I'm doctor Trikini, one of the medical oncologists at Yale and Co. Director of the electoral cancer program. This is a CME developed dedicated to coal colorectal cancer. But given our time that we've allowed it for this session, we've decided to focus on rectal cancer so that we can be focused. So I'll be speaking.
We have doctor Kimberly Jihong from radiation oncology and colorectal surgery. After becoming ready from colorectal surgery and as we go through each presentation, so introduce themselves as well. So I'm going to start out again talking about the medical oncology aspects of rectal cancer. And we'll we'll a lot about 30 patients and 30 patients, 30 minutes per per topic. Again, medical oncology, radiation oncology and colorectal surgery, and they'll be time for questions that can be answered into the chat or could be...
certainly be addressed directly to us. So first I’m going to talk about the role of total neoadjuvant therapy for rectal cancer. How does totally odgen therapy, sometimes abbreviated as TNT, compared to standard preoperative chemoradiotherapy, which has been done since 2004? And which chemotherapy regimen to choose? Potentially, if we’re going to use a total neoadjuvant therapy approach, and also, we’ll then spend a little bit of time talking about the role of immunotherapy.
for microsatellite instability,
NOTE Confidence: 0.7206238525
high rectal cancer,
NOTE Confidence: 0.7206238525
a small subset of patients, but that may.
NOTE Confidence: 0.7206238525
This may have important
NOTE Confidence: 0.7206238525
implications for outcomes.
NOTE Confidence: 0.7206238525
So.
NOTE Confidence: 0.7206238525
Rectal cancer has been treated
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traditionally with chemoradiotherapy,
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followed by surgery,
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followed by adjuvant chemotherapy in the
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United States from the early 2000s.
NOTE Confidence: 0.7206238525
This is based on the sour trial
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which firmly placed neoadjuvant
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chemoradiotherapy as a standard of care,
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and again we typically used in the
NOTE Confidence: 0.7206238525
United States at least chemotherapy
as an adjuvant in the setting and in certain parts of Europe. Of course, adjuvant therapy is more controversial, but in the United States. Currently considered standard of care for any clinical T3 or N1 rectal cancer, but over the last several years for various reasons, which will cover total new advance therapy has become. A new approach, perhaps? And there’s four contemporary studies, perhaps before they’ve been published. Those four studies that have been
in dark color here versus the Oprah
study that offers study rather
that is not yet published but has
had some prelim data presented.
I’m not going to focus on that study.
That’s a study focused on the
potential organ.
Analyzing organ preservation,
so analyzing a watchful way to approach.
But so we have the protest 23
study the RAPIDO study the seller
studying the Polish two study.
I’ll focus on the first three and
and Doctor Johann will talk about
some of the radiation aspects
00:03:21.514 --> 00:03:23.324 of these studies and as well as
00:03:23.324 --> 00:03:24.296 the Polish two study.
00:03:24.300 --> 00:03:26.967 I don’t have any slides about that.
00:03:26.970 --> 00:03:30.757 So the rapid study made a splash
00:03:30.757 --> 00:03:32.380 at ASCO last.
00:03:32.380 --> 00:03:35.292 We’ll ask the 2020 so a couple of
00:03:35.292 --> 00:03:38.270 years ago now and this is a study
00:03:38.270 --> 00:03:42.400 that tried to tried to look at.
00:03:42.400 --> 00:03:44.736 The the benefit of totally adds in therapy.
00:03:44.740 --> 00:03:47.436 But it also tried to look at how short
00:03:47.436 --> 00:03:49.580 course ready up there he might play a
00:03:49.646 --> 00:03:51.816 role in the total nail agent approach.
00:03:51.820 --> 00:03:54.280 So it was a study that was sort of trying
00:03:54.345 --> 00:03:56.689 to answer 2 questions at the same time,
00:03:56.690 --> 00:03:59.558 which always makes it difficult to
really interpret the results. So patients were randomized to either the standard of care approach, so this would be long course close to six weeks of Chemoradiotherapy followed by a one month period of recovery and surgical planning, surgery, and adjuvant chemotherapy. But important to note that the chemotherapy optional so this is a study, a Dutch study and again in Europe. Chemotherapy is not always done in the admin setting, so optional chemotherapy is optional, so we can also see another departure there from what we would do in
the United States for the systemic therapy experimental arm. Short course radiotherapy, Dr. Johann will speak about. You know the reasons for short parts versus long course and how to think about that, but short portrait there we followed by new adjuvants are totally adjuvant capox here or full Fox. The totally by the few platinum doublet followed by surgery. So we have. Several things that are going on different than maybe what we would do.
here and under normal circumstances.

We have short course radiotherapy.

We have total new adjuvant and then we

have patients in the the control arm, not necessarily getting what we

would normally give because some of

them agreement optional therapy so

that they ended up being about 40% of patients in the control group

that did not get adjuvant therapy.

So you know some people would argue.

Maybe this isn’t really a fair

comparison group as a standard of

care group for our US patients.

Maybe a more accurate control comparative

group would be to restrict the
comparison to patients that receive just received adjuvant chemotherapy, which perhaps will be done in the future. Teacher really data for this study. So the initial that this has been presented and now published in The Lancet. So what did we see from the outcomes for patients with total new adjuvant therapy? So in the blue line here we have the total new adjuvant therapy group and the red line. We have the standard of care And we saw that disease related treatment failure.
So essentially an end point very similar to progression. Free survival is better,

Hazem ratio of about .75 that’s significant.

Also distant metastasis reduced with totally original therapy.

Again, it has a ratio of .69.

This is significant,

so we’re seeing overall essentially PFS and and just a metaphysis.

But then when we look at local regional results, so regional failure no really,

no real difference here with doing

this totally legitimate approach.
So that tells us that the PFS benefit essentially starting with F primarily being driven by affective systemic therapy doing what? Expanding it always does eliminating micrometastatic disease, but what does to really become the standard of care? We need to see something like a survival benefit. So did we see anything like that? No, we absolutely did not in the study, so this is overall survival and you can see these curves are very clearly negative. I think if there was maybe some
more separation of these curves,

NOTE Confidence: 0.874603993333333

one could argue with more follow

NOTE Confidence: 0.874603993333333

up from the study.

NOTE Confidence: 0.874603993333333

We see a PFS benefit.

NOTE Confidence: 0.874603993333333

This is a disease that has can stay

NOTE Confidence: 0.874603993333333

controlled for a long time when it’s.

NOTE Confidence: 0.874603993333333

Pathetic,

NOTE Confidence: 0.874603993333333

maybe with more follow up

NOTE Confidence: 0.874603993333333

we see a survival benefit,

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but in this case I think it’s going

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to be pretty hard to show that even

NOTE Confidence: 0.874603993333333

how overlapping these curves are.

NOTE Confidence: 0.874603993333333

See this system has a ratio of .92

NOTE Confidence: 0.874603993333333

with POS 0.59, so no survival benefit.

NOTE Confidence: 0.874603993333333

What about the past year rate and

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I’ve just made a big splash as well.
I think people get excited about the past CR rate and I don’t think this is actually a truly an appropriate endpoint to really be engaging. Too much of our decision making on for the majority of patients at least. You know, if we were to delay treatment even more after radiation, I’m sure we would see even more past CR rates, but if it’s not improving overall survival and it’s not an,
it’s not changing the type of surgery we do and any statistically significant change past the our rates are not really super important. At the end of the day, in my opinion and where we haven’t seen that with most of the attribute studies the the different surgeries are. Same so for the most part, so that was the RAPIDO study. What about another short course study? So this was another study that was very similar. So and it’s designed so I think helps make the case for or against you.
Argument therapy.

Having two studies that are very similar in their design.

So this is an experimental design with the short course radiotherapy.

Neoadjuvant K-pop for four cycles and then adjuvant K pops or two.

So instead of total neoadjuvant, it’s mostly newagen.

Mostly total neoadjuvant versus the standard of care again.

Chemoradiotherapy surgery and then cabox for six cycles.

And this is actually a noninferiority.
study and like the other, the study that I just showed not all patients got adjuvant chemotherapy. So actually 25% of both arms didn’t get adjuvant chemotherapy and in the experimental arm that the new therapies so that that tells you already as far as systemic therapy goes, the experimental group is receiving more of it. Because because both groups are not all receiving adjuvant chemotherapy. This study was done in China and it was not considered optional. We don’t know all the reasons why patients in the control group,
for example, didn’t get.

Adjuvant chemotherapy, So what are some of the survival outcomes? We see the disease free survival again. Essentially a progression pre survival end points for patients that are nonstatic and so we see a statistically significant technically hazard ratio, though only .88. Favoring total neoadjuvant for this total neoadjuvant approach. So that’s the same as the the prior study, right? Essentially, we’re seeing less relapsed. I suddenly imagine,
but in this we are seeing.

In contrast, we are seeing an overall survival benefit here, so we're seeing a has a ratio of .67 P value of .033. So unlike the rabbit study, we are seeing a survival benefit with total neoadjuvant for mostly new adjuvant klopps short course radiotherapy compared to long course radiotherapy, with that big caveat that. Where comparing patients that essentially only 3/4 of the patients received effective systemic
therapy in the control group, whereas the majority receive it in the experimental group and you know you can argue, well, it doesn’t. You know it doesn’t matter. Patients are are able to get it if you do the totally edging approach and only a portion of them are able to do it if if you do the standard of care approach I, I think we need a little bit more information about who’s not getting touch with therapy. Because we don’t find that three out of four kind of trial eligible.
kind of patients are not able to tolerate adjuvant therapy. I'd like from the the reasoning for lack of engagement therapy. But the other big study in this also. Was presented initially the same ASCO as RAPIDO study. Asked the 2020 yeah so the other big studies produced 23 which was looking at intensifying the chemotherapy to full Fox theory and as a rule, a toxic or expensive or given even convenient treatment might be justified if there’s been improvement in overall so revival.
On quality of life, but does these pre survival benefit alone? It’s tough not considered sufficient. We’re actually going to intensify therapy. So compared to the prior presentations where we’re really kind of just talking about reordering the therapy. So we better be able to show a survival benefit for us to comfortably say that full Fox theory can become a standard of care. So what did they do in this study?
They took patients that were randomized to the typical. Chemoradiotherapy followed by surgery followed by chemotherapy. Interestingly, six months of chemotherapy here, right? We would normally be four months in the United States and then in the experimental arm. Both fear and off for three months. This time in that short course or and then followed by adjuvant chemotherapy. So again, that truly shows new adjuvant but mostly neoadjuvant or half new adjuvant. In this study, again,
how many questions does this study? Kind of trying to answer. It’s not. It’s looking at slightly different chemotherapy schedule, even in the control group that would normally do more systemic therapy, but I think that’s OK. So what do we see in the produce?
23 study we saw a past CR rate just to
I think everybody focuses on the number,
so I want to highlight them as well.
Pathologic complete response rate
28% with triplet chemotherapy.
Full Fox series and I have full
Full Fox theory
That’s what we call it a lot in the United
States is technically a different regimen.
This was actually a full fear or not,
but.
Very obviously the same drugs,
just very similar, slightly modified dosing,
so the pathologic complete
response was 28% versus 12%,
so full Fox full Fox theory
short course, long course.
It seems like with the total the edge and approaches are are complete response
Pathologic complete response rates are pretty consistent at the 20 to 25,
maybe to to 30% range.
So what do we see in survival outcomes for these patients?
Three year disease free survival benefit that favors will total new agent.
The Fox theory 59% of 76 versus 69% statistically significant,
but you can see the cursor separated there.

That may change over time for seeing the disease free survival.

We may see a survival benefit, but at this time there’s clearly not statistically significant survival benefit.

But what about?

The metastasis free survival, so again 79% versus 72%, so we are doing a better job controlling systemic disease, just like we saw in the rapid of the trial.

With this this early use and increased intensity full Fox area and I think that’s where the the the hope of using a

28
more intensive treatment like this is, is the hopefully increase control of micrometastatic disease and care more of those patients. But we did not see that yet in this study. So when we talk about intensifying therapy, we want to be really sure that we are. When we think about this and kind of four periods of its use here. The neoadjuvant period chemoradiotherapy of four periods of its use here. The neoadjuvant period chemoradiotherapy of four periods of its use here. The neoadjuvant period chemoradiotherapy of four periods of its use here.
the perioperative period and the adjuvant chemotherapy period. So we look at the neoadjuvant period. Most people got through the six cycles of folks aren't the full without an issue, no new safety signals. Emma radiotherapy period 95% of patients with teams made it through the chemoradiotherapy period. 99% of the standard of care who went straight to it. 80s through period were similar in both groups, so I think they checked those boxes in the perioperative period, 92% of the patients that received
00:15:59.558 --> 00:16:01.197 full box period induction Underwood

00:16:01.197 --> 00:16:03.745 surgery versus 95 with standard of care.

00:16:03.750 --> 00:16:05.550 So there is small difference.

00:16:05.550 --> 00:16:06.591 Postoperative morbidity was

00:16:06.591 --> 00:16:07.979 similar between the groups,

00:16:07.980 --> 00:16:09.545 so we’re not seeing an

00:16:09.545 --> 00:16:10.484 increase in complications.

00:16:10.490 --> 00:16:12.608 We’re also not seeing a difference,

00:16:12.610 --> 00:16:13.540 by the way,

00:16:13.540 --> 00:16:15.710 in the type of surgery people needed.

00:16:15.710 --> 00:16:18.294 So if we had hoped that this surgery

00:16:18.294 --> 00:16:20.849 was going to reduce the rate of APR,

00:16:20.850 --> 00:16:22.368 etcetera, we were a little bit.

00:16:22.370 --> 00:16:22.944 Let down,

00:16:22.944 --> 00:16:24.953 so I think that is important to
00:16:24.953 --> 00:16:26.952 notice to note even that higher
NOTE Confidence: 0.575433818
00:16:26.952 --> 00:16:29.123 path the rate didn’t translate into
NOTE Confidence: 0.575433818
00:16:29.123 --> 00:16:30.500 necessary significant reductions
NOTE Confidence: 0.575433818
00:16:30.500 --> 00:16:32.795 in morbidity from from surgery,
NOTE Confidence: 0.575433818
00:16:32.800 --> 00:16:35.376 at least in the entire study population.
NOTE Confidence: 0.575433818
00:16:35.380 --> 00:16:36.820 What about adding chemotherapy?
NOTE Confidence: 0.575433818
00:16:36.820 --> 00:16:38.620 If you get totally adjuvant,
NOTE Confidence: 0.575433818
00:16:38.620 --> 00:16:41.116 are you less likely to tolerate
NOTE Confidence: 0.575433818
00:16:41.116 --> 00:16:42.780 adjuvant chemotherapy at least
NOTE Confidence: 0.715230942
00:16:42.780 --> 00:16:44.140 to start the adjuvant?
NOTE Confidence: 0.715230942
00:16:44.140 --> 00:16:45.768 Chemotherapy? The answer was no.
NOTE Confidence: 0.715230942
00:16:45.768 --> 00:16:47.822 You know 77 versus 79% of patients
NOTE Confidence: 0.715230942
00:16:47.822 --> 00:16:49.600 were able to start the editing therapy,
NOTE Confidence: 0.715230942
00:16:49.600 --> 00:16:51.510 but TNT patients ended up
NOTE Confidence: 0.715230942
00:16:51.510 --> 00:16:52.656 receiving fewer adjuvants.
NOTE Confidence: 0.715230942
00:16:52.660 --> 00:16:55.294 Cycles, but overall we have cumulative
amounts of chemotherapy patients received to the total neovagina from ARM still received more chemotherapy cumulatively again. About 21% here are patients in the standard of care group did not receive chemotherapy, so you are comparing a group 100% of the whom at least got some systemic therapy and a control group. Only 79% got effective systemic any theraphy. So if we kind of summarize what the difference is between these three, these three or four trials,
so they all had slightly different eligibility.

Rapido trial actually had the most advanced tumors and only allowing clinical test for two disease. But they all have very consistent results, and it’s only in the new agent period and therefore different postoperative regiments as well.
But they’re three year overall survival and disease free. Survival are are all relatively similar, and comparisons to their control arms with the only overall survival benefit. The clearly demonstrated so far in the stellar trial.

Is TNT a standard of care or the standard of care? And I want to say that it’s really hard to compare and these trials. How do you mix and match?
You mix and match full thoughts with long horse. Full fox theory with short course it becomes a little bit busy and hard to say that ordering truly matters for survival benefits when the TNT groups are getting more effective systemic therapy and all the studies because the rate of adjuvant therapy is underwhelming, at least for our US patients, one could argue, hey, that is real life and people that get a surgery that maybe aren’t
00:19:08.432 --> 00:19:10.819 as likely to be able to tolerate.

00:19:10.820 --> 00:19:12.692 Affective post of the post treatment surgery and so that it’s easier to get into systemic therapy in the neoadjuvant pair period.

00:19:14.662 --> 00:19:16.307 I think that’s one of the arguments in a more and more of the surgical disease pancreatic cancer,

00:19:17.927 --> 00:19:20.356 But I I think it’s a little bit more complex here,

00:19:20.356 --> 00:19:23.416 because that’s not quite the case that we see in our patient population here in the United States that we aren’t able to get in affective

00:19:23.416 --> 00:19:24.406 for example.

00:19:24.406 --> 00:19:28.580 because that’s not quite the case that we see in our patient population here in the United States that we aren’t able to get in affective

00:19:25.012 --> 00:19:27.566 But I I think it’s a little bit more complex here,

00:19:27.566 --> 00:19:30.164 because that’s not quite the case that we see in our patient population here in the United States that we aren’t able to get in affective
00:19:36.192 --> 00:19:38.304 systemic therapy up to 3040% of the time.
NOTE Confidence: 0.715230942
00:19:38.304 --> 00:19:39.459 It seems a bit extreme,
NOTE Confidence: 0.715230942
00:19:39.460 --> 00:19:40.260 so I think that.
NOTE Confidence: 0.715230942
00:19:40.260 --> 00:19:41.723 One of the contenders here is that
NOTE Confidence: 0.715230942
00:19:41.723 --> 00:19:43.427 these guys are all done outside the US,
NOTE Confidence: 0.715230942
00:19:43.430 --> 00:19:44.700 where the less aggregate therapy
NOTE Confidence: 0.715230942
00:19:44.700 --> 00:19:45.970 is used for rectal cancer.
NOTE Confidence: 0.715230942
00:19:45.970 --> 00:19:47.657 So we may be seeing mainly an
NOTE Confidence: 0.715230942
00:19:47.657 --> 00:19:49.388 effect that one group of patients
NOTE Confidence: 0.715230942
00:19:49.388 --> 00:19:50.968 is getting systemic therapy and
NOTE Confidence: 0.715230942
00:19:50.968 --> 00:19:51.600 one isn’t
NOTE Confidence: 0.779020331428571
00:19:51.663 --> 00:19:53.746 in 25% of the time, but in the end.
NOTE Confidence: 0.779020331428571
00:19:53.750 --> 00:19:55.286 For me, the positives outweigh that.
NOTE Confidence: 0.779020331428571
00:19:55.290 --> 00:19:56.698 The potential negatives here,
NOTE Confidence: 0.779020331428571
00:19:56.698 --> 00:19:58.106 and I’m using this,
NOTE Confidence: 0.779020331428571
00:19:58.110 --> 00:19:59.378 I’m using neoadjuvant therapy
in the majority of patients, and certainly I think this is a finitive care, and if an OS benefit is shown kind of across the board, it will become the standard of care. So I think some of my Panelists will focus especially Doctor Reddy talking about the surgical benefits of this we'll. We'll talk about the reduced time to often reserve reversal of the major advantage, the possibility of reduced surgical morbidity for low rectal cancer. Certainly in selected patients. Improve disease free survival.
Possibility of OS benefit.

There's longer follow-up.

Certainly in some of these studies like the.

Or just stay and we're not going to talk about well,

I'm not going to talk about watching me much,

but but the possibility of available for watching rate.

Of course,

with TNT that's not available

with without it disadvantages,

I think, for a lower rate of therapy completion compared to CRT.

Even so, it just it’s small.

It’s delaying tended defended his surgery,

which can be important and many
patients cannot tolerate the long duration of systemic therapy. For example, studies and produce 23.

So I think that brings me to my next point, that which chemotherapy regimen to you this? I think full Cox Cable box for at least four months, and the majority of patients for the total nudging therapy is there’s there’s. There’s the approach most widely adopted, and I support that. Thus can be used for select patients that are younger fit where local response is more meaningful for surgery, but I think there’s insufficient evidence
00:21:28.474 --> 00:21:30.760 to recommend this over whole Fox.
NOTE Confidence: 0.779020331428571
00:21:30.760 --> 00:21:32.975 For for patients and shouldn’t
NOTE Confidence: 0.779020331428571
00:21:32.975 --> 00:21:35.190 necessarily be broadly used yet.
NOTE Confidence: 0.779020331428571
00:21:35.190 --> 00:21:38.232 So just spend a few minutes
NOTE Confidence: 0.779020331428571
00:21:38.232 --> 00:21:39.753 talking about the.
NOTE Confidence: 0.779020331428571
00:21:39.760 --> 00:21:42.168 The role of checkpoint inhibitors for MSI
NOTE Confidence: 0.779020331428571
00:21:42.168 --> 00:21:44.518 high rectal cancer that is nonmetastatic.
NOTE Confidence: 0.779020331428571
00:21:44.520 --> 00:21:45.832 This was presented data
NOTE Confidence: 0.779020331428571
00:21:45.832 --> 00:21:47.472 presented at GIS this year,
NOTE Confidence: 0.779020331428571
00:21:47.480 --> 00:21:49.000 which I do ultimately think
NOTE Confidence: 0.779020331428571
00:21:49.000 --> 00:21:50.216 will be practice changing,
NOTE Confidence: 0.779020331428571
00:21:50.220 --> 00:21:53.139 but small numbers because these are patients,
NOTE Confidence: 0.779020331428571
00:21:53.140 --> 00:21:55.124 so mismatch repair deficient
NOTE Confidence: 0.779020331428571
00:21:55.124 --> 00:21:57.604 colorectal cancer in rectal cancer.
NOTE Confidence: 0.779020331428571
00:21:57.610 --> 00:21:58.578 Excuse me,
NOTE Confidence: 0.779020331428571
00:21:58.578 --> 00:22:02.468 is is 5 to 10% of of rectal cancer,
mostly when syndrome patients.

Important to note that these patients have chemo resistant disease and so the group.

Somewhere else when Kettering evaluated, giving these patients the checkpoint inhibitors to taking clinical stage two or three rectal cancer giving an anti PD one therapy and then following them by endoscopy and an MRI to see if they responded and had responded or had residual disease and then patients would go on to the standard.

Emma radiotherapy and surgery, and we know that the immune checkpoint
behaviors are very effective in systemic disease and for various reasons that it’s certainly been hypothesized for a while that would be even more effective than localized disease because they feel like immune escape and they’ll go, and they certainly went on to show that so that. I just put this slide up to mention that they actually enroll pretty advanced patients too, and almost all the patients were no positive so almost all the patients were no positive and certainly higher key stage tumors. What did they show when they did endoscopic following?
Essentially all these patients, essentially the either got a complete or complete response within roughly, you know, six months of starting immune checkpoint diggers. What about looking at these patients radiographically by MRI again? Almost all of these patients and this patient you know, subsided from analysis that wasn’t far enough, but all of this. All the patients analyzed actually got a complete clinical response. So all 11 patients that have been followed for adequate duration.
to be together data analyzed had

a complete clinical response.

Again, this is an 11 patient study,

but I think there will be perhaps

more data looking at this patient population from other investigators

and released from perhaps this team.

Well,

it may ultimately result in this becoming

practice changing in the future,

so I think stay tuned.

I this is not approved yet for

localized colorectal cancer.

These patients need to watch very

closely for progression because

they’re chemoresistant.
I do think it will probably be incorporated into guidelines in the future. So in summary, total new agent therapy can be considered standard for most patients where systemic therapy is planned, which is most clinical teeth region 1 disease in the United States? Both Foxrock Fox can be used for most patients and full Fox, full, fair and ox. For select patients, immune checkpoint inhibitors will become a treatment option for localized disease in the future but are not
00:24:32.863 --> 00:24:34.340 yet in the treatment guidelines.
NOTE Confidence: 0.03717491
00:24:44.880 --> 00:24:50.000 Umm? I think if anyone has any
NOTE Confidence: 0.03717491
00:24:50.000 --> 00:24:54.150 questions we can take one question now.
NOTE Confidence: 0.03717491
00:24:54.150 --> 00:24:56.880 Although I am not entirely sure.
NOTE Confidence: 0.03717491
00:24:56.880 --> 00:25:01.184 Since I cannot see anybody but the panelists.
NOTE Confidence: 0.03717491
00:25:01.190 --> 00:25:02.835 Whether a question can get to me,
NOTE Confidence: 0.686984582
00:25:03.450 --> 00:25:05.100 I can’t see anybody either.
NOTE Confidence: 0.58848537
00:25:14.910 --> 00:25:20.194 OK, on the chat, so certainly I’ll answer
NOTE Confidence: 0.58848537
00:25:20.194 --> 00:25:21.888 this one question and then I’ll I’ll.
NOTE Confidence: 0.58848537
00:25:21.890 --> 00:25:22.940 I’ll watch the chat a little
NOTE Confidence: 0.58848537
00:25:22.940 --> 00:25:23.640 bit closer after this.
NOTE Confidence: 0.58848537
00:25:23.640 --> 00:25:25.010 What is your current approach?
NOTE Confidence: 0.58848537
00:25:25.010 --> 00:25:27.884 My current approach is typically full
NOTE Confidence: 0.58848537
00:25:27.884 --> 00:25:31.380 fox for for four months cycles and
NOTE Confidence: 0.58848537
00:25:31.380 --> 00:25:33.360 long course radiotherapy for the most
NOTE Confidence: 0.58848537
00:25:33.360 --> 00:25:35.505 patients with John will talk about
NOTE Confidence: 0.58848537
00:25:35.505 --> 00:25:37.330 the radiation selection and planning,
NOTE Confidence: 0.58848537
00:25:37.330 --> 00:25:39.195 but usually starting with systemic
NOTE Confidence: 0.58848537
00:25:39.195 --> 00:25:40.687 therapy for logistical purposes.
NOTE Confidence: 0.58848537
00:25:40.690 --> 00:25:45.950 The fox, or for a cycles well Fox series,
NOTE Confidence: 0.58848537
00:25:45.950 --> 00:25:47.747 certainly unused in those select
NOTE Confidence: 0.58848537
00:25:47.747 --> 00:25:49.541 younger 5th patients where I think
NOTE Confidence: 0.58848537
00:25:49.541 --> 00:25:51.480 they have more aggressive disease,
NOTE Confidence: 0.58848537
00:25:51.480 --> 00:25:53.566 but that is not my normal practice.
NOTE Confidence: 0.844957160833333
00:25:54.730 --> 00:25:56.476 Right, I think our practice has
NOTE Confidence: 0.844957160833333
00:25:56.476 --> 00:25:58.200 been long course and you know,
NOTE Confidence: 0.844957160833333
00:25:58.200 --> 00:26:00.502 we’ll talk about. I think Mike.
NOTE Confidence: 0.844957160833333
00:26:00.502 --> 00:26:02.826 You talked a lot about TNT will
NOTE Confidence: 0.844957160833333
00:26:02.826 --> 00:26:05.184 probably skip over my stellar trial and
NOTE Confidence: 0.844957160833333
00:26:05.184 --> 00:26:07.729 rapidough that I have in my slide set,
NOTE Confidence: 0.844957160833333
00:26:07.730 --> 00:26:09.170 so there were not redundant.
NOTE Confidence: 0.844957160833333

49
Try to focus more on short course versus long course. We probably could incorporate short course more into our practice, but you know, I think everyone’s just more comfortable with long course and the patients do well, so I’m going to dig in a little into the nitty gritty of radiation. So you guys have a sense of what we do for rectal cancer when we live down in the basement, so have a little bit of the technique and then we’ll talk about short course versus long course. I’ll touch on TNT,
but I’m going to breeze over that fast because Doctor Shakini covered it quite well and then we’ll leave watchful waiting to Doctor Reddy.

So Kim, Johann, I treat you. I cancers here in New Haven and I think one of the things we need to emphasize is that the treatment of rectal cancer is a team based approach. So I’m lucky to work with these folks and a handful of others, and we really need to work together to get these patients treated and it’s a collaborative approach and I think that’s important to recognize.
So with that I'll get started.

So plan for today is I was going to talk about what is the benefit of radiation therapy for rectal cancer? So local control benefit prior to surgery that's quick doctor Chikani already touched on the sour trial. We'll talk about different radiation techniques, so when you see in my note, should we do 3D conformal should be the IRT. What does SBRT so that everyone has a sense of what those techniques are and how they’re helpful for different scenarios? Then I’ll touch on the standard long.

Of course,
00:27:39.640 --> 00:27:41.460 chemoradiation versus short course radiation and then do a quick review of TNT because I think we got a great review of that from Doctor Dakini, so I'm just showing some rectal plans down here.

00:27:51.960 --> 00:27:54.407 This is a 3D conformal plan and the one to the right is a IRT plan and we'll talk about the benefits of those two approaches.

00:28:02.400 --> 00:28:05.829 OK, so why do we use preop chemo radiation prior to surgery for rectal cancer patients? Michael talked about this already a bit, but the benefit is local control.

00:28:12.940 --> 00:28:15.838 We don’t see the overall survival benefit,
so this is the classic German rectal trial rate, which I think we all know about that compares pre-op versus post-op radiation in patients with locally advanced rectal cancer. And what we see is that patients who have locally advanced disease so T3T4 or node positive, who had preop radiation. And this is long course with concurrent 5 of you. Now we more commonly used alotta compared to post op radiation. The local control was improved in the pre OP setting. And really it’s you know if you contour these cases is that I can
00:28:50.996 --> 00:28:52.753 see the tumor in the preop setting
00:28:52.753 --> 00:28:54.762 in the post op setting I’m merging
00:28:54.762 --> 00:28:56.966 in the pre OP imaging and kind of
00:28:56.966 --> 00:28:58.690 treating where the tumor used to be.
00:28:58.690 --> 00:29:00.888 So I think that helps people understand
00:29:00.888 --> 00:29:02.643 why the local control benefit
00:29:02.643 --> 00:29:04.905 really exists in the preop setting.
00:29:04.910 --> 00:29:06.884 The other benefit of preop radiation is
00:29:06.884 --> 00:29:09.238 for those patients with distal tumors, right?
00:29:09.238 --> 00:29:14.120 We see an increased improvement in.
00:29:14.120 --> 00:29:17.816 Sphincter sparing surgeries or lack of need.
00:29:17.820 --> 00:29:20.524 Sorry my leg is going off for an
00:29:20.524 --> 00:29:23.360 APR and permanent colostomy so you
00:29:23.360 --> 00:29:24.770 know there are some patients where
00:29:24.770 --> 00:29:26.456 the tumor is so distal and involving
00:29:26.456 --> 00:29:28.024 So I think that helps people understand
this finger that we know that it’s not going to benefit them. But you know, for patients who kind of have that distal tumor where they’re on the brink of needing an APR versus and LAR, I think that that is another benefit of pre OP therapy. Toxicities are less in the Preop sitting as well. And but though, as I mentioned, no difference in overall survival. So that’s that’s why we employ radiation prior to surgery. So now I’m going to dig into a
little bit of nitty gritty, dorky radiation therapy techniques. But I think it hopefully is of interest. So what? What are these different things that we're talking about, and what are the techniques and what are the benefits of using one versus another right in the setting of rectal cancer? So how we shape our radiation fields are with what we call these multileaf collimators, these tungsten leaves that are two millimeters or less and they move in and out of the
beam so we can use them to shape the beam.

But we also can use them to modulate the intensity of the beam.

So if you turn the beam on and they come in and out during treatment right then at different times,

each portion of the tumor target can be getting different intensity of radiation,

which allows us to conform the radiation dose to our tumor target and the goal here is dose of

the tumor reduced side effects.

So when we're talking about 3D conformal radiation, this is basically,

you know,

in the old days we would use an X ray
and use Bony anatomy to set our fields.

3D conformal radiation just means that we’re using a CAT scan and I sit for a couple of hours and the normal tissues around those tumor targets every 2 millimeters through the slice of the skin, so that we can use those contours to shape the beams to fit the tumor target and avoid the normal structures as much as possible. But you can see that when we do that for a rectal plan, right, we’re shaped around the muzzle.
but we’re still treating quite a bit of normal tissue around the rectal tumor, so that would be the downside of a 3D conformal plan. Intensity modulated radiation or IRT that you’ll hear us throwing around in the charts? It’s something that’s a little harder to get approved by the insurance companies for rectal cancer, but I’m seeing it approved more commonly nowadays. So this I would think about as your radiation beam is divided into like these tiny little beamlet.
00:32:04.125 --> 00:32:06.220 has different intensity and then

00:32:06.288 --> 00:32:08.613 basically we’re using a computer

00:32:08.613 --> 00:32:10.473 to optimize these intensities.

00:32:10.480 --> 00:32:12.300 And the shape of the beam so

00:32:12.300 --> 00:32:14.444 that we can create concave dose

00:32:14.444 --> 00:32:16.164 distributions that really conform

00:32:16.164 --> 00:32:18.944 to the shape of our tumor target

00:32:18.944 --> 00:32:20.719 and try to decrease toxicity.

00:32:20.720 --> 00:32:23.436 I have more luck getting this approved

00:32:23.436 --> 00:32:25.031 for postoperative cases because

00:32:25.031 --> 00:32:27.245 there’s more normal bowel that falls

00:32:27.245 --> 00:32:29.862 into the field after surgery and I

00:32:29.862 --> 00:32:32.074 think it is more helpful for patients

00:32:32.074 --> 00:32:34.564 with T4 disease where we’re treating

00:32:34.564 --> 00:32:36.669 external iliac nodes because the

00:32:36.669 --> 00:32:38.680 the

00:32:38.680 --> 00:32:40.730 the
volume comes more anterior and there’s more bowel that’s in your field.

But for T3 case, probably a 3D conformal plan is adequate.

So I think this is just a good pictorial of what an intensity modulated plan looks like.

This is a head neck case, but it can give you the sense that you have multiple beams targeted at your tumor with intensity of the beam.

You know different across the entire area.

And the other thing that IRT allows is differentially dose different areas of the tumor target.

So, for example, you can give.
Gross disease, a high dose and simultaneously elective nodes can get a lower dose. You know which is. It’s a convenient way to plan. So this is an example of an IRT plan for a postop rectal case, and you can see right compared to that 3D conformal plan that I showed you that was like a box coming across this whole area, right? We’re really able to carve the dose out of this anterior small bell and try to spare toxicity, so I think this is where we’re moving.
If we can get insurance to play along with us.

So then last as radiation technique that I wanted to mention was SBRT.

So this is stereotactic radiation therapy which is really delivery of a blade of doses in five or fewer fractions.

So we use this in the brain or outside of the brain in the body.

And where are we using this in the context of rectal cancer, right?

Because that’s what we’re talking about tonight.

So as I said, multiple conformal beams are arcs to deliver high doses of radiation.

With rapid falloff beyond the target volume.
So if we use technology to be very tight with our dose distribution then we can get away with giving high doses of radiation. And protect the normal tissues so you know the technology outside of the brain really started in early stage. Lung cancers were using it in liver cancers, pancreas cancers, prostate cancers, but where we use it for rectal cancer is really in the setting of oligo metastatic disease, so I wanted to touch on that briefly.
00:35:01.473 --> 00:35:03.399 precise with our patient set up.
NOTE Confidence: 0.765508517692308
00:35:03.400 --> 00:35:04.570 So this is what your patient
NOTE Confidence: 0.765508517692308
00:35:04.570 --> 00:35:05.620 is going to look like,
NOTE Confidence: 0.765508517692308
00:35:05.620 --> 00:35:07.685 if you send them to me for.
NOTE Confidence: 0.765508517692308
00:35:07.690 --> 00:35:11.858 SBRT, so we build something called VAC Lock,
NOTE Confidence: 0.765508517692308
00:35:11.860 --> 00:35:13.474 which is a mold underneath them
NOTE Confidence: 0.765508517692308
00:35:13.474 --> 00:35:15.090 that holds them in position.
NOTE Confidence: 0.765508517692308
00:35:15.090 --> 00:35:17.930 I often put abdominal compression
NOTE Confidence: 0.765508517692308
00:35:17.930 --> 00:35:19.955 so that they’re breathing more
NOTE Confidence: 0.765508517692308
00:35:19.955 --> 00:35:21.430 shallow so we’re really looks
NOTE Confidence: 0.765508517692308
00:35:21.430 --> 00:35:23.069 like a blood pressure cuff,
NOTE Confidence: 0.765508517692308
00:35:23.070 --> 00:35:23.550 shown here,
NOTE Confidence: 0.765508517692308
00:35:23.550 --> 00:35:25.230 but it’s placed over their belly and
NOTE Confidence: 0.765508517692308
00:35:25.230 --> 00:35:26.844 if they’re breathing more shallow
NOTE Confidence: 0.765508517692308
00:35:26.844 --> 00:35:28.164 then there’s less respiratory
NOTE Confidence: 0.765508517692308
00:35:28.164 --> 00:35:29.628 motion of my tumor target.
So my tumor volume is smaller.

We then obtain usually an Ivy contrast CT scan from planning and then what we call a four dimensional scan. Which is really a video and it shows me how the tumor moves right if we have an oligo metastasis in the liver, it would show me how that moves as the patient breathes so that I can focus my radiation on that path and tighten up the dose distribution. We always use image guidance and I have a slide on that in I think the next slide to help us align the patient appropriately.
For treatment we often put markers in the tumor so that we can use those as surrogates to align the patient. To be precise, with treatment and some places are used in what we call respiratory gating, where you can treat the patient only in certain phases of the respiratory cycle. So only in deep inspiration or exhalation in order to also reduce. So basically the shape of the beam changes and the intensity across the beam changes as the beam arcs around the patient and that allows us to, you know,
NOTE Confidence: 0.828787364827586
00:36:38.444 --> 00:36:40.279 deliver this tight dose distribution.
NOTE Confidence: 0.918599632
00:36:43.940 --> 00:36:46.028 So this is just an example
NOTE Confidence: 0.918599632
00:36:46.028 --> 00:36:47.420 of our image guidance,
NOTE Confidence: 0.918599632
00:36:47.420 --> 00:36:50.297 so we usually obtain what we call
NOTE Confidence: 0.918599632
00:36:50.297 --> 00:36:53.240 it cone beam CT on the machine,
NOTE Confidence: 0.918599632
00:36:53.240 --> 00:36:55.046 and that is something that we fuse
NOTE Confidence: 0.918599632
00:36:55.046 --> 00:36:57.020 in with the planning CT so that
NOTE Confidence: 0.918599632
00:36:57.020 --> 00:37:00.710 we can scoot the patient around on
NOTE Confidence: 0.918599632
00:37:00.710 --> 00:37:03.972 the machine and make sure they’re
NOTE Confidence: 0.918599632
00:37:03.972 --> 00:37:10.693 in the exact same position as they
NOTE Confidence: 0.918599632
00:37:10.693 --> 00:37:12.650 were for planning to be precise.
NOTE Confidence: 0.918599632
00:37:06.360 --> 00:37:09.051 So the purple,
NOTE Confidence: 0.918599632
00:37:07.257 --> 00:37:09.051 for example is planning CT and
NOTE Confidence: 0.918599632
00:37:09.051 --> 00:37:10.693 the green is what they look
NOTE Confidence: 0.918599632
00:37:10.693 --> 00:37:12.650 like on the day of treatment.
NOTE Confidence: 0.918599632
And with that fusion we get them into the perfect position.

So how do we use stereotactic radiation in the context of rectal cancer?

So I wanted to bring up the Saber comment, trial touch on it briefly, because I think we're focusing more on locally advanced rectal cancer.

But since I mentioned Asperity, I thought this was important to talk about. So the question is here in patients who have a controlled primary and only one to five sites of metastatic disease is what they looked at with all metastases.

Amenable to stereotactic radiation, patients were randomized to just...
continuing on standard of care.
Palliative chemotherapy versus that followed by ablating all sites of metastases with SBRT.
Most patients had breast,
Most patients had breast, colorectal or prostate cancer so that’s why I thought it was pertinent to our discussion tonight and overall survival was actually increased. When you.
I distracted by Vicks. Screenshot there, so overall survival was increased.
If you use SBRT to ablate all lesions after standard of care chemotherapy,
so increasingly we’re seeing referrals for patients who finished chemotherapy and may have one to five liver metastases or one lung metastasis and one liver metastasis. And actually, I’ll mention that we are getting a new linac called the reflection probably installed. Within the next year, we’re going to be one of the first in the nation to get this installed, so Stanford has one now and I think we’ll probably be third, but the benefit of this is you can treat multiple alignments at the same time. So now if I put a patient on the machine, I have to allot 30 minutes for each
oligo metastatic site on the reflection
I can treat 5 at the same time, so it really increases output
and also decreases. You know patient burden.
The other thing that the reflection does is tracks based on PET.
So we’ll be infusing pet tracer in our department and then the machine communicates with the pet tracer and we’ll track the tumor based on pet and move with the tip tumor during treatment again to tighten radiation dose and the other exciting thing is right that we can create a lot
of advances in new bio tracers.

For patients who have molecular targets.

Sorry my leg keeps hurting though.

OK.

So those are me going into the nitty gritty of radiation techniques and I hope I have not bored you to tears.

I’m going to touch a little bit on short course versus long course, and then we’ll talk a little bit about T&amp;amp;amp;T.

So the data for short course versus long course, I think is really mixed and challenging to interpret, and I think the problem is is,
as doctor Shakini touched on,
a lot of the studies are comparing short course T&T versus standard.
On course, so you don’t know if it’s the TNT or if it’s the short course that’s causing the benefit,
right? So I always start back at this old Polish study,
which is a classic study looking at advanced tumors randomized to short course,
followed by surgery followed by chemo versus standard long course.
No difference in outcomes.
00:40:50.330 --> 00:40:52.762 But what I in terms of local
NOTE Confidence: 0.635121571
00:40:52.762 --> 00:40:54.538 control or overall survival.
NOTE Confidence: 0.635121571
00:40:54.540 --> 00:40:59.350 But I will point out that.
NOTE Confidence: 0.635121571
00:40:59.350 --> 00:41:02.830 If you look at patients.
NOTE Confidence: 0.635121571
00:41:02.830 --> 00:41:06.344 Who have so in this Trog study,
NOTE Confidence: 0.635121571
00:41:06.350 --> 00:41:08.625 which asked a similar question
NOTE Confidence: 0.635121571
00:41:08.625 --> 00:41:09.990 for advanced patients.
NOTE Confidence: 0.635121571
00:41:09.990 --> 00:41:12.175 Again no difference in local
NOTE Confidence: 0.635121571
00:41:12.175 --> 00:41:13.486 controller overall survival,
NOTE Confidence: 0.635121571
00:41:13.490 --> 00:41:15.242 but I think the important thing
NOTE Confidence: 0.635121571
00:41:15.242 --> 00:41:17.560 to note is that for our patients
NOTE Confidence: 0.635121571
00:41:17.560 --> 00:41:20.132 with distal tumors there was not
NOTE Confidence: 0.635121571
00:41:20.132 --> 00:41:22.108 a statistically significant but
NOTE Confidence: 0.635121571
00:41:22.108 --> 00:41:23.590 an absolute numbers.
NOTE Confidence: 0.635121571
00:41:23.590 --> 00:41:25.534 Hard to ignore difference in terms
NOTE Confidence: 0.635121571
00:41:25.534 --> 00:41:27.398 of local control, so I think.
For all of us, we’re still a little bit weary about using short course for distal patients. Because of this data, and I can let Vick touch on that in his opinion, when he gets a chance to speak. I think this is interesting because so traditionally for short course radiation we were following by immediate surgery and so the question asked in the Stockholm three trial right was short course followed by immediate surgery versus short course followed by delayed surgery course followed by delayed surgery versus long course where strangely
they did not use chemotherapy.

So I think that’s a hard comparison.

In my mind, I look at this trial and interpret it as should we doing short course followed by immediate. Everyone had a TM.

There was no difference in the outcomes in terms of local control, Mets or overall survival.

And so the final outcome was that short course with delay was noninferior to short course with immediate surgery. I think the important thing to note
00:42:34.671 --> 00:42:37.081 is that the past CR for patients who
had immediate surgery right was a
lot lower than the path CR rate for
patients who had delayed surgery.
So I think right when Vick and I share
patience and we do give them short
course therapy, we’re increasingly
doing that with delay to surgery.
The concern was that there would be more.
Complications if you don’t take
the **** out right away after
00:42:37.081 --> 00:42:38.963 had immediate surgery right was a
NOTE Confidence: 0.818020557684211
NOTE Confidence: 0.818020557684211
NOTE Confidence: 0.818020557684211
NOTE Confidence: 0.818020557684211
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NOTE Confidence: 0.818020557684211
high dose short course radiation,

but in fact postop complications were lower in the patients who had a short course followed by delay.

So finally T&T and I’ll make this short, because I think Mike really covered this well, so I think this is an interesting study that sort of sets the groundwork for the TNT approach, right?

It’s only a phase two trial.

Well, 250 patients are not so small,

but non randomized,

and we’re really looking at long course, followed by surgery or increasing cycles.

Full Fox prior to surgery and you see that
within each cycle of folfox prior to surgery, the past CR rate is increasing. So in my mind, this is sort of like the setup for thinking about the TNT approach and then Polish to Mike. I think you touched on this, so I'll also be quick, but really we're looking at patients who have again locally advanced disease, randomized to long course. Followed by surgery versus short course chemo and TMB. So now the problem is right. We're looking at two different questions.
We're looking at short course and neoadjuvant chemo at the same time as we're looking at long course versus short course, but no difference in outcomes in terms of local control. Distant meds are zero resections. Past CR. And those three year overall survival was higher with short course. But the question is, is it higher because of the short course or it’s probably higher? I would say because of the full Fox prior to surgery. And then if we look at long term follow-up, the overall survival difference was lost.
00:44:58.320 --> 00:45:01.698 For Polish two and then Stella,

00:45:01.700 --> 00:45:05.034 I think we did discuss quite well,

00:45:05.034 --> 00:45:07.596 so I'll briefly talk about this,

00:45:07.600 --> 00:45:09.896 but again, this was looking at Preop

00:45:09.896 --> 00:45:11.214 short course radiation followed

00:45:11.214 --> 00:45:13.160 by chemo and whether it was not

00:45:13.160 --> 00:45:14.900 inferior to long course chemo,

00:45:14.900 --> 00:45:16.260 radiation and patient with

00:45:16.260 --> 00:45:17.280 locally advanced disease.

00:45:17.280 --> 00:45:19.632 So patients are getting short course

00:45:19.632 --> 00:45:22.318 followed by 4 cycles of chemo followed

00:45:22.318 --> 00:45:25.306 by surgery and randomized to either

00:45:25.306 --> 00:45:28.850 TNT or loan course chemoradiation.

00:45:28.850 --> 00:45:30.590 And there was no difference in

00:45:30.590 --> 00:45:32.370 survival or local regional recurrence.

83
The TNT group actually had better three-year overall survival and acute Grade 3 toxicities during preop treatment. These were slightly higher in the TNT group versus in the Chemo Radiation group. But I think we found this is tolerable for patients. So as Michael said, I think we’re moving more and more towards T&T. For most of our patients. Based on these studies. Rapido I think Doctor Jacchini also. Four and two. Looking at standard long course treatment. Versus short course chemo TMDE. With past CR higher with T&amp;amp;T.
And distant means lower with TNT,
so again, I think supporting our practice change more towards TNT.
I've NCCN guidelines in here.
I don’t think we need to review them because we cannot look at them,
but basically supporting more the use of TNT.
So that’s what I had.
I’m happy to take questions.
I went fast, but it’s getting late so I don’t want to keep everyone on the line too long.
We hand it over to you.
Oh, I need to stop my screen share right?
Can you see my screen? Yes, looks perfect.
00:47:41.30 --> 00:47:41.990 So I'm back ready.
NOTE Confidence: 0.73946904
00:47:41.990 --> 00:47:43.530 I'm one of the colorectal surgeons here.
NOTE Confidence: 0.73946904
00:47:43.530 --> 00:47:45.735 I'm going to talk about the surgical
NOTE Confidence: 0.73946904
00:47:45.735 --> 00:47:47.130 management of rectal cancer.
NOTE Confidence: 0.73946904
00:47:47.130 --> 00:47:49.650 I want to echo what Kim said.
NOTE Confidence: 0.73946904
00:47:49.650 --> 00:47:52.020 This is truly a multidisciplinary approach,
NOTE Confidence: 0.73946904
00:47:52.020 --> 00:47:53.064 and if anything,
NOTE Confidence: 0.73946904
00:47:53.064 --> 00:47:55.970 I actually use more services than I think.
NOTE Confidence: 0.73946904
00:47:55.970 --> 00:47:57.503 Mike and Kim,
NOTE Confidence: 0.73946904
00:47:57.503 --> 00:48:01.080 with the Intrastromal therapy nurses we use.
NOTE Confidence: 0.73946904
00:48:01.080 --> 00:48:04.356 We use our anesthesiologist and without
NOTE Confidence: 0.73946904
00:48:04.356 --> 00:48:07.536 all of these people surgical management
NOTE Confidence: 0.73946904
00:48:07.536 --> 00:48:10.524 of rectal cancer will be impossible.
NOTE Confidence: 0.73946904
00:48:10.530 --> 00:48:13.098 Before we talk about the surgical.
NOTE Confidence: 0.73946904
NOTE Confidence: 0.73946904
00:48:14.448 --> 00:48:17.462 I think it's it's important to look at the
The origins of surgery for rectal cancer were limited during the pre-1900s. Most rectal cancers were treated by a procedure called transient illusion, which was described by Lisfranc. It wasn't until 1907 that the traditional proctectomy, which involves both an abdominal and perineal approach, was described. This procedure was performed for most rectal cancers and was the abdominal perineal resection. It wasn't until 75 years later that a different approach was developed, known as the abdominal perineal resection, which is still used today.
holy plane of surgery that we currently use was described by Bill Hill in 1982. Now, in between 1907 and 1982 some surgeons were still doing PME, even though they didn’t call it PME, but because they weren’t doing tme. They were persistent, high local recurrence rates and because of this there was a lot of interest in both chemotherapy and radiation. In addition to surgery for the management of rectal cancer, So the role of chemotherapy and radiation was mainly to decrease local recurrence, improve surgical resection of non resectable lesions and sphincter dysfunction.
preservation and low lying rectal tumors.

We went through a phase of several trials.

I’m not going to go through all the trials. Pretty much.

They all showed that multimodality treatment decreased local recurrence.

So one of the important trials that I’m going to mention is this. Dutch tme trial.

Now if you look at all the studies where they did surgery alone, local recurrence was about 28.25%.

When they added radiation, it dropped it down to about 12 to 14%.

but if you look at the Dutch TME
trial surgery alone by just following good surgical principles at a local recurrence rate of about 10%, you throw in radiation. After that we dropped it down to 5%, so DME becomes the standard no. You know we just debated between short and long hours chemo, radiation versus radiation, and then we finally come to this study, which kind of established what we do right now or what we used to do about 10 years ago and that was preoperative chemotherapy and radiation, followed by surgery followed by chemotherapy. Local recurrence was about 6%.
So the summary of the trials basically showed that PME surgery was important for all patients. It really brought the local countries. And then pre-op chemoradiation with surgery and chemotherapy was the way to go. So now in recent times this I’m talking about 5 plus years ago patients got endoscopy. They got transrectal ultrasound. And they have two options. One, if it was an early stage cancer, either P1 or two lesion, they went for up front surgery.
on the other hand, if they have locally advanced cancers, which was any cancer P3 and higher or no positive disease, they got chemoradiation followed by surgery followed by chemotherapy. Now we went from local pelvic failure of more than 25% by changing the surgical technique and by adding chemoradiation. We changed our local recurrence for 25% to about 5 to 10%. How are about 30 to 40% still went down to develop distant disease? Now, none of the trials we looked at improved overall survival.
They established rules for good surgery, radiation and chemotherapy. But they didn’t address any micrometastatic disease with upfront chemotherapy. They did not increase patient compliance and they did not increase downstaging. Now with chemoradiation what we saw was that.

Pathologic complete response was noted in anywhere from 10 to 15%, but the question was can we do more? and this is where T&T comes in. There were a bunch of trials I’m not going to go through all the trials because Mike and Kim did a good job. And pretty much every trial talks about...
increase in Pathologic complete response.

Now the reason I focus only on this and not the other stuff is this plays a role and should we do surgery for rectal cancer.

So what are the surgical options? One TNT changed this so it should not be an option when we talk about local excision and more radical surgery like LARP. Or even exempt for that matter.

So let's talk about watch and wait. So when we talk about watch and wait, some of the terminology is important. You know there's differences between induction, chemotherapy, consolidation, chemotherapy, and more:

94
and DNMT is basically induction or consolidation chemotherapy. Now, Pathologic complete response. You know the definition of that is important because it’s no evidence on pathology after proctectomy or full thickness excision. Now some of these cancers if you do a full thickness excision, you could still have tumor behind the rectal wall, which can’t be excised with the transanal excision. So sometimes, even though we may say on a transitional excision specimen,
that there's pathologic complete response that may not really be pathologic complete response. A few other things. What is a complete clinical response? This basically includes 3 things. One, there's no evidence of tumor on clinical and radiologic studies. You know with the camera radiologic lesion on endoscopy looks like this. Here was the rectal cancer. It's gone now. You have this whitish scar with
some telangiectatic.

Then there’s near complete pathological response, so some tumor is present. But if you give it a little bit more time from radiation, potentially this area can disappear. Then there’s incomplete pathologic response. And here you see the ulcer. You know there’s like a bed. There’s some necrotic tissue. Likely this thing is not going to be a complete neurological response. And these three things become important when we talk about watching ready.
00:54:11.760 --> 00:54:15.456 Now, how did we come to watching late?
NOTE Confidence: 0.809624648333333
00:54:15.460 --> 00:54:18.134 A lot of this started looking at
NOTE Confidence: 0.809624648333333
00:54:18.134 --> 00:54:19.840 anal cancer treatment so long
NOTE Confidence: 0.809624648333333
00:54:19.840 --> 00:54:21.240 time ago for anal cancer,
NOTE Confidence: 0.809624648333333
00:54:21.240 --> 00:54:22.920 so you have to have any PR,
NOTE Confidence: 0.809624648333333
00:54:22.920 --> 00:54:25.520 but then chemotherapy and radiation
NOTE Confidence: 0.809624648333333
00:54:25.520 --> 00:54:27.485 effectively melted away the cancer
NOTE Confidence: 0.809624648333333
00:54:27.485 --> 00:54:30.740 that now we do APR’s for anal
NOTE Confidence: 0.809624648333333
00:54:30.740 --> 00:54:33.540 cancer just purely for salvage.
NOTE Confidence: 0.809624648333333
00:54:33.540 --> 00:54:35.316 And for rectal cancer also we
NOTE Confidence: 0.809624648333333
00:54:35.316 --> 00:54:37.629 saw kind of saw it accidentally,
NOTE Confidence: 0.809624648333333
00:54:37.630 --> 00:54:39.976 like patients who had advanced age
NOTE Confidence: 0.809624648333333
00:54:39.980 --> 00:54:41.366 that no surgeon wanted to touch,
NOTE Confidence: 0.809624648333333
00:54:41.370 --> 00:54:42.906 or patients who have high core
NOTE Confidence: 0.809624648333333
00:54:42.906 --> 00:54:44.358 morbidities when we gave them
NOTE Confidence: 0.809624648333333
00:54:44.358 --> 00:54:45.477 chemotherapy and radiation,
we saw Pathologic complete response
and as we waited there
tumors did not progress.
And then we have a second group
of patients where you know they
got chemotherapy and radiation.
They didn’t see anything inside and
they said why am I doing surgery?
So now we have tried to transition
to more intentional watching weight
where this is for less advanced
disease and if you get the complete
or clinical complete response,
we follow them very closely and we see if
we can get away without doing surgery.
Now the important thing for this is the selection. So the baseline stage is important. So when we stage them, if I'm MRI, the circumferential resection margin is less than one millimeter. Likely this patient is not a good candidate for watching late. If they have extensive nodal disease, or if they have lateral pelvic nodal disease, they're not good candidates for watching. The other important thing is that the tumor should be profitable and digital rectal exam. So if you can't palpate the tumor,
00:55:45.710 --> 00:55:47.796 they may not be a good candidate
00:55:47.796 --> 00:55:48.926 for watching right now.
00:55:48.926 --> 00:55:50.578 We also look at some endoscopic features
00:55:50.578 --> 00:55:52.189 to see if they’re good candidates
00:55:52.189 --> 00:55:53.821 for this watch and read approach.
00:55:53.830 --> 00:55:55.594 We’ve got to make sure the tumors are small,
00:55:55.600 --> 00:55:56.452 they’re not circumferential,
00:55:56.452 --> 00:55:58.440 and if after you do the totally
00:55:58.491 --> 00:55:59.913 adjuvant therapy you got to make
00:55:59.913 --> 00:56:01.430 sure there are no strictures,
00:56:01.430 --> 00:56:03.130 because if there are strictures,
00:56:03.130 --> 00:56:06.739 it’s kind of hard to assess that they’re in.
00:56:06.740 --> 00:56:10.135 Now, once we have these selection criteria,
00:56:10.140 --> 00:56:13.220 if all three selection criteria are met,
00:56:13.220 --> 00:56:16.202 there’s 98% accuracy in what we are
doing with watching now digital rectal exam again is the most accurate.

We need to get a baseline before treatment, usually after treatment. If you see a smooth and regular mucosal surface on palpation, patients usually don’t have are are good candidates for this watch and with endoscopy like I mentioned before, if there’s whitening of the mucosa and you just see calendar pacius, they’re also good. But if you see any ulceration, stenosis or masked, they don’t have a clinical complete response. Biopsies should not be done.
because sometimes you only biopsy the superficial surface. Cancer may be found deeper inside and sometimes this. This may yield false assurance location and if they if, let’s say the MRI shows a deeper lesion, they may not pursue surgery because they feel that well. They found the cancer on colonoscopy. Now I see nothing. Why why should I go for surgery? Lastly, MRI is important. This is where the radiologist comes in for us on Tito restored images
and diffusion weighted images.

We can see if there's any residual to.

Now, what kind of surveillance do we follow after you know the patient gets done with Mike and Kim, they come to us in about 6 to 8 weeks later.

We start with digital rectal exam and they lost and we get an MRI.

If there's an incomplete response. Meaning we see an All Star team or anything like that.

If there's a near complete response. They go for a radical surgery.

They found the other hand.

It may be reasonable in some patients.
to wait another 6 to 8 weeks and repeat the digital rectal exam
and endoscopy to see if they go from near complete response to.
To complete clinical response now most of these patients if you wait long enough,
sometimes you have to wait 28 to 34 weeks. They do become complete clinical responders now, if, on the other hand,
there’s no continued response or any growth, you’ve got to look at protecting.
Now for clinical complete responders,
we’ll be doing is we do additional rectal exam,
anoscopy and MRI every three to four months.
I usually tend to go every three months for at least two years. After two years we decreased the frequency. We do it every six months for about three years. And then this is the key part is that you got to go for this yearly because we don’t have long term data. So if you’re going to go with the watch and wait approach, we gotta make sure our application is committed to doing this every three months for two years every six months after. Now, what is local report? The risk of local regrowth is about 10%.
complete response for two years and the actual risk is only 25% of two years and then most of these patients have aluminum components, so we can pick them up on endoscopy or digital rectal exam. Rarely do they have mesorectal or lateral pelvic sidewall disease. And the risk factors are basically increasing 2 stage for every increasing 2 stage for every There’s about a 10% increase increase in risk of local regrowth after two years. If they’re complete clinical responder, there is no risk,
and there you know just because they have a higher stage.
Even if there’s regrowth, 90% of these patients are amenable to R0 sections.
I usually say if there are clinically 2M0 because they’ve had told me, as you been therapy, some patients may be candidates for transient addition.
Some patients do go for proctectomy. Anything higher than that. They should go for proctectomy.
There is increased risk for metastatic disease, unfortunately, if there’s local regrowth, we don’t know if it’s because of
tumor biology, but I think there’s going to be more work on that. In terms of functional outcome, I mean with watch and wait all they’re getting this chemoradiation so they’re quality of life is so much better than what surgery they have. Fewer defecation, urinary problems. They also have better sexual function. They have superior functional outcomes. Then even those patients have had local excision, but about a third of the patients do have this large syndrome which is low interior syndrome where they have frequency,
urgency, clustering, occasional incontinence. But it is manageable and it doesn’t prove it. Now, what about the future? Because now we don’t know which patients respond well and become complete responders. So some people are working on actually cultures of the rectal cancer derived from the patients, and we treat them. And then we also create the patient and see if these organized cultures actually complete. They respond and they may give us an indication on what the patient completed respond.
Now let’s talk about some of the surgical options that for surgery, it depends on where the tumor is. So the anatomy of the rectum is important to any tumors lower down chances of having an ostomy are much higher. So let’s talk 1st about local excision. So local excision was described in the 1800s for benign tumors. It was kind of refined and perfected by Alan Park. He designed a lot of instruments. The first real rectal cancer transanal excision was done in 1977 at Saint Marks Hospital.
In the 1980s, this guy was way ahead of his time. Gerhard because he designed with the setup, which is essentially a laparoscopic setup that’s transiently scopic microsurgery, where you can go through the ****. It was the first natural orifice device where you can go through the **** and resect tumors, even up to 20 centimeters higher. The problem with that is it’s a very complex system and the training curve is very high, so it didn’t get adopted. We do have it we do do these stem surgeries.
Then they came up with a more easier platform which is using the laptop with the equipment in the 20 Tens this is much cheaper whereas the temps equipment is probably close to I think 1/4 of $1,000,000. So this one is much more accessible to all the institutions. Now we do local excision for T1 lesions. They usually have to be histologically favorable. Usually we make sure they have no lymphovascular invasion, poor differentiation, or tumor planning. Unfortunately,
we don’t know a lot of this information

until after we did the surgery,

so if a patient undergoes.

Transitional expression for T1 lesion

and if they have any of these bad features,

I mean literally region for

differentiation or general budding.

They may have to consider.

Radiation or protecting?

Now, how about for two lesions?

The problem with the two lesions

is that local recurrence rate.

If you do a local excision is

about 13 to 30%.

Now the main reason is because

they have nodal involvement in
30 to 40% of the patients.

Now, some patients are still candidates for local excision of two lesions. These are high risk patients. And then there are some patients who absolutely refuse to have a philosophy. And sometimes you don’t have a choice. You do something that’s better than nothing. And there’s data to show that chemo radiation may decrease local recurrence and also create this occult nodal disease. And when we when we give chemoradiation we see that the local recurrence is 15% as opposed to about 7%.
when we do a formal practice.

So it’s lower than the 30%.

Now, how about doing more radiation therapy 1st and then doing local exception?

Now, there are several trials which looked at it and they showed that it’s equivalent local recurrence and overall survival to proctectomy. So in select patients it may be useful.

The downside is that if you do chemo radiation or totally adjuvant therapy up front, is there really role even for two lesions? The surgery even necessary, especially if there are complete clinical response.
Now the problem with local excision after radiation is the post hoc healing issues. Let’s talk about.

Anytime we do local excision, this is the biggest thing we worry about. It is directly correlated to the depth of invasion of the tumor. So for a tumor that’s confined to the top 1/3 of the submucosa of the wall of the there’s only 3% risk of lower normal metastases. Now, these are T1 lesions.

If they invade the lower third or
the deeper third of the submucosa,
there's a 23% risk of blood from the taxes.
These numbers are almost close
to the two regions.
Also, if they have information or
invasion and four differentiation,
there's higher chance there were some
nice studies done which showed that
Lymphovascular invasion is associated
with lymph node metastasis and also with
the 2.5 X increase in systemic recounts.
This is a nice study done by chain
in 2012 where they looked at T1
lesions and T2 lesions,
vascular and region and four differentiation.
And if you look at it, if they have both,
It's almost 100% chance of winning on the test disease.
Same for T1 and T2.
Obviously everything is worse for the two regions.
Also 44 differentiation again,
another study showed a 5X fold increased chance of lymphoma.
capacities and that’s why you know if we have these risk factors we try not to do a local excision tumor.
Budding was initially described by in 1993.
The Japanese had a lot of literature and prognostic indicator of low forecasts.
So we tried to do a local excision for like the low risk patients. Now how do we do it? Usually you know we have these operating scopes and we identify the lesion, get about 1 centimeter margin, excise the lesion down to the parackal fact some people close it up and some don’t. And here’s how attempts approach with the transcend the transient landscape with microsurgery. You’re you have the laparoscopic instruments, we actually use it and we can actually go even up to the sigmoid to recycle lesions. This is, this is how it looks for anyone who is in GI.
It looks like an advanced ESD procedure.

Yeah, and there's a huge training curve associated with it now, even though it's the smallest surgery we do, there are complications associated with it. The biggest one is urinary retention. We also see bleeding. We receive this in about 5% of the patients or patients were anticoagulated. The big thing is you know you can see public accesses. These are a bigger issue for higher lesions, where interpersonal entry is gained, but these can be managed by easily.
Now what about the outcomes?

One of the worst things about local excision is that we cannot harvest or stage the mesorectal lymph nodes.

For key one cancers, again there's 65% risk of nodal metastasis, and if you don't do a good surgery and there's positive margins, it increases the local recurrence and decreases the five year overall survival for two regions.

Again, local recurrence you know it's pretty bad, and the overall survival is slightly lower, but some patients are good candidates.
01:07:32.546 --> 01:07:34.701 for this. You're more outcomes.
01:07:34.701 --> 01:07:36.936 Risk of lymph nodes increase
01:07:36.936 --> 01:07:39.479 as the destaging increases.
01:07:39.480 --> 01:07:41.608 Also, local recurrence increases.
01:07:41.608 --> 01:07:44.800 There are several studies confirming these.
01:07:44.800 --> 01:07:47.620 So in summary, we do transitional
01:07:47.620 --> 01:07:50.180 transitional excisions for T1 regions.
01:07:50.180 --> 01:07:51.500 If it's a high risk one,
01:07:51.500 --> 01:07:53.220 you can add in chemoradiation
01:07:53.220 --> 01:07:54.940 or do more radical surgery.
01:07:54.940 --> 01:08:00.356 For T2 would prefer radical surgery,
01:08:00.356 --> 01:08:03.028 but in some select patients maybe transient
01:08:03.030 --> 01:08:05.514 Decision to go straight forward main
01:08:05.514 --> 01:08:07.010 surgery which we will talk about.
So the radical surgery for rectal cancer is a proctectomy thought. It was initially described in 1907 by Miles. There was the abdominal pain reduction. We further defined what good surgery means in 1982 by the field. And why do we have to do timing? The reason is if you do, if you operate in the non teaming planes, local recurrence can be as high as 30% and if if you look at our circumferential resection margin, if you go right next to the tumor and get a margin of less than one millimeter, that’s a 50% local recurrence rate.
We don’t have to do much better if you just go 1 millimeter to the other side. Local recurrence drops to 17% by staying in TME drops to less than 10%. There’s embryological portions for the Cammy plan that will not go over this. There are different surgical approaches. Here’s the we used to do.

Additional open incision and then we started going with a smaller lifestyle that, or minimally invasive approaches with laparoscopy. The insufflate, the belly, use a camera and use a little.
instruments and do the surgery.

Now we’re using the robotic thing. It’s ergonomically better.

The surgeon sits here and the robot sits next to the patient and we control it to do the surgery.

The visualization is phenomenal. This is how it looks.

We identify the wrestlers we can see. You know, pretty much everything we need to see and.

And still again, we’re out for radical resection.

DME is the standard local recurrence, can rock to less than 7%.

The problem with rectal cancer is the
01:09:38.342 --> 01:09:40.310 lower the fuel mirrors to the ****
01:09:40.310 --> 01:09:41.787 the higher the chance of the leak.
01:09:41.790 --> 01:09:43.370 So the lower the tumor,
01:09:43.370 --> 01:09:45.002 the higher the chance of them
01:09:45.002 --> 01:09:46.090 having the temporary announcement.
01:09:46.090 --> 01:09:47.616 And when we stay in these planes,
01:09:47.620 --> 01:09:49.876 there’s nerves which wrap around us
01:09:49.876 --> 01:09:51.813 which can cause erectile dysfunction
01:09:51.813 --> 01:09:54.347 in attempt to 30% of the patients.
01:09:54.347 --> 01:09:56.860 Some report even as high as 80%.
01:09:56.860 --> 01:09:58.080 And for the distal margin,
01:09:58.080 --> 01:09:59.600 we need about 2 centimeters,
01:09:59.600 --> 01:10:01.014 and if there’s any question of that,
01:10:01.020 --> 01:10:03.044 we can even do a frozen section even
01:10:03.044 --> 01:10:04.303 1 centimeter after chemoradiation
can be acceptable in certain patients where the tumors are very.

No, the most patients want the LAR, which is a low interior section syndrome and this is a sphincter preserving surgery. There's different kinds if it's a high tumor, you can do a standard LAR for super low tumors. We do low, ultra low or colloidal. Usually it's acceptable even if the internal sphincter is involved. We got to make sure that this will feel more margin is about 1 centimeter for us to be able to renounce the most divinest. Most of them do get some kind of an artificial *****.
Now when we look at their anatomy, patients always ask us well, why are you picking out my sigmoid? Also, when the cancer is here and the reason is it has to do with the blood supply. So we got the sigmoid colon, the uterus dividing it off the anterior. In this case, it’s the uterus dividing it off the anterior.
01:11:06.796 --> 01:11:08.520 uterus and then once we do this,
NOTE Confidence: 0.561672465957143
01:11:08.520 --> 01:11:09.444 we use it.
NOTE Confidence: 0.561672465957143
01:11:09.444 --> 01:11:10.984 The retractors and open fashion
NOTE Confidence: 0.561672465957143
01:11:10.984 --> 01:11:13.520 go all the way low and then we try
NOTE Confidence: 0.561672465957143
01:11:13.520 --> 01:11:15.652 to transact it as low as possible
NOTE Confidence: 0.561672465957143
01:11:15.652 --> 01:11:17.317 and then insert statement through
NOTE Confidence: 0.561672465957143
01:11:17.317 --> 01:11:19.081 the **** to perform it.
NOTE Confidence: 0.561672465957143
01:11:19.081 --> 01:11:20.589 And that’s the most.
NOTE Confidence: 0.561672465957143
01:11:20.590 --> 01:11:22.048 Laparoscopically we use
NOTE Confidence: 0.561672465957143
01:11:22.048 --> 01:11:23.506 these little instruments,
NOTE Confidence: 0.561672465957143
01:11:23.510 --> 01:11:25.028 so here we are identifying the
NOTE Confidence: 0.561672465957143
01:11:25.028 --> 01:11:26.640 IMA that we need to divide.
NOTE Confidence: 0.561672465957143
01:11:26.640 --> 01:11:28.525 We isolated and divided divide
NOTE Confidence: 0.561672465957143
01:11:28.525 --> 01:11:31.435 the IV and then free up the left
NOTE Confidence: 0.561672465957143
01:11:31.435 --> 01:11:33.654 colon and then we take down all
NOTE Confidence: 0.561672465957143
01:11:33.737 --> 01:11:36.245 the attachments of the left colon,
01:11:36.250 --> 01:11:38.644 dissect the ****** off the presacral plane.

01:11:38.650 --> 01:11:40.100 Here’s the hypogastric plexus that

01:11:40.100 --> 01:11:42.222 we identify and keep safe so that

01:11:42.222 --> 01:11:43.450 there’s no sexual dysfunction.

01:11:45.640 --> 01:11:47.784 There’s a video of what this is doing.

01:11:47.790 --> 01:11:49.020 The surgery robotically?

01:11:49.020 --> 01:11:51.778 So we’re taking down the plane in

01:11:51.778 --> 01:11:53.566 a quick second. You’ll even see

01:11:53.566 --> 01:11:54.919 that you’re highlighting up here.

01:11:54.920 --> 01:11:56.942 And green, we have a specialized

01:11:56.942 --> 01:11:59.489 dye that we use when we use the.

01:11:59.490 --> 01:12:00.458 They’re right there when

01:12:00.458 --> 01:12:01.668 we use the robotic surgery,

01:12:01.670 --> 01:12:02.800 we’re opening up the planes.

01:12:02.800 --> 01:12:04.190 This is the Mesorectal plane,
which is the loose areolar tissue.

It’s almost bloodless.

If you look at it.

We’re just, you know,

going through it for quite fast.

Like here,

we are identifying the hypogastric nerves,

preserving them so there’s no sexual dysfunction, and we keep doing this,

so I’ll skip over this.

You’re real isolated on both

the right and the left side.

Here is the *****.

The tumor is somewhere here,

so now we’re doing the disco mobilization.

So you know we’re not counting down
we’re getting the entirety of me.

We have identified the tumor here, so now we’re marking it off and we’re thinning it out.

The margin needs to be about 2 centimeters.

Once we do that here, we’re basing it off the prostate and the Seminole vesicles.

Once we have done that, we use the stapler to divide it and extract the specimen.

So in this case you know the staple really comes in and you have cleaned out the rectal wall.

You can see that.

The muscles of the rectal
wall were dividing it.

Once it’s divided, the specimen is extracted and then we do this anastomosis and the fresh colon from higher comes down and it’s.

This is how it looks in real life. There’s a spike coming in from below, with Spike with stapler. The spike is standard deployed on our staple line.

There’s the proximal annual that gets hooked on to it. And then Atmos as a fraction in two layers with two rows of statements. And sometimes we actually oversaw it.
Here on hold we’re holding up the prostate and the what.

This is just rearranging it.

Moving the fat out of the way so none of these get incorporated.

So there’s different colonic resources in this procedure.

I showed you this one, which is called the Baker anastomosis.

There’s a jpegs or coal plasty I’ll talk about why we use the most of the time.

We do diversifications, especially after team radiation, or if it’s a little tumor.

So this is a temporary diverting look.
01:14:00.850 --> 01:14:01.460 Really awesome,
NOTE Confidence: 0.5868949385
01:14:01.460 --> 01:14:03.595 now the next most can be done,
NOTE Confidence: 0.5868949385
01:14:03.600 --> 01:14:04.572 stapled, or handsome.
NOTE Confidence: 0.5868949385
01:14:04.572 --> 01:14:07.196 We prefer the staple because it’s easier and
NOTE Confidence: 0.5868949385
01:14:07.196 --> 01:14:09.254 quicker and faster and safer for patient,
NOTE Confidence: 0.5868949385
01:14:09.260 --> 01:14:10.348 but in some situations
NOTE Confidence: 0.5868949385
01:14:10.348 --> 01:14:12.230 we have to do a hands on,
NOTE Confidence: 0.5868949385
01:14:12.230 --> 01:14:13.870 and that’s the message because
NOTE Confidence: 0.5868949385
01:14:13.870 --> 01:14:15.182 the State Fair misfired.
NOTE Confidence: 0.5868949385
01:14:15.190 --> 01:14:16.275 This is a staple anastomosis
NOTE Confidence: 0.5868949385
01:14:16.275 --> 01:14:17.143 that I showed you.
NOTE Confidence: 0.5868949385
01:14:17.150 --> 01:14:18.488 The answer is much more difficult.
NOTE Confidence: 0.5868949385
01:14:18.490 --> 01:14:20.994 We get it, it’s it’s usually done open.
NOTE Confidence: 0.5868949385
01:14:21.000 --> 01:14:23.060 Uh, takes a longer time,
NOTE Confidence: 0.5868949385
01:14:23.060 --> 01:14:25.360 so we usually staple misfires.
NOTE Confidence: 0.5868949385
01:14:25.360 --> 01:14:27.436 Here’s the tumor that’s been excised.
We take off the cuff of rectal mucosa, pull the corn, and do a hands on anastomosis through the. This adds about an hour to the case. You know this is usually not done nowadays. Now these are for tumors which involve the internal sphincter. What we do is we go all the way down below the headline right by the inner drum, divide it, pull the colon from above and literally look it up for the intercom. The functional results from PR and patients have good functional outcome,
meaning they don’t have incontinence,

This is more of historic interest,

but we have about two or three patients where we have done this

because they were hostile abdomen.

So we do a abdominal incision and then we go through the back and

we open up the toxics and actually under direct visualization to

then that’s the most as if they have a hostile anterior abdomen.

This is recently of interest.

This is called a transitional

PME where the distal portion of the TME is very difficult.
So what they decided to do was why not go through the divide the go up a little higher and then pull the colon down and do that. It helps with the distal mobilization of the last three to six centimeters of the but there’s some complications. Is that because you’re kind of doing it blindly? People are transacted the Aretha, or cause rectovaginal fistula, and these are bad problems. With good luck, periscopic skills, you’re able to do the distal 3.
to 6 centimeters,

so you’re not huge advocates for the kids.

I mean,

you’re still in terms of functional outcome after anastomosis.

It’s conflicted because you’re missing your 

Some people do report good outcomes,

but there’s higher rates of incontinence and worse quality of life,

especially in women.

And patients experience this low interoception syndrome where they have origins through frequency clustering,

Most of these symptoms do improve after year,
and quantifiers of wars instead of just hooking up the colon straight into the venous actually helps with this. These are the different options the cloning jpod was described in 1986. Technically, a little bit more difficult. Very hard to do it in patients who are obese patients are diverticulosis, where bulky colon have a shortened mesentery. This is how it kind of looks. It looks like there’s capacity. It’s supposed to have a small colon. Call pasty was defined as an easier approach where you know you can get this reservoir,
but the problem is now you run an atmosphere and another staple one which can potentially leak. So we try not to do this because there's a higher leak rate of the colopy side. Then there's a much easier technique where we do and decide we do about 3 centimeters of this and looked it up, through cloning Jacobs. So we have now all transitioned to this. You can do it stapled or hand so on. We do use reservoirs. Patients do get a perspective of stoma, but one big downside is this.
Lower anterior resection syndrome.

Now this is the procedure described by miles, which is abdominal pain and other section the absolute indication for it. If any external sphincters involved or if the patient is incontinent even for the diagnosis of the rectal cancer, some relative indications.

If you’re tall big guy, you know it’s sometimes very hard to reinforce the walls for low tumor. So sometimes APR is the only option. For APR we do the same surgery except they get an cost and we do the same surgery as the low anterior section.
But we also detect the **** so there’s an elliptical incision to core down.
Divide the sprinklers and then reach from our dissection to the other side and then we close up things.
So it’s used for patients where they’re sphincter involvement.
It’s also used in patients who have incontinence in obese or called patients with mid rectal humans.
We do an impr.
There’s very good long term functional outcomes,
but no one wants it because it’s a permanent collection.
Now these are for locally advanced diseases.
This is the public separation. There's different forms of it. You have the posterior pelvic example or complete public extempore. Both bladder, uterus and ****** or removed or and then bladder, prostate and ****** removed. Here's an example and then we are mobilizing the bladder and identifying the dorsal venous plexus ligating it. Then you know once we ligate we divide the prostate and the urethra. Now it's fully unblocked removed. So here's. State, water and ******.
We take it out and usually patients end up with two colostomy and two Oxo makes 1.

There’s a colostomy for stool.

One is a urinary conduit because they don’t have a ladder anymore for your.

The outcomes from these are great.

Five year overall survival is 53%,

so doing a good operation upfront is better for locally advanced tumors rather than doing the half you know half past reception.

Survival drops to 20%.

Now recurrent cancer because I mentioned that it’s beyond the scope of this lecture, but it’s very difficult because
you're in extra mesorectal planes,
which means there's a lot of bleeding,
and it also goes into the lateral compartments,
so you think about things like creator.
And it's very complicated because one year recurrence you have prior surgery,
radiation fibrosis.
These are usually miserable surgeries,
but if done right, they can be life saving for the patient.
So in conclusion, you know rectal surgery is evolving,
especially with adjuvant therapy.
Staples have made our life easier.
Functional outcomes are getting better.

And the goals of treatment for us from a certain perspective is local control.

Improve the survival.

Try to preserve the sphincter bladder and sexual function and try to improve their quality.

So if we start off with, there were no good surgeries and patient had bought bad outcomes then 1980s. We made a lot of improvement. We then did minimally invasive surgery and now we’re going to going back to no surgery, but we’re getting better outcomes thanks to Mike and Tim and everyone else.
01:20:19.140 --> 01:20:20.070 So any questions?

01:20:23.870 --> 01:20:25.950 Thanks Vicki, I'll pose one of the questions.

01:20:25.950 --> 01:20:27.355 I'll leave one of the questions posed in the chat.

01:20:28.760 --> 01:20:32.792 So for clinical low, low digital rectal cancers that are clinically tied to.

01:20:32.792 --> 01:20:36.588 Versus instead of just taking the station straight to TME and considering preoperative RTE followed by Transcendental Decision,

01:20:36.590 --> 01:20:38.285 what kind of sway is you for referring this patient like this over to us?

01:20:40.556 --> 01:20:42.095 the station straight to TME and considering preoperative RTE

01:20:42.095 --> 01:20:44.147 followed by Transcendental Decision,

01:20:44.150 --> 01:20:46.022 what kind of sway is you for referring this patient like this over to us?

01:20:46.022 --> 01:20:47.527 this patient like this over to us?

01:20:48.710 --> 01:20:50.846 So for the I mean my personal preference,

01:20:50.850 --> 01:20:52.497 I like to do crazy and all excision see

01:20:52.497 --> 01:20:54.168 if they have any high risk features.
Because once you do chemo radiation, you won’t know if they have any of the high risk features like Lancaster invasion. Poor differentiation. So personally I think it’s much easier and. No, it’s better to do training decision followed by humiliation. But some patients do get chemoradiation, then come and see us and we are never certain if they had any good features because sometimes the tumor is gone. But in some patients it is an option. Thank you. I think all those questions have to go on the chat, so feel free to.
Answered some of them by text, but.

Feel free to put any questions in the chat. I don’t think anybody can voice in that question.

Doctor really. I think one of the great points you brought up a few times during your talk is the question of survivorship, right?

And I don’t I can be the first person to say I’m guilty of not doing the best job in that,

And should we be looking into, you know,

building sort of more of a survivorship program for our rectal cancer patients

in terms of sexual health,

rectal symptoms, local symptoms,

because they are struggling and
they don’t know that we provide
And they come to me and I say,
But that you know that’s not helpful.
No, so we actually believe it or not.
After five years we still follow
the patients mainly for all
their other side effects. So
do you feel like you’re taking that
on your plate, or can we do something
more institutionally to sort of have
a better colorectal survivorship,
or even just GI in general, right program?
Should we enhance that? I mean,
but not such a good job with GI.

So we've started our app.

Patient patients are happy about this.

Before we used to say five years ago and see us and they, you know they had all kinds of symptoms and they didn't know what was going on.

They would reach out to everyone.

Used to go on support groups and they would just complain,

but now we have made it a point that even after five years we followed them.

They they come and see us once a year. If they're you know,
if they see no improvement then they kind of disappear on their own, but they still send them all to you. Is what you’re saying. No, even for the annual cancer anal cancer with rectal cancer anyway. Of chronic symptoms and incontinence. For years, local symptoms, urinary symptoms, and I think they struggle on their own, so I think that’s something we need to focus on more as a group. The Sack board is. We even have patients with cervical cancer and prostate cancer. After radiation that we’re managing,
right, right, right.
OK, well, I'm glad for your collaboration on that.
Do you routinely?
Therapy for like 12 floor physical therapy? Uh, that's already.
So that's a little bit more difficult because it has to be based on insurance companies.
Pelvic floor therapy does help the patients.
Sacral nerve modulation helps patients with low interior section syndrome.
The problem with that is that you have to implant.
This device and they can't get MRI's after so a lot of patients.
01:24:11.456 --> 01:24:13.016 don’t don’t want to go for
NOTE Confidence: 0.6134629682
NOTE Confidence: 0.6134629682
01:24:14.660 --> 01:24:16.250 We don’t want to do it.
NOTE Confidence: 0.6134629682
01:24:16.250 --> 01:24:17.680 A lot of times trouble
NOTE Confidence: 0.92935502
01:24:17.690 --> 01:24:21.225 with who does pelvic floor therapy here?
NOTE Confidence: 0.92935502
01:24:21.230 --> 01:24:26.825 We do. OK, I can’t figure out how to
NOTE Confidence: 0.92935502
01:24:26.825 --> 01:24:29.050 put the referral in. Private world
NOTE Confidence: 0.790497993571429
01:24:29.280 --> 01:24:32.136 send them to us so we get manometry
NOTE Confidence: 0.790497993571429
01:24:32.136 --> 01:24:34.070 and everything with GI and then
NOTE Confidence: 0.76988206
01:24:34.620 --> 01:24:35.916 so they can come to colorectal.
NOTE Confidence: 0.76988206
01:24:35.920 --> 01:24:37.066 OK so that’s great to know.
NOTE Confidence: 0.782521528761905
01:24:38.500 --> 01:24:40.810 One thing we’re trying to do
NOTE Confidence: 0.782521528761905
01:24:40.810 --> 01:24:43.290 is actually and and mind you
NOTE Confidence: 0.782521528761905
01:24:43.290 --> 01:24:45.846 is trying to advocate for Cdr
NOTE Confidence: 0.782521528761905
01:24:45.846 --> 01:24:48.432 diagnosis code for a large so that.
NOTE Confidence: 0.782521528761905
01:24:48.432 --> 01:24:49.844 You know there’s no
01:24:51.858 --> 01:24:54.301 But I think that that’s more directed
pelvic floor therapy because there is someone like in YPB who does it.
01:24:55.996 --> 01:24:58.450 is someone like in YPB who does it.
01:24:58.450 --> 01:25:00.410 But then I send the patients and they
01:25:00.410 --> 01:25:01.721 don’t understand the issues, right?
01:25:01.721 --> 01:25:03.347 So patient comes back and they’re
01:25:03.347 --> 01:25:04.470 like what was that?
01:25:04.470 --> 01:25:05.478 It didn’t help me at all,
01:25:05.810 --> 01:25:07.091 and not only that, some of the
01:25:07.091 --> 01:25:08.429 problems that they use are very
01:25:11.630 --> 01:25:13.070 That right they don’t understand the
The one that the one of the questions in the chat doctor Reddy is have you started adopting a wait and weight watch approach? Wasn’t waiting approach included patients who are surgical candidates? It’s a it makes me very nervous, but we have. Sadly, I’m still if if someone who’s 40 comes in, chances are we don’t follow away from watch approach. We do advocate for them even a couple of times we have gotten burned for some patients who have had treatment somewhere else and we have, you know they have seen local recurrences. And we have taken care of them.
It’s not that they did anything wrong. Sometimes patients, when they see a local recurrence, they kind of get upset with the people locally because they say oh, and that’s why we didn’t show it and you missed the cancer. What’s been your experience with salvage? For those patients with endoscopy and the pathology has shown no tumor in the wall, those patients are more reticent.
to go for a radical surgery.

So even if the MRI shows something because the MRI will always say it can’t rule out tumor or they’re kind of nebulous, patients don’t go for surgery, especially if it’s an APR. But those patients, unfortunately they come with locally advanced disease, like they’re circumferential resection margins. I mean, we had someone who had a complete who done it memorial, who almost had a near complete response. After about a year started having symptoms.
Endoscopy biopsy didn’t show anything.

One of our endoscopies actually did a deeper biopsy because I couldn’t convince the guy.

Found cancer, he had a 10 centimeter lesion with all circumferential resection margins positive and he did not want the public’s information.

It was positive on the prostate so you know this this survival is going to be

I think promising a patient the option of watchful waiting up
01:27:18.757 --> 01:27:20.516 front is challenging because they
NOTE Confidence: 0.777209975
01:27:20.516 --> 01:27:22.460 say this was proposed to me as an
NOTE Confidence: 0.777209975
01:27:22.520 --> 01:27:24.464 option or read about it and I always
NOTE Confidence: 0.777209975
01:27:24.464 --> 01:27:26.407 tell them we need to wait to see
NOTE Confidence: 0.777209975
NOTE Confidence: 0.777209975
01:27:28.004 --> 01:27:29.664 We cannot commit to this.
NOTE Confidence: 0.777209975
01:27:29.670 --> 01:27:30.591 Day one, right?
NOTE Confidence: 0.777209975
01:27:30.591 --> 01:27:32.740 So I think that needs to be
NOTE Confidence: 0.777209975
01:27:32.816 --> 01:27:34.460 made clear to patients.
NOTE Confidence: 0.711509165
01:27:35.190 --> 01:27:36.720 And all of that, I mean, how many pay?
NOTE Confidence: 0.711509165
01:27:36.720 --> 01:27:38.396 I mean you know this because they
NOTE Confidence: 0.711509165
01:27:38.396 --> 01:27:40.639 all complain to you because I do
NOTE Confidence: 0.711509165
01:27:40.639 --> 01:27:42.662 a rectal exam after radiation.
NOTE Confidence: 0.711509165
01:27:42.662 --> 01:27:44.628 And they’re like, oh,
NOTE Confidence: 0.711509165
01:27:44.630 --> 01:27:47.030 I can’t tolerate this.
And if you can’t do a rectal exam, I think watching weight is out of the. It’s not right? It’s clear that there’s residual disease, right? No even if there is not residual disease, it’s that they’re not that you’re not able to surveil them. Is what you’re saying right? Yeah, I got that. Yeah, I think you know my view is we’ll see the final results from the Oprah trial and offer trial and get different pronunciations before before.
NOTE Confidence: 0.62238383
01:28:23.040 --> 01:28:24.790 Moving our program forward right?
NOTE Confidence: 0.62238383
01:28:24.790 --> 01:28:26.986 We should probably start to consider
NOTE Confidence: 0.62238383
01:28:26.986 --> 01:28:29.100 this more for select patients.
NOTE Confidence: 0.818789692857143
01:28:30.450 --> 01:28:32.280 And now I mean we’re seeing
NOTE Confidence: 0.818789692857143
01:28:32.280 --> 01:28:33.816 complete response rates of close
NOTE Confidence: 0.818789692857143
01:28:33.816 --> 01:28:35.586 to like 30%, right, right?
NOTE Confidence: 0.818789692857143
01:28:35.586 --> 01:28:38.406 I mean, compared to 10 to 15%?
NOTE Confidence: 0.818789692857143
01:28:38.410 --> 01:28:40.420 I mean, back then I used to only feel bad
NOTE Confidence: 0.818789692857143
01:28:40.477 --> 01:28:44.048 10 to 15% of the time that I did an APR.
NOTE Confidence: 0.818789692857143
01:28:44.050 --> 01:28:45.338 And there’s no cancer.
NOTE Confidence: 0.818789692857143
01:28:45.338 --> 01:28:47.948 Now I gotta feel worse 30% of the time.
NOTE Confidence: 0.818789692857143
01:28:47.948 --> 01:28:48.980 I feel worse, right?
NOTE Confidence: 0.915972428
01:28:54.380 --> 01:28:56.170 Other questions from the group.
NOTE Confidence: 0.637048735
01:28:58.520 --> 01:29:00.836 Got 21, you’re still holding on.
NOTE Confidence: 0.703625002818182
01:29:03.020 --> 01:29:06.480 Oh, that we we did set this to go until 8:30,
but I think the goal was about 30 minutes per presentation with questions so. So we are at around 8:00 o’clock.

If anyone has any burning questions, you can either put it in the chat before I finish talking, or you can email us directly. Of course our emails are ourfirstname.lastname@yale.edu and on on the website.

Happy to communicate. Parting words, thank you for organizing this. I think it was great. Thank you Mike.
Thank you all. Have a great night.

See you soon. Alright, take care bye bye.