there’s definitely a propensity
for starring starring alopecia,
but also just keloid scarring.
Here’s an example of a patient with a
keloid overport site which responded
well to injection of triamcinolone,
so I think it’s important to look
at how these toxicities differ
and in various populations.
And in closing went to refer
patients to our clinic.

I think the short answer is anytime you need a hand, we're really happy to see these patients. It is a privilege definitely for rashes that are higher grade that are impacting quality of life or that are recalcitrant to kind of conservative management. And definitely anytime there's a red flag that I mentioned like skin pain, duskiness, blisters or plus definitely send those patients our way.

So in conclusion, I hope you'll see from this talk that cutaneous toxicities are not just common, but they're also really important in the
overall management of cancer patients. I hope that Dermot Earley dermatologic intervention can make a difference. Remember that the EGFR acne reform rash often starts. It is a sterile rash, but it can often be secondarily infected and you can get these unusual late perperek eruptions as well. Hand foot skin from the anti angiogenesis drugs and definitely have associated pain. We don’t have great treatments yet, so please consider referring patients to the study using a novel nitroglycerin
ointment to treat it and then turning to the checkpoint inhibitor rash.

I think the lichenoid one is the important one to know about. It’s common it can have associated parictis and mucosal involvement as well as bullous pemphigoid, which frequently requires systemic therapy. And if there’s any red flag, obviously you know you have to treat these patients aggressively.

So I just wanted to thank really all of my colleagues Ann and Metang, Sir John Cradoc, everyone at Smilow who’s supported
Our clinic over the years, I have a really great team from the admins to the nurses to my chief residents, many of which have chosen Uncle Dharmas. Akarere Anatomy very proud and as well as my research fellows, an NYCC I. So if you ever have any patients, I’m very I’m always available. You can text me call me. Contact us and we’ll gladly see them. So thank you and I’ll take any questions. It’s terrific, thank you, Jonathan. Do you have questions from the audience? My recollection is that with the RAF inhibitors there was a serious
problem with squamous cell carcinoma’s is
that yeah so actually had a. I had a picture of that slide. I didn’t go into it too much but we had.
We saw a lot of toxicities over the years with the beer at inhibitors, but with the concomitant administration
we’ve actually seen that basically drop down to near 0 and so you can still get phototoxic rash is another odd things,
we’ve not seen squamous cells develop in patients on be right contributors to the American hitter.
Coadministration perfect thank you.

Any other questions?

If not, thank you Jonathan.

Very interesting. Looks like you’re making a lot of progress in managing these disorders.

Thanks for having me.