WEBVTT

00:00:00.000 --> 00:00:02.766 Support for Yale Cancer Answers comes NOTE Confidence: 0.8556965 $00{:}00{:}02{.}766 \dashrightarrow 00{:}00{:}05{.}256$ from AstraZeneca, focused on exploring NOTE Confidence: 0.8556965 $00:00:05.256 \rightarrow 00:00:07.528$ innovative treatment approaches for NOTE Confidence: 0.8556965 $00:00:07.528 \rightarrow 00:00:10.368$ people living with bladder cancer. NOTE Confidence: 0.8556965 00:00:10.370 --> 00:00:14.358 Learn more at astrazeneca-us.com. NOTE Confidence: 0.8556965 00:00:14.360 --> 00:00:15.728 Welcome to Yale Cancer NOTE Confidence: 0.8556965 00:00:15.728 --> 00:00:17.096 Answers with your host NOTE Confidence: 0.8556965 00:00:17.100 --> 00:00:18.810 Doctor Anees Chagpar. NOTE Confidence: 0.8556965 $00:00:18.810 \rightarrow 00:00:20.635$ Yale Cancer Answers features the NOTE Confidence: 0.8556965 $00:00:20.635 \rightarrow 00:00:22.875$ latest information on cancer care by NOTE Confidence: 0.8556965 $00{:}00{:}22.875 \dashrightarrow 00{:}00{:}24.311$ welcoming on cologists and specialists NOTE Confidence: 0.8556965 00:00:24.311 --> 00:00:26.719 who are on the forefront of the NOTE Confidence: 0.8556965 00:00:26.719 --> 00:00:28.375 battle to fight cancer. This week, NOTE Confidence: 0.8556965 $00:00:28.380 \longrightarrow 00:00:30.384$ it's a conversation about the diagnosis NOTE Confidence: 0.8556965 $00:00:30.384 \rightarrow 00:00:32.140$ and treatment of bladder cancer, NOTE Confidence: 0.8556965

 $00:00:32.140 \longrightarrow 00:00:33.536$ with doctor John Colberg.

NOTE Confidence: 0.8556965

00:00:33.536 --> 00:00:35.630 Doctor Colberg is a professor of

NOTE Confidence: 0.8556965

 $00{:}00{:}35{.}698 \dashrightarrow 00{:}00{:}37{.}473$ urology and director of Urologic

NOTE Confidence: 0.8556965

 $00{:}00{:}37{.}473 \dashrightarrow 00{:}00{:}39{.}624$ Oncology at the Yale School of

NOTE Confidence: 0.8556965

00:00:39.624 --> 00:00:41.472 Medicine where Doctor Chagpar is

NOTE Confidence: 0.8556965

 $00{:}00{:}41.472 \dashrightarrow 00{:}00{:}44.280$ a professor of surgical on cology.

 $00{:}00{:}44.620 \dashrightarrow 00{:}00{:}47.284$ Maybe we can start off by talking

NOTE Confidence: 0.8637104

 $00{:}00{:}47.284 \dashrightarrow 00{:}00{:}50.088$ a little bit more about bladder cancer.

NOTE Confidence: 0.8637104

 $00:00:50.090 \dashrightarrow 00:00:52.491$ It certainly isn't one of the most

NOTE Confidence: 0.8637104

 $00{:}00{:}52.491 \dashrightarrow 00{:}00{:}54.540$ common cancers that we think about.

NOTE Confidence: 0.8637104

 $00{:}00{:}54.540 \dashrightarrow 00{:}00{:}57.618$ So tell us a little bit more about it.

NOTE Confidence: 0.8637104

00:00:57.620 --> 00:01:00.350 How common is it? Who gets it, and

NOTE Confidence: 0.8637104

 $00:01:00.350 \longrightarrow 00:01:01.718$ how deadly is it?

00:01:02.999 --> 00:01:05.830 If you look at non skin cancer cancers,

NOTE Confidence: 0.8637104

 $00:01:05.830 \longrightarrow 00:01:08.305$ it's the fifth most common

NOTE Confidence: 0.8637104

 $00{:}01{:}08{.}305 \dashrightarrow 00{:}01{:}10{.}285$ cancer that we diagnose.

NOTE Confidence: 0.8637104

 $00:01:10.290 \longrightarrow 00:01:13.727$ It's the fourth most common in males.

- NOTE Confidence: 0.8637104
- 00:01:13.730 --> 00:01:17.174 About 80,000 cases are diagnosed a year.

 $00:01:17.180 \longrightarrow 00:01:20.126$ The vast majority are male,

NOTE Confidence: 0.8637104

 $00:01:20.130 \longrightarrow 00:01:24.630$ about 62,000 versus 19,000 for women and

NOTE Confidence: 0.8637104

 $00:01:24.630 \rightarrow 00:01:29.076$ the average age of diagnosis is 73.

NOTE Confidence: 0.8637104

 $00:01:29.080 \longrightarrow 00:01:32.083$ The chance of a man getting bladder

NOTE Confidence: 0.8637104

 $00:01:32.083 \longrightarrow 00:01:35.185$ cancer is about one out of 27 and

NOTE Confidence: 0.8637104

 $00:01:35.185 \longrightarrow 00:01:37.838$ for women about one out of 80.

NOTE Confidence: 0.8917018

 $00:01:39.670 \longrightarrow 00:01:42.838$ So when you think about it,

NOTE Confidence: 0.8917018

 $00:01:42.840 \longrightarrow 00:01:45.297$ being in the top five,

NOTE Confidence: 0.8917018

00:01:45.300 - 00:01:47.412 it actually might be more common

NOTE Confidence: 0.8917018

 $00:01:47.412 \longrightarrow 00:01:48.820$ than many people realize.

NOTE Confidence: 0.8917018

 $00:01:48.820 \longrightarrow 00:01:51.636$ So what are the risk factors?

NOTE Confidence: 0.8917018

 $00:01:51.640 \dashrightarrow 00:01:53.385$ Are there modifiable things that

NOTE Confidence: 0.8917018

00:01:53.385 --> 00:01:55.539 people should be thinking about that

NOTE Confidence: 0.8917018

 $00{:}01{:}55{.}539 \dashrightarrow 00{:}01{:}57{.}269$ may predispose to bladder cancer?

 $00:01:57.270 \longrightarrow 00:02:00.045$ Absolutely, I think the biggest

NOTE Confidence: 0.8917018

 $00{:}02{:}00{.}045 \dashrightarrow 00{:}02{:}02{.}265$ one is cigarette smoking.

NOTE Confidence: 0.8917018

 $00{:}02{:}02{:}02{:}07{:}02{:}05{:}05{:}638$ A cigarette smoker has a three times greater

NOTE Confidence: 0.8917018

 $00:02:05.638 \longrightarrow 00:02:08.589$ chance of developing bladder cancer.

NOTE Confidence: 0.8917018

 $00{:}02{:}08.590 \dashrightarrow 00{:}02{:}10.530$ There's some environmental and

NOTE Confidence: 0.8917018

 $00{:}02{:}10.530 \dashrightarrow 00{:}02{:}12.955$ workplace exposures that you

NOTE Confidence: 0.8917018

 $00:02:12.960 \longrightarrow 00:02:16.068$ might want to think about which

NOTE Confidence: 0.8917018

 $00:02:16.068 \longrightarrow 00:02:18.650$ includes people who

NOTE Confidence: 0.8917018

 $00{:}02{:}18.650 \dashrightarrow 00{:}02{:}21.710$ work in textiles,

NOTE Confidence: 0.8917018

00:02:21.710 --> 00:02:26.170 maybe professions of painters, truck drivers.

NOTE Confidence: 0.8917018

 $00:02:26.170 \longrightarrow 00:02:28.160$ And on top of that,

NOTE Confidence: 0.8917018

 $00:02:28.160 \longrightarrow 00:02:30.946$ a lot of these people also smoke,

NOTE Confidence: 0.8917018

 $00:02:30.950 \longrightarrow 00:02:33.338$ so they have a much higher risk

NOTE Confidence: 0.8917018

 $00:02:33.338 \longrightarrow 00:02:34.930$ of developing bladder cancer.

NOTE Confidence: 0.8917018

 $00{:}02{:}34{.}930 \dashrightarrow 00{:}02{:}36{.}915$ Now there's no predisposing

NOTE Confidence: 0.8917018

 $00:02:36.915 \rightarrow 00:02:38.503$ genetic factors perse.

00:02:38.510 - > 00:02:40.596 Most of them are related to being

NOTE Confidence: 0.8917018

00:02:40.596 --> 00:02:42.728 turned on by cigarette smoking

NOTE Confidence: 0.8917018

 $00{:}02{:}42.728 \dashrightarrow 00{:}02{:}44.480$ or environmental exposures.

 $00:02:45.670 \rightarrow 00:02:47.455$ tI hink with the cigarette smoking

NOTE Confidence: 0.840632500000001

 $00{:}02{:}47{.}455 \dashrightarrow 00{:}02{:}50{.}365$ and I'd like to come back to

NOTE Confidence: 0.840632500000001

 $00{:}02{:}50{.}365 \dashrightarrow 00{:}02{:}52{.}465$ that in terms of cumulative risk

NOTE Confidence: 0.840632500000001

00:02:52.465 - 00:02:54.853 and whether quitting smoking

NOTE Confidence: 0.84063250000001

00:02:54.853 --> 00:02:57.253 actually reduces your risk, but

NOTE Confidence: 0.84063250000001

00:02:57.253 --> 00:02:59.418 in terms of workplace exposures,

NOTE Confidence: 0.840632500000001

 $00:02:59.420 \longrightarrow 00:03:01.748$ oftentimes if you're a

NOTE Confidence: 0.840632500000001

 $00:03:01.748 \longrightarrow 00:03:03.890$ painter or a truck driver,

NOTE Confidence: 0.840632500000001

 $00:03:03.890 \longrightarrow 00:03:05.920$ that's your livelihood.

NOTE Confidence: 0.840632500000001

 $00:03:05.920 \dashrightarrow 00:03:08.008$ Are there things that people are

NOTE Confidence: 0.840632500000001

 $00:03:08.008 \rightarrow 00:03:10.728$ doing to reduce some of the exposures

NOTE Confidence: 0.840632500000001

 $00:03:10.728 \rightarrow 00:03:13.248$ that people get to various chemicals

NOTE Confidence: 0.840632500000001

 $00:03:13.248 \rightarrow 00:03:15.248$ associated with these occupations?

- NOTE Confidence: 0.840632500000001
- $00:03:15.250 \rightarrow 00:03:16.582$ So, for example,
- NOTE Confidence: 0.840632500000001
- $00:03:16.582 \rightarrow 00:03:19.246$ are there governmental bans
- NOTE Confidence: 0.84063250000001
- $00:03:19.246 \rightarrow 00:03:22.598$ on some of these chemicals that may be
- NOTE Confidence: 0.840632500000001
- $00:03:22.598 \rightarrow 00:03:25.398$ found in paints and dyes and so on?
- $00{:}03{:}29{.}586 \dashrightarrow 00{:}03{:}31{.}704$ There's a fairly delayed response to
- NOTE Confidence: 0.8379483
- $00:03:31.704 \dashrightarrow 00:03:33.957$ getting the cancer after this exposure,
- NOTE Confidence: 0.8379483
- $00{:}03{:}33{.}960 \dashrightarrow 00{:}03{:}37{.}000$ so a lot of these men and women we see
- NOTE Confidence: 0.8379483
- $00{:}03{:}37{.}083 \dashrightarrow 00{:}03{:}40{.}107$ have been exposed 20 or 30 years ago or
- NOTE Confidence: 0.8379483
- $00{:}03{:}40{.}107 \dashrightarrow 00{:}03{:}43{.}550$ 40 years ago when there weren't a lot
- NOTE Confidence: 0.8379483
- $00{:}03{:}43{.}550 \dashrightarrow 00{:}03{:}46{.}302$ of restrictions and new laws in place
- NOTE Confidence: 0.8379483
- $00:03:46.302 \rightarrow 00:03:48.480$ to prevent from limiting their exposure.
- NOTE Confidence: 0.8379483
- $00:03:48.480 \longrightarrow 00:03:51.382$ But some of them,
- NOTE Confidence: 0.8379483
- $00{:}03{:}51{.}382 \dashrightarrow 00{:}03{:}53{.}909$ truck drivers are exposed to diesel fuel
- NOTE Confidence: 0.8379483
- $00:03:53.909 \rightarrow 00:03:56.923$ or people work in the dry cleaning business
- NOTE Confidence: 0.8379483
- $00{:}03{:}56{.}923 \dashrightarrow 00{:}04{:}00{.}215$ are exposed
- NOTE Confidence: 0.8379483
- $00:04:00.220 \longrightarrow 00:04:03.080$ so I think that we are

- NOTE Confidence: 0.8379483
- $00{:}04{:}03.152 \dashrightarrow 00{:}04{:}06.344$ more aware of the exposures now and

 $00:04:06.344 \rightarrow 00:04:08.549$ certainly with cigarette smoking

NOTE Confidence: 0.8379483

 $00:04:08.550 \longrightarrow 00:04:10.716$ it's pretty easy to say,

NOTE Confidence: 0.87964946

 $00:04:10.720 \longrightarrow 00:04:11.917$ stop smoking.

NOTE Confidence: 0.87964946

 $00{:}04{:}11{.}917 \dashrightarrow 00{:}04{:}14{.}311$ And sadly though there

NOTE Confidence: 0.87964946

 $00{:}04{:}14.311 \dashrightarrow 00{:}04{:}16.604$ really is no legal restrictions on

NOTE Confidence: 0.87964946

 $00{:}04{:}16{.}604 \dashrightarrow 00{:}04{:}19{.}421$ smoking and so it really is up to

NOTE Confidence: 0.87964946

 $00:04:19.421 \longrightarrow 00:04:21.577$ people to take control of their own

NOTE Confidence: 0.87964946

 $00{:}04{:}21.580 \dashrightarrow 00{:}04{:}23.445$ health with regards to cigarette

NOTE Confidence: 0.87964946

 $00{:}04{:}23.445 \dashrightarrow 00{:}04{:}25.711$ smoking though one of the questions

NOTE Confidence: 0.87964946

 $00{:}04{:}25{.}711 \dashrightarrow 00{:}04{:}28{.}049$ that often comes up is

NOTE Confidence: 0.87964946

 $00{:}04{:}28.049 \dashrightarrow 00{:}04{:}30.305$ people who have engaged in smoking

NOTE Confidence: 0.87964946

00:04:30.305 --> 00:04:32.200 often find it very difficult

NOTE Confidence: 0.87964946

 $00{:}04{:}32{.}200 \dashrightarrow 00{:}04{:}35{.}728$ to quit and so they say,

NOTE Confidence: 0.87964946

 $00:04:35.730 \longrightarrow 00:04:37.690$ if I've already been smoking

- $00:04:37.690 \longrightarrow 00:04:39.258$ for 10, 15, 20 years,
- NOTE Confidence: 0.87964946
- $00{:}04{:}39{.}260 \dashrightarrow 00{:}04{:}41{.}997$ the damage is already done,
- NOTE Confidence: 0.87964946
- $00:04:42.000 \rightarrow 00:04:44.415$ so why bother quitting smoking?
- NOTE Confidence: 0.87964946
- $00:04:44.415 \longrightarrow 00:04:47.488$ Is the risk of bladder cancer cumulative?
- NOTE Confidence: 0.87964946
- $00{:}04{:}47{.}490 \dashrightarrow 00{:}04{:}48{.}639$ In other words,
- NOTE Confidence: 0.87964946
- $00{:}04{:}48.639 \dashrightarrow 00{:}04{:}51.800$ you keep adding to that risk
- NOTE Confidence: 0.87964946
- $00:04:51.800 \rightarrow 00:04:55.328$ the more you smoke and after a certain point,
- NOTE Confidence: 0.87964946
- $00:04:55.330 \rightarrow 00:04:58.858$ if you say quit for five or ten years,
- NOTE Confidence: 0.87964946
- 00:04:58.860 --> 00:05:00.820 your risk goes back down.
- NOTE Confidence: 0.87964946
- $00{:}05{:}00{.}820 \dashrightarrow 00{:}05{:}03{.}220$ Or is it that
- NOTE Confidence: 0.87964946
- $00:05:03.220 \rightarrow 00:05:04.824$ cigarette smoking causes damage
- NOTE Confidence: 0.87964946
- $00:05:04.824 \rightarrow 00:05:06.829$ that once it's done is done,
- NOTE Confidence: 0.87964946
- $00:05:06.830 \rightarrow 00:05:10.439$ and even if you quit smoking at that point,
- NOTE Confidence: 0.87964946
- $00:05:10.440 \longrightarrow 00:05:12.445$ you're still at risk of
- NOTE Confidence: 0.87964946
- 00:05:12.445 --> 00:05:13.648 developing bladder cancer.
- NOTE Confidence: 0.87964946
- 00:05:13.650 00:05:15.650 I don't think we know

- NOTE Confidence: 0.8668983
- $00{:}05{:}15.650 \dashrightarrow 00{:}05{:}17.660$ that for certain, but
- NOTE Confidence: 0.8668983
- $00:05:17.660 \rightarrow 00:05:20.060$ certainly patients who stop smoking,
- NOTE Confidence: 0.8668983
- $00{:}05{:}20.060 \dashrightarrow 00{:}05{:}22.466$ I think the recurrence of the
- NOTE Confidence: 0.8668983
- $00:05:22.466 \longrightarrow 00:05:24.070$ bladder cancer goes down.
- NOTE Confidence: 0.8668983
- $00{:}05{:}24.070 \dashrightarrow 00{:}05{:}26.506$ So I think that even though it
- NOTE Confidence: 0.8668983
- $00:05:26.506 \rightarrow 00:05:28.554$ may not completely absolve them
- NOTE Confidence: 0.8668983
- $00:05:28.554 \rightarrow 00:05:30.884$ from getting more bladder cancer,
- NOTE Confidence: 0.8668983
- $00:05:30.890 \longrightarrow 00:05:32.890$ it certainly will help them.
- NOTE Confidence: 0.8956487
- $00{:}05{:}34{.}500 \dashrightarrow 00{:}05{:}36{.}957$ And so the other thing that's interesting
- NOTE Confidence: 0.8956487
- $00{:}05{:}36{.}957 \dashrightarrow 00{:}05{:}40{.}066$ is that you mentioned that there was this
- NOTE Confidence: 0.8956487
- 00:05:40.070 00:05:42.290 gender difference in terms
- NOTE Confidence: 0.8956487
- $00{:}05{:}42.290 \dashrightarrow 00{:}05{:}44.513$ of bladder cancer, with more men
- NOTE Confidence: 0.8956487
- $00:05:44.513 \rightarrow 00:05:46.368$ getting bladder cancer than women,
- NOTE Confidence: 0.8956487
- 00:05:46.370 --> 00:05:48.225 I wonder whether that's related
- NOTE Confidence: 0.8956487
- $00:05:48.225 \longrightarrow 00:05:49.709$ to differences in smoking.
- NOTE Confidence: 0.8956487

 $00:05:49.710 \longrightarrow 00:05:52.041$ And now that we are beginning to

NOTE Confidence: 0.8956487

 $00{:}05{:}52{.}041 \dashrightarrow 00{:}05{:}54{.}528$ see more and more women smoking,

NOTE Confidence: 0.8956487

00:05:54.530 - > 00:05:55.878 whether they've seen anything

NOTE Confidence: 0.8956487

 $00{:}05{:}55{.}878 \dashrightarrow 00{:}05{:}58{.}393$ change in terms of the risk of

NOTE Confidence: 0.8956487

 $00:05:58.393 \dashrightarrow 00:06:00.097$ women developing bladder cancers.

NOTE Confidence: 0.8787095

 $00{:}06{:}01{.}070$ --> $00{:}06{:}02{.}918$ I think that's a reasonable supposition. NOTE Confidence: 0.8787095

 $00{:}06{:}02{.}920$ --> $00{:}06{:}06{.}000$ We don't see that yet, but I think that

NOTE Confidence: 0.8787095

00:06:06.000 --> 00:06:08.640 like other types of cancer that may take

NOTE Confidence: 0.8787095

 $00{:}06{:}08{.}640 \dashrightarrow 00{:}06{:}10{.}616$ several years to kind of catch up.

NOTE Confidence: 0.8544121

 $00{:}06{:}11.780 \dashrightarrow 00{:}06{:}14.804$ The other question we've seen in

NOTE Confidence: 0.8544121

 $00{:}06{:}14.804 \dashrightarrow 00{:}06{:}18.015$ other cancers is there a synergistic

NOTE Confidence: 0.8544121

00:06:18.015 --> 00:06:20.215 effect between alcohol and

NOTE Confidence: 0.8544121

 $00:06:20.215 \dashrightarrow 00:06:23.700$ smoking in terms of cancer risks.

NOTE Confidence: 0.8544121

 $00{:}06{:}23.700 \dashrightarrow 00{:}06{:}26.812$ Do we see that in bladder cancer too

NOTE Confidence: 0.8544121

 $00{:}06{:}26.812 \dashrightarrow 00{:}06{:}31.109$ or is it really the environmental and

NOTE Confidence: 0.8544121

 $00:06:31.109 \rightarrow 00:06:34.534$ occupational exposures instead of alcohol?

- NOTE Confidence: 0.8544121
- 00:06:34.540 --> 00:06:36.708 I don't think we've
- NOTE Confidence: 0.8544121
- $00:06:36.710 \longrightarrow 00:06:40.504$ seen that with alcohol and bladder cancer.
- $00{:}06{:}43.886 \dashrightarrow 00{:}06{:}47.460$ Is the risk higher with people who have an
- NOTE Confidence: 0.8681989555
- 00:06:47.460 --> 00:06:50.090 occupational risk like
- NOTE Confidence: 0.8681989555
- $00:06:50.090 \rightarrow 00:06:52.634$ being exposed to various chemicals in
- NOTE Confidence: 0.8681989555
- $00:06:52.634 \rightarrow 00:06:55.628$ the workplace if they are also smokers,
- NOTE Confidence: 0.8681989555
- $00:06:55.630 \longrightarrow 00:06:57.760$ is that just additive,
- NOTE Confidence: 0.8681989555
- 00:06:57.760 --> 00:06:59.740 but a synergistic risk?
- NOTE Confidence: 0.8681989555
- $00{:}06{:}59{.}740 \dashrightarrow 00{:}07{:}05{.}018$ Or is it
- NOTE Confidence: 0.8681989555
- $00:07:05.020 \longrightarrow 00:07:06.360$ an additive risk?
- NOTE Confidence: 0.7951145
- $00{:}07{:}06.360 \dashrightarrow 00{:}07{:}08.358$ I don't think we know for certain,
- NOTE Confidence: 0.7951145
- $00{:}07{:}08.360 \dashrightarrow 00{:}07{:}10.030$ but I think that an ecdotally
- NOTE Confidence: 0.7951145
- 00:07:10.030 --> 00:07:11.366 it's synergy.
- NOTE Confidence: 0.7951145
- $00:07:11.370 \longrightarrow 00:07:13.368$ So typically the worst
- NOTE Confidence: 0.7951145
- $00{:}07{:}13.370 \dashrightarrow 00{:}07{:}15.514$ cancers we see tend to be
- NOTE Confidence: 0.7951145
- $00:07:15.514 \rightarrow 00:07:17.372$ in people who have environmental

- NOTE Confidence: 0.7951145
- $00:07:17.372 \longrightarrow 00:07:20.960$ exposures and they smoke.
- NOTE Confidence: 0.8869073
- $00:07:20.960 \dashrightarrow 00:07:24.496$ And so do we ever see bladder cancer
- NOTE Confidence: 0.8869073
- 00:07:24.496 --> 00:07:28.080 in people who don't have one of those
- NOTE Confidence: 0.8869073
- $00:07:28.080 \longrightarrow 00:07:30.310$ two risk factors?
- NOTE Confidence: 0.8551573
- $00{:}07{:}31{.}330 \dashrightarrow 00{:}07{:}33{.}190$ Yes, absolutely.
- NOTE Confidence: 0.8551573
- $00{:}07{:}33{.}190 \dashrightarrow 00{:}07{:}35{.}510$ Are these risk different than others in terms
- NOTE Confidence: 0.8551573
- $00:07:35.510 \longrightarrow 00:07:37.465$ of how they look biologically?
- NOTE Confidence: 0.8551573
- $00{:}07{:}37{.}470 \dashrightarrow 00{:}07{:}40{.}930$ How they behave, and so on.
- NOTE Confidence: 0.8551573
- $00:07:40.930 \longrightarrow 00:07:43.618$ I don't think we know that for certain,
- NOTE Confidence: 0.8551573
- 00:07:43.620 --> 00:07:46.308 but again, not everybody
- NOTE Confidence: 0.8551573
- $00{:}07{:}46.308 \dashrightarrow 00{:}07{:}48.228$ that smokes gets bladder cancer.
- NOTE Confidence: 0.8766133
- 00:07:48.910 --> 00:07:50.546 And some people
- NOTE Confidence: 0.8766133
- $00:07:50.546 \longrightarrow 00:07:53.000$ get bladder cancer, who
- NOTE Confidence: 0.8766133
- 00:07:53.000 --> 00:07:54.272 don't smoke.
- NOTE Confidence: 0.8766133
- $00{:}07{:}54.272 \dashrightarrow 00{:}07{:}56.816$ But I guess the definitive message is
- NOTE Confidence: 0.8766133

00:07:56.816 --> 00:07:59.780 if you smoke you are at greater NOTE Confidence: 0.8766133 $00{:}07{:}59{.}780 \dashrightarrow 00{:}08{:}01{.}872$ risk of getting bladder cancer NOTE Confidence: 0.8766133 00:08:01.872 --> 00:08:04.888 and so doing what you can to quit NOTE Confidence: 0.8766133 00:08:04.888 --> 00:08:07.390 smoking may help you either to NOTE Confidence: 0.8766133 $00:08:07.390 \longrightarrow 00:08:09.510$ avoid getting bladder cancer to NOTE Confidence: 0.8766133 $00{:}08{:}09{.}596 \dashrightarrow 00{:}08{:}12{.}291$ begin with and reducing your risk NOTE Confidence: 0.8766133 $00:08:12.291 \longrightarrow 00:08:14.270$ of getting a recurrence. NOTE Confidence: 0.8766133 $00:08:14.270 \longrightarrow 00:08:17.910$ So let's talk a little bit about bladder NOTE Confidence: 0.8766133 $00{:}08{:}17{.}910 \dashrightarrow 00{:}08{:}21{.}668$ cancer in terms of how it presents. NOTE Confidence: 0.8766133 00:08:21.670 --> 00:08:23.780 How do people actually NOTE Confidence: 0.8766133 $00:08:23.780 \longrightarrow 00:08:25.046$ develop bladder cancer? NOTE Confidence: 0.8766133 $00:08:25.050 \rightarrow 00:08:26.746$ What symptoms does that NOTE Confidence: 0.8766133 $00:08:26.746 \rightarrow 00:08:28.018$ present with, typically? NOTE Confidence: 0.8418908 $00:08:28.020 \rightarrow 00:08:30.690$ Do people with bladder cancer NOTE Confidence: 0.8418908 $00:08:30.690 \rightarrow 00:08:33.767$ present with blood in the urine? NOTE Confidence: 0.8418908 $00:08:38.580 \longrightarrow 00:08:40.512$ Or is it found when he look under

- NOTE Confidence: 0.8418908
- $00:08:40.512 \longrightarrow 00:08:42.166$ the microscope?
- $00:08:47.480 \longrightarrow 00:08:49.040$ So two questions there.
- NOTE Confidence: 0.86200565
- $00:08:49.040 \longrightarrow 00:08:50.304$ The first question is,
- NOTE Confidence: 0.86200565
- $00:08:50.304 \rightarrow 00:08:51.884$ sometimes when people
- NOTE Confidence: 0.86200565
- $00:08:51.884 \rightarrow 00:08:53.407$ find blood in their urine,
- NOTE Confidence: 0.86200565
- $00:08:53.410 \longrightarrow 00:08:56.364$ they assume that that's something like
- NOTE Confidence: 0.86200565
- $00:08:56.364 \rightarrow 00:08:59.329$ a kidney stone or something like that.
- NOTE Confidence: 0.86200565
- $00{:}08{:}59{.}330 \dashrightarrow 00{:}09{:}00{.}845$ How do you differentiate that
- NOTE Confidence: 0.86200565
- 00:09:00.845 --> 00:09:03.063 from a bladder cancer and how do
- NOTE Confidence: 0.86200565
- $00:09:03.063 \rightarrow 00:09:04.663$ you actually find microscopic
- NOTE Confidence: 0.86200565
- $00:09:04.663 \rightarrow 00:09:06.620$ material that you can't really see?
- NOTE Confidence: 0.86200565
- $00{:}09{:}06.620$ --> $00{:}09{:}08.534$ Is that something that would then
- NOTE Confidence: 0.86200565
- $00:09:08.534 \rightarrow 00:09:10.430$ cause people to present very late?
- NOTE Confidence: 0.86200565
- $00:09:10.430 \longrightarrow 00:09:12.960$ How is that picked up?
- NOTE Confidence: 0.87472963
- 00:09:12.960 --> 00:09:18.756 I think that if you have symptoms,
- NOTE Confidence: 0.87472963
- $00:09:18.756 \rightarrow 00:09:25.580$ maybe even infection or pain with urination,

- NOTE Confidence: 0.87472963
- $00:09:25.580 \dashrightarrow 00:09:27.925$ pattern changes, some people will
- NOTE Confidence: 0.87472963
- $00{:}09{:}27{.}925 \dashrightarrow 00{:}09{:}31{.}533$ look at your analysis and see if
- NOTE Confidence: 0.87472963
- $00{:}09{:}31{.}533 \dashrightarrow 00{:}09{:}33{.}300$ there's microscopic hematuria
- NOTE Confidence: 0.87472963
- $00{:}09{:}33{.}300 \dashrightarrow 00{:}09{:}37{.}010$ and that's one way that we find a lot of
- NOTE Confidence: 0.87472963
- $00:09:37.111 \longrightarrow 00:09:40.828$ people just present with blood and
- NOTE Confidence: 0.87472963
- $00:09:40.830 \rightarrow 00:09:42.920$ that's how they initially present,
- NOTE Confidence: 0.8825627
- $00:09:42.920 \rightarrow 00:09:46.248$ and so in either of those two circumstances,
- NOTE Confidence: 0.8825627
- $00:09:46.250 \rightarrow 00:09:49.162$ either you have symptoms of an infection
- NOTE Confidence: 0.8825627
- 00:09:49.162 --> 00:09:52.508 or pain, or frequency of going,
- NOTE Confidence: 0.8825627
- $00:09:52.510 \dashrightarrow 00:09:56.267$ or you actually see blood in your urine, you
- NOTE Confidence: 0.8825627
- $00:09:56.267 \rightarrow 00:10:00.110$ go to your family doctor and they do a
- NOTE Confidence: 0.8825627
- $00:10:00.110 \longrightarrow 00:10:02.110$ test and they find blood in your urine.
- NOTE Confidence: 0.8825627
- $00:10:02.110 \longrightarrow 00:10:03.860$ What's the next step?
- NOTE Confidence: 0.8363638
- $00:10:03.860 \longrightarrow 00:10:05.065$ The first thing you want
- NOTE Confidence: 0.8363638
- $00{:}10{:}05{.}065 \dashrightarrow 00{:}10{:}06{.}610$ to look at is
- NOTE Confidence: 0.8363638

 $00:10:06.610 \longrightarrow 00:10:09.778$ do they have symptoms of an infection?

NOTE Confidence: 0.8363638

00:10:09.780 --> 00:10:11.910 So if they have symptoms of infection,

NOTE Confidence: 0.8363638

 $00{:}10{:}11{.}910 \dashrightarrow 00{:}10{:}14{.}750$ they need to treat the infection and the blood

NOTE Confidence: 0.8363638

00:10:14.750 --> 00:10:17.270 should go away, if it doesn't go

NOTE Confidence: 0.8363638

00:10:17.270 --> 00:10:19.849 away or the symptoms don't

NOTE Confidence: 0.8363638

 $00{:}10{:}19{.}849 \dashrightarrow 00{:}10{:}22{.}194$ get better after treating infection

NOTE Confidence: 0.8363638

 $00{:}10{:}22.194 \dashrightarrow 00{:}10{:}24.600$ then you need what we call the

NOTE Confidence: 0.8363638

 $00:10:24.600 \longrightarrow 00:10:27.250$ work up of the blood in the urine

NOTE Confidence: 0.8363638

 $00{:}10{:}27.250 \dashrightarrow 00{:}10{:}29.518$ and that work up usually entails

NOTE Confidence: 0.8363638

00:10:29.518 --> 00:10:32.926 some type of an X Ray study like a CT

NOTE Confidence: 0.8363638

00:10:32.926 --> 00:10:35.702 scan or an MRI because you can bleed

NOTE Confidence: 0.8363638

00:10:35.702 --> 00:10:38.180 from any part of the urinary tract,

NOTE Confidence: 0.8363638

 $00:10:38.180 \rightarrow 00:10:40.998$ the lining of the kidneys, the kidney itself,

 $00:10:44.040 \rightarrow 00:10:45.000$ the bladder itself,

NOTE Confidence: 0.8363638

00:10:45.000 --> 00:10:47.376 so you want to image or

NOTE Confidence: 0.8363638

 $00{:}10{:}47{.}376 \dashrightarrow 00{:}10{:}49{.}722$ look at the kidneys

- $00{:}10{:}49{.}722 \dashrightarrow 00{:}10{:}52{.}388$ with the CT scan
- NOTE Confidence: 0.8363638
- $00:10:52.390 \longrightarrow 00:10:55.027$ and then
- NOTE Confidence: 0.8363638
- 00:10:55.027 00:10:57.837 you also want to look into the bladder,
- NOTE Confidence: 0.8363638
- $00{:}10{:}57{.}840 \dashrightarrow 00{:}10{:}59{.}886$ and that's usually an office procedure
- NOTE Confidence: 0.8363638
- $00{:}10{:}59{.}886 \dashrightarrow 00{:}11{:}01{.}877$ where you take a small telescope
- NOTE Confidence: 0.8363638
- 00:11:01.877 --> 00:11:04.506 with the light at the end of it and
- NOTE Confidence: 0.8363638
- $00{:}11{:}04{.}506$ --> $00{:}11{:}06{.}809$ actually look into the bladder and can
- NOTE Confidence: 0.8363638
- $00:11:06.809 \rightarrow 00:11:08.758$ visualize the lining of the bladder.
- NOTE Confidence: 0.91712534
- $00{:}11{:}10{.}320 \dashrightarrow 00{:}11{:}14{.}092$ And so if you do that,
- NOTE Confidence: 0.91712534
- $00:11:14.092 \longrightarrow 00:11:17.284$ people often ask what does
- NOTE Confidence: 0.91712534
- 00:11:17.284 --> 00:11:20.299 cancer look like? Will you see
- NOTE Confidence: 0.8236216
- $00:11:20.300 \longrightarrow 00:11:22.586$ in the bladder the tumor growth?
- NOTE Confidence: 0.8236216
- 00:11:24.500 --> 00:11:26.410 You'll actually see it emanating
- NOTE Confidence: 0.8236216
- $00:11:26.410 \longrightarrow 00:11:27.938$ from the bladder wall.
- NOTE Confidence: 0.8236216
- $00{:}11{:}27{.}940 \dashrightarrow 00{:}11{:}30{.}988$ It may look a little like cauliflower
- NOTE Confidence: 0.8236216
- 00:11:30.990 --> 00:11:33.282 or papillary

- NOTE Confidence: 0.8236216
- $00:11:33.282 \longrightarrow 00:11:34.810$ growth in the bladder,
- NOTE Confidence: 0.8236216
- $00:11:34.810 \longrightarrow 00:11:36.964$ or it could be something as subtle
- NOTE Confidence: 0.8236216
- 00:11:36.964 --> 00:11:39.400 as a redness in the bladder,
- NOTE Confidence: 0.8236216
- $00:11:39.400 \rightarrow 00:11:43.220$ or could be a solid mass in the bladder.
- NOTE Confidence: 0.8236216
- $00{:}11{:}43{.}220 \dashrightarrow 00{:}11{:}47{.}448$ So all those are related to
- NOTE Confidence: 0.8236216
- $00{:}11{:}47{.}450 \dashrightarrow 00{:}11{:}50{.}271$ what that looks like under the
- NOTE Confidence: 0.8236216
- $00:11:50.271 \rightarrow 00:11:52.568$ microscope once you take that out,
- NOTE Confidence: 0.8236216
- $00:11:52.570 \longrightarrow 00:11:54.146$ because lower grade tumors
- NOTE Confidence: 0.8236216
- $00:11:54.146 \longrightarrow 00:11:56.116$ tend to be more papillary,
- NOTE Confidence: 0.8236216
- $00:11:56.120 \rightarrow 00:11:58.490$ meaning they're not as aggressive in
- NOTE Confidence: 0.8236216
- $00{:}11{:}58{.}490 \dashrightarrow 00{:}12{:}00{.}450$ higher grade tumors tend to be more solid.
- NOTE Confidence: 0.8236216
- 00:12:01.635 --> 00:12:02.820 So how do
- NOTE Confidence: 0.8408894
- $00:12:02.820 \longrightarrow 00:12:05.106$ you exactly take out this cancer
- NOTE Confidence: 0.8408894
- $00{:}12{:}05{.}106 \dashrightarrow 00{:}12{:}07{.}913$ in order to find out under the
- NOTE Confidence: 0.8408894
- 00:12:07.913 --> 00:12:09.908 microscope what it looks like?
- NOTE Confidence: 0.8408894

 $00:12:09.910 \longrightarrow 00:12:12.668$ That sounds like a biopsy to me.

NOTE Confidence: 0.8408894

 $00:12:12.670 \longrightarrow 00:12:16.210$ So how exactly is that done?

NOTE Confidence: 0.8408894

 $00{:}12{:}16{.}210 \dashrightarrow 00{:}12{:}19{.}945$ We usually schedule the person

NOTE Confidence: 0.8408894

 $00:12:19.950 \longrightarrow 00:12:23.358$ in the operating room

NOTE Confidence: 0.8408894

 $00{:}12{:}23.358 \dashrightarrow 00{:}12{:}26.629$ with the anesthesia so that you

NOTE Confidence: 0.8257768

 $00{:}12{:}28{.}770 \dashrightarrow 00{:}12{:}30{.}960$ go in with a telescope, a little

NOTE Confidence: 0.8257768

 $00:12:30.960 \longrightarrow 00:12:32.900$ bigger telescope and

NOTE Confidence: 0.8257768

 $00:12:32.900 \rightarrow 00:12:35.325$ through that telescope we're able

NOTE Confidence: 0.8257768

 $00:12:35.325 \longrightarrow 00:12:37.966$ to trim or cut the tissue out.

NOTE Confidence: 0.8257768

 $00:12:37.970 \longrightarrow 00:12:39.764$ Usually we could remove

NOTE Confidence: 0.8257768

 $00:12:39.764 \longrightarrow 00:12:42.708$ all the tumor itself,

NOTE Confidence: 0.8257768

 $00{:}12{:}42.708 \dashrightarrow 00{:}12{:}45.330$ and then we take that tissue

NOTE Confidence: 0.8257768

 $00:12:45.330 \longrightarrow 00:12:46.814$ to pathology so they

NOTE Confidence: 0.8257768

 $00:12:46.814 \longrightarrow 00:12:49.040$ can analyze it.

NOTE Confidence: 0.86669844

 $00{:}12{:}49{.}040 \dashrightarrow 00{:}12{:}50{.}900$ It sounds like that's a little operation,

NOTE Confidence: 0.86669844

 $00:12:50.900 \rightarrow 00:12:52.755$ not a big operation because

- NOTE Confidence: 0.86669844
- $00:12:52.755 \rightarrow 00:12:54.610$ you're still using a telescope.
- NOTE Confidence: 0.86669844
- $00{:}12{:}54{.}610 \dashrightarrow 00{:}12{:}56{.}434$ It doesn't sound like this is
- NOTE Confidence: 0.86669844
- $00:12:56.434 \longrightarrow 00:12:59.089$ a big cut in the abdomen and
- NOTE Confidence: 0.86669844
- $00:12:59.089 \rightarrow 00:13:00.909$ you're removing the bladder.
- NOTE Confidence: 0.86669844
- 00:13:00.910 --> 00:13:02.770 It sounds minimally
- NOTE Confidence: 0.86669844
- $00:13:02.770 \longrightarrow 00:13:04.250$ invasive. Is that right?
- $00{:}13{:}06.850 \dashrightarrow 00{:}13{:}09.070$ Yes, often times it's done as an outpatient.
- NOTE Confidence: 0.86669844
- $00:13:09.070 \rightarrow 00:13:10.790$ Occasionally the patient will require
- NOTE Confidence: 0.86669844
- $00{:}13{:}10.790 \dashrightarrow 00{:}13{:}13.160$ a tube in the bladder overnight,
- NOTE Confidence: 0.86669844
- $00{:}13{:}13{.}160 \dashrightarrow 00{:}13{:}16{.}246$ or for a couple days, depending on how
- NOTE Confidence: 0.86669844
- $00:13:16.246 \rightarrow 00:13:19.754$ much you have to do, but the real
- NOTE Confidence: 0.86669844
- $00{:}13{:}19.754 \dashrightarrow 00{:}13{:}22.898$ risks of the procedure is bleeding,
- NOTE Confidence: 0.86669844
- 00:13:22.900 --> 00:13:25.390 because obviously you're cutting tissue,
- NOTE Confidence: 0.86669844
- $00:13:25.390 \longrightarrow 00:13:28.330$ but you're able to also
- NOTE Confidence: 0.86669844
- $00:13:28.330 \rightarrow 00:13:30.682$ cauterize the area. Rarely
- NOTE Confidence: 0.86669844
- $00:13:30.690 \longrightarrow 00:13:33.203$ opening the bladder can

- NOTE Confidence: 0.86669844
- $00:13:33.203 \longrightarrow 00:13:35.850$ perforate the bladder,
- NOTE Confidence: 0.86669844
- $00:13:35.850 \longrightarrow 00:13:37.840$ but those are very uncommon.
- NOTE Confidence: 0.8967927
- 00:13:38.720 --> 00:13:41.088 Well, we're going to pick up right after
- NOTE Confidence: 0.8967927
- $00{:}13{:}41.088 \dashrightarrow 00{:}13{:}43.755$ we take a short break for a medical
- NOTE Confidence: 0.8967927
- 00:13:43.755 --> 00:13:45.869 minute learning more about what happens
- NOTE Confidence: 0.8967927
- $00{:}13{:}45.869 \dashrightarrow 00{:}13{:}48.017$ after the diagnosis of bladder cancer
- NOTE Confidence: 0.8967927
- $00:13:48.017 \rightarrow 00:13:50.080$ with my guest doctor John Colberg.
- NOTE Confidence: 0.8575317
- $00{:}13{:}50.660 \dashrightarrow 00{:}13{:}53.552$ Support for Yale Cancer Answers comes
- NOTE Confidence: 0.8575317
- $00{:}13{:}53.552 \dashrightarrow 00{:}13{:}56.083$ from AstraZeneca, providing important
- NOTE Confidence: 0.8575317
- $00:13:56.083 \rightarrow 00:13:58.187$ treatment options for patients
- NOTE Confidence: 0.8575317
- $00:13:58.187 \rightarrow 00:14:01.270$ living with different types of lung,
- NOTE Confidence: 0.8575317
- $00{:}14{:}01{.}270 \dashrightarrow 00{:}14{:}02{.}782$ bladder, ovarian, breast,
- NOTE Confidence: 0.8575317
- $00{:}14{:}02.782 \dashrightarrow 00{:}14{:}04.798$ pancreatic and blood cancers.
- NOTE Confidence: 0.8575317
- $00{:}14{:}04.800 \dashrightarrow 00{:}14{:}08.448$ More information at a strazeneca-us.com.
- NOTE Confidence: 0.8575317
- 00:14:08.450 --> 00:14:10.535 This is a medical minute
- NOTE Confidence: 0.8575317

 $00{:}14{:}10.535 \dashrightarrow 00{:}14{:}11.786$ about smoking cessation.

NOTE Confidence: 0.8575317

00:14:11.790 --> 00:14:13.880 There are many obstacles to

NOTE Confidence: 0.8575317

 $00:14:13.880 \rightarrow 00:14:15.552$ face when quitting smoking,

NOTE Confidence: 0.8575317

 $00:14:15.560 \rightarrow 00:14:18.479$ as smoking involves the potent drug nicotine.

NOTE Confidence: 0.8575317

00:14:18.480 --> 00:14:21.406 But it's a very important lifestyle change,

NOTE Confidence: 0.8575317

 $00:14:21.410 \longrightarrow 00:14:22.664$ especially for patients

NOTE Confidence: 0.8575317

00:14:22.664 --> 00:14:23.918 undergoing cancer treatment.

NOTE Confidence: 0.8575317

 $00:14:23.920 \longrightarrow 00:14:26.170$ Quitting smoking has been shown to

NOTE Confidence: 0.8575317

 $00{:}14{:}26.170 \dashrightarrow 00{:}14{:}28.211$ positively impact response to treatments

NOTE Confidence: 0.8575317

 $00{:}14{:}28{.}211 \dashrightarrow 00{:}14{:}30{.}586$ decrease the likelihood that patients

NOTE Confidence: 0.8575317

 $00{:}14{:}30{.}586 \dashrightarrow 00{:}14{:}32{.}486$ will develop second malignancies

NOTE Confidence: 0.8575317

 $00:14:32.550 \rightarrow 00:14:34.370$ and increase rates of survival.

NOTE Confidence: 0.8575317

 $00:14:34.370 \longrightarrow 00:14:36.010$ Tobacco treatment programs are

NOTE Confidence: 0.8575317

 $00:14:36.010 \rightarrow 00:14:38.060$ currently being offered at federally

NOTE Confidence: 0.8575317

 $00{:}14{:}38.060 \dashrightarrow 00{:}14{:}40.049$ designated comprehensive cancer centers.

NOTE Confidence: 0.8575317

 $00:14:40.050 \longrightarrow 00:14:41.780$ And operate on the principles

- NOTE Confidence: 0.8575317
- $00:14:41.780 \longrightarrow 00:14:44.185$ of the US Public Health Service

00:14:44.185 --> 00:14:45.997 clinical practice guidelines.

NOTE Confidence: 0.8575317

 $00:14:46.000 \rightarrow 00:14:47.692$ All treatment components are

NOTE Confidence: 0.8575317

 $00{:}14{:}47.692 \dashrightarrow 00{:}14{:}49.807$ evidence based and therefore all

NOTE Confidence: 0.8575317

00:14:49.807 --> 00:14:51.834 patients are treated with FDA

NOTE Confidence: 0.8575317

 $00{:}14{:}51{.}834 \dashrightarrow 00{:}14{:}53{.}378$ approved first line medications

NOTE Confidence: 0.8575317

 $00{:}14{:}53{.}378 \dashrightarrow 00{:}14{:}56{.}030$ for smoking cessation as well as

NOTE Confidence: 0.8575317

 $00{:}14{:}56.030 \dashrightarrow 00{:}14{:}57.842$ smoking cessation counseling that

NOTE Confidence: 0.8575317

 $00{:}14{:}57{.}842 \dashrightarrow 00{:}14{:}59{.}636$ stresses appropriate coping skills.

NOTE Confidence: 0.8575317

 $00{:}14{:}59.636 \dashrightarrow 00{:}15{:}01.851$ More information is available at

NOTE Confidence: 0.8575317

00:15:01.851 --> 00:15:03.180 yalecancercenter.org you're listening

NOTE Confidence: 0.8575317

 $00{:}15{:}03.239 \dashrightarrow 00{:}15{:}04.699$ to Connecticut public radio.

NOTE Confidence: 0.8689771

 $00{:}15{:}05{.}700 \dashrightarrow 00{:}15{:}07{.}896$ Welcome back to Yale Cancer Answers.

NOTE Confidence: 0.8689771

 $00{:}15{:}07{.}900 \dashrightarrow 00{:}15{:}09{.}892$ This is doctor Anees Chagpar

NOTE Confidence: 0.8689771

 $00:15:09.892 \longrightarrow 00:15:12.099$ and I'm joined to night by

00:15:12.099 --> 00:15:14.114 my guest doctor John Colberg.

NOTE Confidence: 0.8689771

 $00{:}15{:}14{.}120 \dashrightarrow 00{:}15{:}16{.}070$ We're talking about the diagnosis

NOTE Confidence: 0.8689771

 $00{:}15{:}16.070$ --> $00{:}15{:}18.386$ and treatment of bladder cancer and NOTE Confidence: 0.8689771

00:15:18.386 --> 00:15:20.528 right before the break you

NOTE Confidence: 0.8689771

 $00{:}15{:}20.528 \dashrightarrow 00{:}15{:}22.760$ were telling us about this minimally

NOTE Confidence: 0.8689771

00:15:22.760 --> 00:15:24.320 invasive endoscopic biopsy that's

NOTE Confidence: 0.8689771

 $00{:}15{:}24{.}320 \dashrightarrow 00{:}15{:}25{.}988$ done to diagnose bladder cancers.

NOTE Confidence: 0.8689771

 $00:15:25.988 \rightarrow 00:15:28.946$ So I want to pick it up there when

NOTE Confidence: 0.8689771

00:15:28.946 --> 00:15:31.001 people have this outpatient procedure

NOTE Confidence: 0.8689771

 $00{:}15{:}31.001 \dashrightarrow 00{:}15{:}32.780$ to diagnose bladder cancers.

NOTE Confidence: 0.8689771

 $00{:}15{:}32{.}780 \dashrightarrow 00{:}15{:}34{.}976$ How long does it actually take

NOTE Confidence: 0.8689771

 $00:15:34.976 \longrightarrow 00:15:36.440$ to get that diagnosis back?

NOTE Confidence: 0.8751063

 $00:15:36.440 \rightarrow 00:15:39.728$ Usually it takes about three to five days.

NOTE Confidence: 0.8751063

 $00:15:39.730 \longrightarrow 00:15:42.650$ It all depends on how complicated or

NOTE Confidence: 0.8751063

 $00{:}15{:}42.650 \dashrightarrow 00{:}15{:}45.002$ if there's some differences in what

NOTE Confidence: 0.8751063

 $00:15:45.002 \rightarrow 00:15:47.308$ exactly the pathology is or if the pathologist

- NOTE Confidence: 0.8751063
- 00:15:47.308 --> 00:15:49.988 may need to do some special stains or
- NOTE Confidence: 0.8751063
- $00{:}15{:}50.055 \dashrightarrow 00{:}15{:}52.179$ special studies to really nail down
- NOTE Confidence: 0.8751063
- $00:15:52.179 \rightarrow 00:15:55.420$ exactly what type of tumor it is.
- NOTE Confidence: 0.8759819
- $00:15:55.420 \longrightarrow 00:15:57.975$ That brings me to my next question,
- NOTE Confidence: 0.8759819
- $00{:}15{:}57{.}980 \dashrightarrow 00{:}15{:}59{.}800$ which is, are there different
- NOTE Confidence: 0.8759819
- $00:15:59.800 \rightarrow 00:16:01.256$ types of bladder cancer?
- NOTE Confidence: 0.8759819
- $00:16:01.260 \rightarrow 00:16:03.450$ Or is this a homogeneous disease?
- NOTE Confidence: 0.8759819
- 00:16:03.450 --> 00:16:04.910 It sounds like
- NOTE Confidence: 0.8759819
- $00:16:04.910 \longrightarrow 00:16:06.005$ there's different types.
- NOTE Confidence: 0.8759819
- $00:16:06.010 \longrightarrow 00:16:08.200$ Can you tell us a little
- NOTE Confidence: 0.8759819
- $00:16:08.200 \longrightarrow 00:16:09.660$ bit more about that?
- NOTE Confidence: 0.83846825
- $00{:}16{:}09{.}960 \dashrightarrow 00{:}16{:}11{.}808$ Sure, there's basically three
- NOTE Confidence: 0.83846825
- 00:16:11.808 --> 00:16:14.118 different types of bladder cancer.
- NOTE Confidence: 0.83846825
- $00{:}16{:}14.120 \dashrightarrow 00{:}16{:}16.430$ There are two very uncommon
- NOTE Confidence: 0.83846825
- $00:16:16.430 \longrightarrow 00:16:18.278$ rare types of cancers.
- NOTE Confidence: 0.83846825

 $00:16:18.280 \rightarrow 00:16:20.450$ They're called squamous cell cancers that

NOTE Confidence: 0.83846825

 $00:16:20.450 \longrightarrow 00:16:23.194$ typically occur in men or women

NOTE Confidence: 0.83846825

 $00{:}16{:}23.194 \dashrightarrow 00{:}16{:}25.210$ who have chronic inflammation.

NOTE Confidence: 0.83846825

 $00:16:25.210 \longrightarrow 00:16:28.311$ Infections may be in a tube in the

NOTE Confidence: 0.83846825

 $00:16:28.311 \rightarrow 00:16:31.209$ bladder for long periods of time.

NOTE Confidence: 0.83846825

 $00:16:31.210 \longrightarrow 00:16:33.865$ The second type is called

NOTE Confidence: 0.83846825

00:16:33.865 --> 00:16:35.989 adenocarcinoma.

NOTE Confidence: 0.83846825

 $00:16:35.990 \longrightarrow 00:16:37.762$ Again, very uncommon.

NOTE Confidence: 0.83846825

 $00{:}16{:}37{.}762 \dashrightarrow 00{:}16{:}41{.}670$ They usually occur in the top of the bladder.

NOTE Confidence: 0.83846825

 $00{:}16{:}41.670 \dashrightarrow 00{:}16{:}44.050$ A little structure that connects

NOTE Confidence: 0.83846825

 $00:16:44.050 \longrightarrow 00:16:47.150$ the belly button.

NOTE Confidence: 0.83846825

 $00:16:47.150 \longrightarrow 00:16:49.730$ The vast majority of bladder cancers

NOTE Confidence: 0.83846825

 $00{:}16{:}49{.}730 \dashrightarrow 00{:}16{:}52{.}839$ are what we call urothelial cancers

NOTE Confidence: 0.83846825

 $00{:}16{:}52.839 \dashrightarrow 00{:}16{:}55.439$ or transitional cell cancers.

NOTE Confidence: 0.83846825

 $00:16:55.440 \longrightarrow 00:16:56.864$ And it's really important that

NOTE Confidence: 0.83846825

 $00:16:56.864 \rightarrow 00:16:59.000$ the pathologist tells you three things.

- NOTE Confidence: 0.83846825
- $00:16:59.000 \rightarrow 00:17:01.443$ What type of tumor it is, what
- NOTE Confidence: 0.83846825
- $00:17:01.443 \longrightarrow 00:17:03.269$ grade the tumor is,
- NOTE Confidence: 0.83846825
- $00{:}17{:}03.270 \dashrightarrow 00{:}17{:}05.050$ meaning what it looks like under the
- NOTE Confidence: 0.83846825
- $00:17:05.050 \rightarrow 00:17:07.186$ microscope, is a high grade
- NOTE Confidence: 0.83846825
- $00:17:07.190 \longrightarrow 00:17:08.970$ or is it low grade?
- NOTE Confidence: 0.83846825
- $00:17:08.970 \longrightarrow 00:17:11.245$ And thirdly he will tell you what
- NOTE Confidence: 0.83846825
- $00:17:11.245 \longrightarrow 00:17:13.600$ we call the depth of invasion.
- NOTE Confidence: 0.83846825
- 00:17:13.600 --> 00:17:13.955 Meaning,
- NOTE Confidence: 0.83846825
- $00:17:13.955 \rightarrow 00:17:16.795$ how deep does it penetrate the bladder wall?
- NOTE Confidence: 0.83846825
- 00:17:16.800 --> 00:17:18.665 or is it superficial, meaning
- NOTE Confidence: 0.83846825
- $00:17:18.665 \longrightarrow 00:17:20.898$ just involving the top layer or
- NOTE Confidence: 0.83846825
- $00{:}17{:}20.898 \dashrightarrow 00{:}17{:}22.728$ the layer right behind the top
- NOTE Confidence: 0.83846825
- $00{:}17{:}22.728 \dashrightarrow 00{:}17{:}24.630$ layer called the lamina propria
- NOTE Confidence: 0.83846825
- $00{:}17{:}24.630 \dashrightarrow 00{:}17{:}27.060$ or is it into the muscle?
- NOTE Confidence: 0.83846825
- $00{:}17{:}27.060 \dashrightarrow 00{:}17{:}29.566$ Because depending on what the grade is,
- NOTE Confidence: 0.83846825

- 00:17:29.570 --> 00:17:30.266 high grade,
- NOTE Confidence: 0.83846825
- $00:17:30.266 \longrightarrow 00:17:32.354$ low grade and depending on the
- NOTE Confidence: 0.83846825
- $00:17:32.354 \longrightarrow 00:17:34.233$ depth of invasion that will
- NOTE Confidence: 0.83846825
- $00:17:34.233 \rightarrow 00:17:36.447$ dictate or tell us exactly what
- NOTE Confidence: 0.83846825
- $00{:}17{:}36{.}447 \dashrightarrow 00{:}17{:}38{.}867$ the next steps will be.
- NOTE Confidence: 0.7837661
- $00:17:40.160 \longrightarrow 00:17:42.716$ Tell us more about that.
- $00{:}17{:}44{.}420 \dashrightarrow 00{:}17{:}46{.}120$ What does the algorithm look
- NOTE Confidence: 0.7837661
- 00:17:46.120 --> 00:17:48.155 like?
- NOTE Confidence: 0.7837661
- 00:17:48.155 --> 00:17:50.810 If someone has what we call low grade,
- NOTE Confidence: 0.7837661
- 00:17:50.810 --> 00:17:52.088 superficial bladder cancer, and
- NOTE Confidence: 0.84545594
- 00:17:54.250 --> 00:17:55.201 it's small,
- NOTE Confidence: 0.84545594
- $00{:}17{:}55{.}201 \dashrightarrow 00{:}17{:}57{.}900$ meaning less than two or three centimeters,
- NOTE Confidence: 0.84545594
- $00:17:57.900 \longrightarrow 00:17:59.560$ most people will just
- NOTE Confidence: 0.84545594
- $00:17:59.560 \longrightarrow 00:18:01.220$ follow those patients,
- NOTE Confidence: 0.84545594
- $00:18:01.220 \longrightarrow 00:18:02.880$ meaning they will put him
- NOTE Confidence: 0.84545594
- $00:18:02.880 \longrightarrow 00:18:04.208$ on a surveillance protocol,
- NOTE Confidence: 0.84545594

 $00:18:04.210 \longrightarrow 00:18:06.196$ meaning they'll come back to the

NOTE Confidence: 0.84545594

00:18:06.196 --> 00:18:08.230 office every three to six months

NOTE Confidence: 0.84545594

 $00:18:08.230 \longrightarrow 00:18:09.850$ and look into the bladder,

NOTE Confidence: 0.84545594

 $00{:}18{:}09{.}850 \dashrightarrow 00{:}18{:}11{.}842$ because what we know about bladder

NOTE Confidence: 0.84545594

 $00{:}18{:}11.842 \dashrightarrow 00{:}18{:}13.834$ cancer is that

NOTE Confidence: 0.84545594

 $00:18:13.834 \rightarrow 00:18:15.494$ the recurrence rates are quite high,

NOTE Confidence: 0.84545594

 $00:18:15.500 \longrightarrow 00:18:17.887$ so that you want to make sure

NOTE Confidence: 0.84545594

 $00:18:17.887 \longrightarrow 00:18:19.924$ that you follow these men and

NOTE Confidence: 0.84545594

00:18:19.924 --> 00:18:22.519 women so you can pick up if it

NOTE Confidence: 0.84545594

 $00{:}18{:}22{.}519 \dashrightarrow 00{:}18{:}24{.}906$ does come back at an early stage.

NOTE Confidence: 0.84545594

 $00:18:24.910 \longrightarrow 00:18:26.800$ So it doesn't progress into a

NOTE Confidence: 0.84545594

 $00:18:26.800 \longrightarrow 00:18:28.570$ higher grade tumor or muscle

NOTE Confidence: 0.84545594

 $00:18:28.570 \longrightarrow 00:18:30.160$ invasive tumor, so let

NOTE Confidence: 0.86896193

 $00{:}18{:}30{.}160 \dashrightarrow 00{:}18{:}32{.}960$ me just stop you there for one second.

NOTE Confidence: 0.86896193

00:18:32.960 --> 00:18:35.804 So if they did a biopsy and they've just

NOTE Confidence: 0.86896193

 $00:18:35.804 \rightarrow 00:18:38.359$ taken a piece of this cancer before they

- NOTE Confidence: 0.86896193
- $00:18:38.359 \rightarrow 00:18:41.359$ put you on this regimen of surveillance,
- NOTE Confidence: 0.86896193
- $00:18:41.360 \longrightarrow 00:18:43.304$ do they actually need to go
- NOTE Confidence: 0.86896193
- $00:18:43.304 \rightarrow 00:18:45.560$ and take out the whole tumor?
- NOTE Confidence: 0.86896193
- $00:18:45.560 \rightarrow 00:18:48.192$ Or is this something that they can just
- NOTE Confidence: 0.86896193
- $00:18:48.192 \rightarrow 00:18:50.810$ watch like a prostate cancer, for example,
- NOTE Confidence: 0.86896193
- $00:18:50.810 \longrightarrow 00:18:52.910$ because it tends to be indolent.
- NOTE Confidence: 0.86896193
- $00:18:52.910 \longrightarrow 00:18:55.070$ So typically when you go in
- NOTE Confidence: 0.86896193
- $00:18:55.070 \longrightarrow 00:18:57.345$ to take the tumor out,
- NOTE Confidence: 0.86896193
- $00{:}18{:}59{.}300 \dashrightarrow 00{:}19{:}00{.}596$ you actually resect the
- NOTE Confidence: 0.86896193
- $00:19:00.596 \longrightarrow 00:19:02.216$ whole tumor if you can.
- NOTE Confidence: 0.86896193
- $00{:}19{:}02{.}220 \dashrightarrow 00{:}19{:}05{.}190$ So usually for low grade tumors
- NOTE Confidence: 0.86896193
- 00:19:05.190 $\operatorname{-->}$ 00:19:07.451 you have muscle in the specimen
- NOTE Confidence: 0.86896193
- 00:19:07.451 $\operatorname{-->}$ 00:19:09.500 and if there's no muscle involved
- NOTE Confidence: 0.86896193
- $00:19:09.500 \longrightarrow 00:19:11.648$ then you're basically done.
- NOTE Confidence: 0.86896193
- $00{:}19{:}11.650 \dashrightarrow 00{:}19{:}14.170$ You don't have to go back again.
- NOTE Confidence: 0.86896193

00:19:14.170 --> 00:19:16.318 Now there's some caveats of that.

NOTE Confidence: 0.86896193

00:19:16.320 --> 00:19:18.462 If it's a higher grade tumor and

NOTE Confidence: 0.86896193

 $00{:}19{:}18{.}462 \dashrightarrow 00{:}19{:}20{.}629$ you don't have muscle involved, NOTE Confidence: 0.86896193

 $00{:}19{:}20{.}630 \dashrightarrow 00{:}19{:}23{.}270$ you will go back and re stage or NOTE Confidence: 0.86896193

00:19:23.270 --> 00:19:25.786 re reset that tumor did to make

NOTE Confidence: 0.86896193

 $00:19:25.786 \rightarrow 00:19:28.529$ sure that it's not on the muscle. NOTE Confidence: 0.86896193

 $00:19:28.530 \longrightarrow 00:19:31.070$ So for higher grade tumors

NOTE Confidence: 0.86896193

00:19:31.070 --> 00:19:33.610 with no involvement of muscle,

NOTE Confidence: 0.86896193

00:19:33.610 --> 00:19:36.312 you may want to consider what we

NOTE Confidence: 0.86896193

00:19:36.312 --> 00:19:37.991 call intravesical or treatment

NOTE Confidence: 0.86896193

00:19:37.991 --> 00:19:40.655 in the bladder with certain

NOTE Confidence: 0.86896193

 $00{:}19{:}40.655 \dashrightarrow 00{:}19{:}42.870$ different types of medication.

NOTE Confidence: 0.86896193

 $00{:}19{:}42.870 \dashrightarrow 00{:}19{:}44.634$ U sually it's installed over

NOTE Confidence: 0.86896193

 $00{:}19{:}44.634 \dashrightarrow 00{:}19{:}47.280$ once a week for six weeks.

NOTE Confidence: 0.86896193

 $00:19:47.280 \longrightarrow 00:19:49.044$ The medication we typically

NOTE Confidence: 0.86896193

 $00:19:49.044 \rightarrow 00:19:50.808$ use is something called BCG.

- NOTE Confidence: 0.86896193
- $00:19:50.810 \longrightarrow 00:19:53.576$ It's a mycobacterium that

 $00{:}19{:}53.576 \dashrightarrow 00{:}19{:}56.099$ causes tuberculosis and what it does,

NOTE Confidence: 0.86896193

 $00:19:56.100 \rightarrow 00:20:00.177$ it sets up an immune response of your own

NOTE Confidence: 0.86896193

 $00{:}20{:}00{.}180 \dashrightarrow 00{:}20{:}03{.}246$ to cut down on the

NOTE Confidence: 0.86896193

 $00:20:03.246 \longrightarrow 00:20:05.280$ recurrence of the tumor.

NOTE Confidence: 0.86896193

 $00:20:05.280 \rightarrow 00:20:08.216$ If it is high grade and muscle invasive

NOTE Confidence: 0.86896193

 $00:20:08.216 \longrightarrow 00:20:10.890$ then that changes the whole scenario

NOTE Confidence: 0.86896193

 $00:20:10.890 \rightarrow 00:20:13.680$ as far as your treatment algorithm.

NOTE Confidence: 0.8737979

 $00{:}20{:}14.440 \dashrightarrow 00{:}20{:}16.896$ I'm going to get to what

NOTE Confidence: 0.8737979

00:20:16.896 --> 00:20:19.837 we do if it's invaded the muscle,

NOTE Confidence: 0.8737979

 $00:20:19.840 \longrightarrow 00:20:21.970$ but the whole concept of installation

NOTE Confidence: 0.8737979

 $00{:}20{:}21{.}970 \dashrightarrow 00{:}20{:}24{.}893$ of BCG and the fact that it's a

NOTE Confidence: 0.8737979

 $00:20:24.893 \rightarrow 00:20:26.678$ mycobacterium kind of like TB,

NOTE Confidence: 0.8737979

00:20:26.680 --> 00:20:29.650 brings up a lot of questions that I think our

NOTE Confidence: 0.8737979

 $00{:}20{:}29{.}726 \dashrightarrow 00{:}20{:}32{.}438$ list eners might be asking themselves.

00:20:32.440 --> 00:20:34.960 So, for example, if you get this,

NOTE Confidence: 0.8737979

 $00{:}20{:}34{.}960 \dashrightarrow 00{:}20{:}37{.}992$ does that put you at risk of actually

NOTE Confidence: 0.8737979

00:20:37.992 --> 00:20:39.998 getting tuberculosis number one, and #2

NOTE Confidence: 0.8737979

00:20:40.000 --> 00:20:42.880 if you've already had TB in the past,

NOTE Confidence: 0.8737979

00:20:42.880 --> 00:20:45.202 does that reduce your risk of

NOTE Confidence: 0.8737979

 $00:20:45.202 \longrightarrow 00:20:46.750$ getting bladder cancer if

NOTE Confidence: 0.8737979

 $00{:}20{:}46.750 \dashrightarrow 00{:}20{:}48.950$ the chemical that we use,

NOTE Confidence: 0.8737979

 $00:20:48.950 \longrightarrow 00:20:51.590$ or the medication that we use

NOTE Confidence: 0.8737979

 $00{:}20{:}51{.}590 \dashrightarrow 00{:}20{:}53{.}350$ is actually a mycobacterium.

NOTE Confidence: 0.8737979

 $00:20:53.350 \longrightarrow 00:20:54.670$ You know, people

NOTE Confidence: 0.8326042

 $00{:}20{:}54.670 \dashrightarrow 00{:}20{:}56.870$ looked at that because there's

NOTE Confidence: 0.8326042

 $00{:}20{:}56.870 \dashrightarrow 00{:}20{:}59.544$ several countries outside the US

NOTE Confidence: 0.8326042

 $00:20:59.544 \longrightarrow 00:21:02.286$ that actually vaccinate

NOTE Confidence: 0.8326042

 $00:21:02.286 \rightarrow 00:21:05.785$ people for TB so it doesn't appear to be

NOTE Confidence: 0.8326042

 $00{:}21{:}05.785 \dashrightarrow 00{:}21{:}09.189$ a prevent you from getting bladder cancer.

NOTE Confidence: 0.8326042

 $00:21:09.190 \longrightarrow 00:21:12.220$ There is a small risk

- NOTE Confidence: 0.8326042
- $00:21:12.220 \longrightarrow 00:21:15.127$ that you can get what we call BCGiosis

 $00{:}21{:}15{.}127 \dashrightarrow 00{:}21{:}17{.}999$ or systemic BCG from the treatment.

NOTE Confidence: 0.8326042

00:21:18.000 --> 00:21:20.070 It's very, very rare and it's

NOTE Confidence: 0.8326042

 $00:21:20.070 \longrightarrow 00:21:21.450$ usually associated with the

NOTE Confidence: 0.8326042

00:21:21.513 --> 00:21:23.389 installation of the medication,

NOTE Confidence: 0.8326042

 $00:21:23.390 \rightarrow 00:21:25.844$ meaning that when you put the

NOTE Confidence: 0.8326042

 $00:21:25.844 \rightarrow 00:21:29.156$ medication in you have to put it

NOTE Confidence: 0.8326042

 $00:21:29.160 \longrightarrow 00:21:32.283$ through a catheter

 $00{:}21{:}35{.}710 \dashrightarrow 00{:}21{:}38{.}374$ which is a small tube and most of the cases

NOTE Confidence: 0.8326042

 $00:21:38.374 \rightarrow 00:21:42.019$ of systemic BCG has been related to

NOTE Confidence: 0.8326042

 $00{:}21{:}42.019 \dashrightarrow 00{:}21{:}44.050$ what we call traumatic catheterization meaning

NOTE Confidence: 0.8326042

 $00{:}21{:}44.050 \dashrightarrow 00{:}21{:}46.507$ that when you put the catheter in an d

NOTE Confidence: 0.8326042

00:21:46.507 --> 00:21:48.280 it's been difficult to put in,

NOTE Confidence: 0.8326042

00:21:48.280 --> 00:21:49.905 you've gotten blood back from

NOTE Confidence: 0.8326042

00:21:49.905 --> 00:21:51.530 the catheter and the

NOTE Confidence: 0.8326042

 $00:21:51.530 \rightarrow 00:21:53.480$ medication is injected under some force.

- NOTE Confidence: 0.8326042
- 00:21:53.480 --> 00:21:56.080 And obviously you don't want to do that.

00:21:56.080 --> 00:21:58.272 So typically in our office if someone

NOTE Confidence: 0.8326042

 $00:21:58.272 \longrightarrow 00:22:00.377$ placed the catheter and they

NOTE Confidence: 0.8326042

 $00{:}22{:}00{.}377 \dashrightarrow 00{:}22{:}02{.}242$ get blood during the catheterization,

NOTE Confidence: 0.8326042

 $00:22:02.250 \rightarrow 00:22:04.525$ they will not give the treatment

NOTE Confidence: 0.8326042

 $00:22:04.525 \longrightarrow 00:22:05.830$ that day.

NOTE Confidence: 0.8353027

 $00:22:05.830 \longrightarrow 00:22:07.450$ John another question

NOTE Confidence: 0.8353027

 $00:22:07.450 \longrightarrow 00:22:10.100$ why is it that we use BCG

NOTE Confidence: 0.8353027

 $00{:}22{:}10.183 \dashrightarrow 00{:}22{:}12.920$ when we think about cancer and

NOTE Confidence: 0.8353027

 $00:22:12.920 \longrightarrow 00:22:15.648$ talk about cancer on the show

NOTE Confidence: 0.8353027

 $00{:}22{:}15.650 \dashrightarrow 00{:}22{:}17.785$ often times when we're thinking

NOTE Confidence: 0.8353027

 $00{:}22{:}17.785 \dashrightarrow 00{:}22{:}19.920$ about medications to treat cancer,

NOTE Confidence: 0.8353027

 $00:22:19.920 \rightarrow 00:22:21.656$ we're thinking about chemotherapy.

NOTE Confidence: 0.8353027

 $00{:}22{:}21.656 \dashrightarrow 00{:}22{:}24.260$ Rarely do we actually think about

NOTE Confidence: 0.8353027

 $00{:}22{:}24{.}324 \dashrightarrow 00{:}22{:}26{.}748$ something like BCG or a mycobacterium.

 $00:22:26.750 \longrightarrow 00:22:29.739$ Yes, so it starts to set up

NOTE Confidence: 0.8288937

 $00{:}22{:}29{.}740 \dashrightarrow 00{:}22{:}32{.}374$ this immune response, which is kind

NOTE Confidence: 0.8288937

 $00:22:32.374 \rightarrow 00:22:36.148$ of a hot topic with a lot of cancers.

NOTE Confidence: 0.8288937

00:22:36.150 --> 00:22:38.285 Now BCG he's been around

NOTE Confidence: 0.8288937

 $00:22:38.285 \longrightarrow 00:22:40.420$ from since the early 1980s,

NOTE Confidence: 0.8288937

 $00{:}22{:}40{.}420 \dashrightarrow 00{:}22{:}43{.}876$ and it's been shown to cut down on the

NOTE Confidence: 0.8288937

 $00:22:43.876 \longrightarrow 00:22:47.738$ the incidence of recurrence by about 50%.

NOTE Confidence: 0.8288937

 $00{:}22{:}47.740 \dashrightarrow 00{:}22{:}50.240$ There are other medications used

NOTE Confidence: 0.8288937

 $00{:}22{:}50{.}240 \dashrightarrow 00{:}22{:}52{.}240$ in tramuscularly, and those tend

NOTE Confidence: 0.8288937

 $00:22:52.240 \longrightarrow 00:22:54.740$ to be chemotherapy agents,

NOTE Confidence: 0.8288937

 $00:22:54.740 \longrightarrow 00:22:58.170$ meaning they kill on contact.

NOTE Confidence: 0.8288937

 $00:23:03.620 \longrightarrow 00:23:05.948$ But their

NOTE Confidence: 0.8288937

 $00:23:05.950 \rightarrow 00:23:09.442$ response rates are not as good as BCG

NOTE Confidence: 0.8117576

 $00:23:09.450 \longrightarrow 00:23:11.826$ because of this immune

NOTE Confidence: 0.8117576

 $00:23:11.826 \longrightarrow 00:23:13.730$ response that it sets up,

NOTE Confidence: 0.8117576

 $00:23:13.730 \longrightarrow 00:23:16.208$ it sounds like that's really the mechanism

- NOTE Confidence: 0.8117576
- $00{:}23{:}16.208 \dashrightarrow 00{:}23{:}18.790$ by which it affects these cancers.

00:23:18.790 - 00:23:21.506 Which brings me to the question of,

NOTE Confidence: 0.8117576

 $00:23:21.510 \longrightarrow 00:23:23.202$ well, does immunotherapy work

NOTE Confidence: 0.8117576

 $00:23:23.202 \rightarrow 00:23:25.740$ more in these patients where the

NOTE Confidence: 0.8117576

00:23:25.811 --> 00:23:28.198 immune system is kind of revved up?

 $00:23:32.121 \rightarrow 00:23:35.059$ That's the hot topic in bladder cancer right now,

NOTE Confidence: 0.7749244

 $00{:}23{:}35{.}060 \dashrightarrow 00{:}23{:}38{.}714$ and there's two situations where

NOTE Confidence: 0.7749244

 $00:23:38.714 \longrightarrow 00:23:41.543$ we'd use immunotherapy, one is for

NOTE Confidence: 0.7749244

 $00{:}23{:}41{.}543 \dashrightarrow 00{:}23{:}44{.}210$ men or women who have failed BCG

NOTE Confidence: 0.7749244

 $00{:}23{:}44{.}304 \dashrightarrow 00{:}23{:}47{.}339$ but still have superficial disease,

NOTE Confidence: 0.7749244

 $00{:}23{:}47{.}340 \dashrightarrow 00{:}23{:}50{.}049$ and called CIS or carcinoma insitu

NOTE Confidence: 0.7749244

 $00:23:50.049 \longrightarrow 00:23:53.625$ which is it's

NOTE Confidence: 0.7749244

 $00:23:53.625 \rightarrow 00:23:56.420$ own sliver of bladder cancer.

NOTE Confidence: 0.7749244

 $00:23:56.420 \longrightarrow 00:23:59.426$ And it's been approved,

NOTE Confidence: 0.7749244

 $00{:}23{:}59{.}430 \dashrightarrow 00{:}24{:}01{.}940$ Pembrolizumab has been approved for

NOTE Confidence: 0.7749244

 $00{:}24{:}01{.}940 \dashrightarrow 00{:}24{:}04{.}450$ patients in that particular case.

- NOTE Confidence: 0.7749244
- $00:24:04.450 \rightarrow 00:24:08.636$ It's also been approved for people who failed

 $00:24:08.640 \longrightarrow 00:24:11.172$ or who are ineligible to receive

NOTE Confidence: 0.7749244

 $00:24:11.172 \rightarrow 00:24:12.860$ chemotherapy for invasive disease.

NOTE Confidence: 0.7749244

 $00:24:12.860 \longrightarrow 00:24:16.010$ So we do start to use it more and

NOTE Confidence: 0.7749244

 $00{:}24{:}16.010 \dashrightarrow 00{:}24{:}19.188$ more in more advanced bladder cancer.

NOTE Confidence: 0.8833491

 $00:24:21.060 \longrightarrow 00:24:23.380$ And so let's let's talk a little bit

NOTE Confidence: 0.8833491

 $00{:}24{:}23.380 \dashrightarrow 00{:}24{:}25.750$ more about the advanced bladder cancer.

NOTE Confidence: 0.8833491

 $00:24:25.750 \longrightarrow 00:24:27.430$ When you say more advanced,

NOTE Confidence: 0.8833491

 $00:24:27.430 \longrightarrow 00:24:29.440$ do you mean invading the muscle?

NOTE Confidence: 0.8833491

 $00:24:29.440 \longrightarrow 00:24:31.778$ Which is where we kind of left

NOTE Confidence: 0.8833491

 $00:24:31.780 \longrightarrow 00:24:33.460$ off in that algorithm, correct?

NOTE Confidence: 0.8833491

 $00{:}24{:}33{.}460 \dashrightarrow 00{:}24{:}35{.}812$ So you're talking about what we call T2

NOTE Confidence: 0.8833491

 $00:24:35.812 \longrightarrow 00:24:37.856$ or higher stage bladder cancer

NOTE Confidence: 0.8833491

 $00{:}24{:}37.856 \dashrightarrow 00{:}24{:}40.490$ into the muscle layer of the bladder,

NOTE Confidence: 0.8833491

 $00:24:40.490 \longrightarrow 00:24:42.730$ as seen on the pathology from the

 $00{:}24{:}42.730 \dashrightarrow 00{:}24{:}45.177$ reception that you did with the telescope.

NOTE Confidence: 0.8305577

 $00{:}24{:}45{.}990 \dashrightarrow 00{:}24{:}48{.}138$ And so how are those patients

NOTE Confidence: 0.8305577

 $00:24:48.140 \longrightarrow 00:24:50.732$ treated?

NOTE Confidence: 0.8305577

 $00{:}24{:}50{.}732 \dashrightarrow 00{:}24{:}53{.}148$ In the old days we would just take their bladders out,

NOTE Confidence: 0.8305577

 $00:24:53.150 \longrightarrow 00:24:54.940$ or we'd radiate the bladder.

NOTE Confidence: 0.8305577

 $00{:}24{:}54{.}940 \dashrightarrow 00{:}24{:}57{.}418$ We found that the success rate

NOTE Confidence: 0.8305577

00:24:57.418 --> 00:24:59.950 of survival was pretty poor,

NOTE Confidence: 0.8305577

 $00{:}24{:}59{.}950 \dashrightarrow 00{:}25{:}02{.}098$ less than 50% five year survival.

NOTE Confidence: 0.8305577

 $00:25:02.100 \longrightarrow 00:25:03.890$ So about 15 years ago

NOTE Confidence: 0.8305577

 $00:25:03.890 \longrightarrow 00:25:06.109$ there are a couple of very good

NOTE Confidence: 0.8305577

 $00{:}25{:}06{.}109 \dashrightarrow 00{:}25{:}08{.}545$ studies that have looked at using

NOTE Confidence: 0.8305577

00:25:08.545 --> 00:25:10.675 chemotherapy both either in the

NOTE Confidence: 0.8305577

 $00:25:10.748 \longrightarrow 00:25:13.464$ adjuvant or neo

NOTE Confidence: 0.8305577

 $00:25:13.464 \rightarrow 00:25:16.019$ setting meaning before or after surgery.

NOTE Confidence: 0.8305577

 $00:25:16.019 \longrightarrow 00:25:17.871$ This improved the survival

- $00:25:17.871 \longrightarrow 00:25:19.260$ significantly,
- NOTE Confidence: 0.8305577
- $00{:}25{:}19{.}260 \dashrightarrow 00{:}25{:}22{.}284$ so that's been kind of the standard
- NOTE Confidence: 0.8305577
- $00{:}25{:}22{.}284 \dashrightarrow 00{:}25{:}25{.}028$ treatment for most people with
- NOTE Confidence: 0.8305577
- $00:25:25.028 \longrightarrow 00:25:27.308$ invasive bladder cancer is to
- NOTE Confidence: 0.8305577
- $00:25:27.308 \rightarrow 00:25:29.980$ receive some form of chemotherapy,
- NOTE Confidence: 0.8305577
- $00:25:29.980 \longrightarrow 00:25:31.375$ preferably before surgery,
- NOTE Confidence: 0.8305577
- 00:25:31.375 --> 00:25:34.165 before you take the bladder out,
- NOTE Confidence: 0.8305577
- $00:25:34.170 \longrightarrow 00:25:36.018$ and typically the regiments
- NOTE Confidence: 0.8305577
- $00{:}25{:}36.018 \dashrightarrow 00{:}25{:}38.790$ will include either a two drug
- NOTE Confidence: 0.8305577
- $00{:}25{:}38.869 \dashrightarrow 00{:}25{:}40.717$ regiment called Cisplatinum and
- NOTE Confidence: 0.8305577
- $00{:}25{:}40.717 \dashrightarrow 00{:}25{:}43.489$ Gemcitabine, or MVAC
- NOTE Confidence: 0.8305577
- $00:25:43.490 \longrightarrow 00:25:46.370$ which is short for
- NOTE Confidence: 0.8305577
- 00:25:46.370 --> 00:25:48.458 Methotrexate, Vinblastine, Doxorubicin, Cisplatin.
- $00{:}25{:}49{.}510 \dashrightarrow 00{:}25{:}51{.}446$ A lot of patience when you talk to
- NOTE Confidence: 0.8363407
- $00:25:51.446 \rightarrow 00:25:53.466$ them about neoadjuvant chemotherapy or
- NOTE Confidence: 0.8363407
- $00:25:53.466 \rightarrow 00:25:55.434$ getting chemotherapy before surgery

 $00:25:55.440 \rightarrow 00:25:57.672$ they say why would I need the surgery then

NOTE Confidence: 0.8363407

 $00{:}25{:}57.672 \dashrightarrow 00{:}26{:}00{.}330$ if I'm taking the chemotherapy upfront,

NOTE Confidence: 0.8363407

 $00{:}26{:}00{.}330 \dashrightarrow 00{:}26{:}02{.}647$ could that kill off all of the

NOTE Confidence: 0.8363407

 $00:26:02.647 \rightarrow 00:26:05.153$ cancer cells and then maybe I can

NOTE Confidence: 0.8363407

00:26:05.153 --> 00:26:06.953 save myself having the surgery,

NOTE Confidence: 0.8363407

 $00{:}26{:}06{.}960 \dashrightarrow 00{:}26{:}09{.}564$ especially if that means that you won't

NOTE Confidence: 0.8363407

 $00:26:09.564 \longrightarrow 00:26:12.546$ have to take out my bladder.

NOTE Confidence: 0.8363407

 $00{:}26{:}12.550 \dashrightarrow 00{:}26{:}14.805$ It's a great question and

NOTE Confidence: 0.8363407

00:26:17.530 --> 00:26:20.260 there is a response rate of probably 30% more people

NOTE Confidence: 0.8363407

00:26:20.260 --> 00:26:22.990 become what we call P0 meaning

NOTE Confidence: 0.8363407

 $00:26:22.990 \longrightarrow 00:26:25.720$ If you do take their bladders out,

NOTE Confidence: 0.8363407

 $00{:}26{:}25{.}720 \dashrightarrow 00{:}26{:}28{.}840$ there will be no cancer in the specimen.

NOTE Confidence: 0.8363407

 $00{:}26{:}28{.}840 \dashrightarrow 00{:}26{:}31{.}850$ There are two issues, one

NOTE Confidence: 0.8363407

 $00{:}26{:}31.850 \dashrightarrow 00{:}26{:}33.986$ you've got to be very careful

NOTE Confidence: 0.8363407

 $00{:}26{:}33{.}986 \dashrightarrow 00{:}26{:}36{.}248$ because it's often times hard to

- NOTE Confidence: 0.8363407
- $00:26:36.248 \rightarrow 00:26:38.163$ determine if they have recurrent

 $00{:}26{:}38.163 \dashrightarrow 00{:}26{:}40.699$ disease or not in their bladder, and two

NOTE Confidence: 0.8363407

 $00:26:40.700 \longrightarrow 00:26:43.150$ even though you don't take their bladders

NOTE Confidence: 0.8363407

 $00:26:43.150 \rightarrow 00:26:45.659$ out and the disease may be cured,

NOTE Confidence: 0.8363407

 $00{:}26{:}45.660 \dashrightarrow 00{:}26{:}47.492$ it still can recur.

NOTE Confidence: 0.8363407

 $00:26:47.492 \longrightarrow 00:26:50.240$ So for some patients it's an

NOTE Confidence: 0.8363407

 $00:26:50.240 \longrightarrow 00:26:52.395$ option, but it's not one

NOTE Confidence: 0.8363407

 $00:26:52.395 \longrightarrow 00:26:53.688$ we usually recommend.

NOTE Confidence: 0.89805925

 $00{:}26{:}54{.}840 \dashrightarrow 00{:}26{:}57{.}634$ And I guess

NOTE Confidence: 0.89805925

 $00{:}26{:}57{.}634 \dashrightarrow 00{:}26{:}59{.}713$ the other thing is that you don't

NOTE Confidence: 0.89805925

 $00:26:59.713 \rightarrow 00:27:01.460$ really know that every single

NOTE Confidence: 0.89805925

 $00{:}27{:}01{.}460 \dashrightarrow 00{:}27{:}03{.}536$ solitary cell of that cancer has

NOTE Confidence: 0.89805925

 $00{:}27{:}03.598 \dashrightarrow 00{:}27{:}05.479$ disappeared after chemotherapy,

NOTE Confidence: 0.89805925

 $00{:}27{:}05{.}480 \dashrightarrow 00{:}27{:}08{.}049$ unless you look at every single cell,

NOTE Confidence: 0.89805925

 $00:27:08.050 \rightarrow 00:27:10.246$ which often means doing more surgery,

 $00:27:10.250 \longrightarrow 00:27:12.085$ so does the surgery mean

NOTE Confidence: 0.89805925

00:27:12.085 --> 00:27:13.920 taking out the whole bladder?

NOTE Confidence: 0.89805925

 $00{:}27{:}13{.}920 \dashrightarrow 00{:}27{:}16{.}688$ Is there ever a time when you can

NOTE Confidence: 0.89805925

 $00:27:16.688 \rightarrow 00:27:19.493$ take out just a part of the bladder

NOTE Confidence: 0.89805925

 $00{:}27{:}19{.}493 {-}{-}{>} 00{:}27{:}22{.}000$ and put it back together

NOTE Confidence: 0.89805925

00:27:22.000 --> 00:27:23.588 again?

NOTE Confidence: 0.89805925

 $00{:}27{:}23.588 \dashrightarrow 00{:}27{:}25.176$ Absolutely there are certain tumors

NOTE Confidence: 0.89805925

 $00{:}27{:}25.180 \dashrightarrow 00{:}27{:}27{.}574$ and it all depends on the location.

NOTE Confidence: 0.89805925

00:27:27.580 --> 00:27:29.638 If it's what we call in

NOTE Confidence: 0.89805925

 $00:27:29.640 \longrightarrow 00:27:31.350$ the dome of the bladder,

NOTE Confidence: 0.89805925

 $00{:}27{:}31{.}350 \dashrightarrow 00{:}27{:}33{.}639$ meaning that top part of the bladder

NOTE Confidence: 0.89805925

 $00:27:33.639 \rightarrow 00:27:35.808$ where you can get good margins,

NOTE Confidence: 0.89805925

00:27:35.810 --> 00:27:37.868 you can do a partial cystectomy.

NOTE Confidence: 0.89805925

00:27:37.870 -> 00:27:39.680 Unfortunately, that's not where the

NOTE Confidence: 0.89805925

 $00{:}27{:}39{.}680 \dashrightarrow 00{:}27{:}41{.}989$ majority of the bladder tumors form,

NOTE Confidence: 0.89805925

 $00:27:41.990 \rightarrow 00:27:44.830$ so the chance of just doing a partial

- NOTE Confidence: 0.89805925
- $00:27:44.830 \longrightarrow 00:27:46.449$ cystectomy is pretty low.
- NOTE Confidence: 0.89805925
- 00:27:46.450 --> 00:27:47.718 But in my practice,
- NOTE Confidence: 0.89805925
- 00:27:47.718 --> 00:27:50.910 if I see three or four patients a year,
- NOTE Confidence: 0.89805925
- $00:27:50.910 \longrightarrow 00:27:52.968$ that's probably a lot that are
- NOTE Confidence: 0.89805925
- $00:27:52.968 \rightarrow 00:27:54.340$ candidates for partial cystectomy.
- NOTE Confidence: 0.89805925
- $00{:}27{:}54{.}340 \dashrightarrow 00{:}27{:}57{.}204$ So yes, you can do a partial cystectomy
- NOTE Confidence: 0.89805925
- $00:27:57.210 \longrightarrow 00:27:58.968$ if it's in the right location
- NOTE Confidence: 0.9008096
- $00:27:58.970 \rightarrow 00:28:01.306$ and so for the rest of the people,
- NOTE Confidence: 0.9008096
- $00:28:01.310 \longrightarrow 00:28:03.330$ that means that you're taking
- NOTE Confidence: 0.9008096
- $00:28:03.330 \longrightarrow 00:28:04.946$ out their whole bladder.
- NOTE Confidence: 0.9008096
- $00:28:04.950 \longrightarrow 00:28:06.885$ And so the question obviously
- NOTE Confidence: 0.9008096
- $00{:}28{:}06{.}885 \dashrightarrow 00{:}28{:}09{.}175$ becomes what does that mean for
- NOTE Confidence: 0.9008096
- 00:28:09.175 --> 00:28:11.463 me in terms of my quality of life?
- NOTE Confidence: 0.9008096
- $00:28:11.470 \longrightarrow 00:28:13.864$ I mean, does this mean a stoma?
- NOTE Confidence: 0.9008096
- $00:28:13.870 \longrightarrow 00:28:16.264$ How does that work exactly?
- NOTE Confidence: 0.9008096

- $00:28:16.270 \longrightarrow 00:28:18.664$ So there are three
- NOTE Confidence: 0.8730591
- $00{:}28{:}18.670 \dashrightarrow 00{:}28{:}20.365$ options when you take some one's
- NOTE Confidence: 0.8730591
- $00{:}28{:}20{.}365 \dashrightarrow 00{:}28{:}22{.}462$ bladder out as far as where
- NOTE Confidence: 0.8730591
- $00:28:22.462 \longrightarrow 00:28:24.642$ the urine goes, one is a stoma.
- NOTE Confidence: 0.8730591
- $00:28:24.642 \longrightarrow 00:28:27.240$ Or we take a small piece of small
- NOTE Confidence: 0.8730591
- $00{:}28{:}27{.}240 \dashrightarrow 00{:}28{:}29{.}907$ intestine and we connect the tubes from
- NOTE Confidence: 0.8730591
- $00{:}28{:}29{.}907 \dashrightarrow 00{:}28{:}33{.}078$ the kidneys and bring it out of the skin
- NOTE Confidence: 0.8730591
- $00:28:33.080 \longrightarrow 00:28:35.894$ so it drains into a bag,
- NOTE Confidence: 0.8730591
- $00{:}28{:}35{.}900 \dashrightarrow 00{:}28{:}38{.}960$ 24 hours, seven days a week.
- NOTE Confidence: 0.8730591
- 00:28:38.960 --> 00:28:41.156 You can make a continent stoma,
- NOTE Confidence: 0.8730591
- 00:28:41.160 --> 00:28:43.715 meaning you take part of the patients
- NOTE Confidence: 0.8730591
- 00:28:43.715 --> 00:28:45.910 right colon
- NOTE Confidence: 0.8730591
- $00:28:47.010 \longrightarrow 00:28:49.425$ and bring a small piece of intestines up
- NOTE Confidence: 0.8730591
- $00:28:49.425 \longrightarrow 00:28:51.290$ and they actually catheterized
- NOTE Confidence: 0.8730591
- $00{:}28{:}51{.}290 \dashrightarrow 00{:}28{:}54{.}322$ a stoma four to six times a day.
- NOTE Confidence: 0.8730591
- 00:28:54.330 --> 00:28:54.982 And thirdly,

- NOTE Confidence: 0.8730591
- $00{:}28{:}54{.}982 \dashrightarrow 00{:}28{:}56{.}938$ you can actually make a new

 $00:28:56.938 \longrightarrow 00:28:58.893$ bladder where you take several

NOTE Confidence: 0.8730591

 $00:28:58.893 \rightarrow 00:29:00.549$ centimeters of small intestine,

NOTE Confidence: 0.8730591

 $00:29:00.550 \rightarrow 00:29:02.746$ you fashion it into a sphere,

 $00:29:06.040 \longrightarrow 00:29:07.865$ so everything's on the inside,

NOTE Confidence: 0.8730591

 $00{:}29{:}07{.}870 \dashrightarrow 00{:}29{:}09{.}640$ so they urinate normally without

NOTE Confidence: 0.8730591

 $00{:}29{:}09{.}640 \dashrightarrow 00{:}29{:}11{.}900$ a bag or without a stoma.

NOTE Confidence: 0.8727357

00:29:12.530 --> 00:29:14.726 Doctor John Colberg is a professor

NOTE Confidence: 0.8727357

 $00{:}29{:}14.726 \dashrightarrow 00{:}29{:}16.984$ of urology and director of Urologic

NOTE Confidence: 0.8727357

 $00{:}29{:}16{.}984 \dashrightarrow 00{:}29{:}19{.}532$ Oncology at the Yale School of Medicine.

NOTE Confidence: 0.8727357

 $00{:}29{:}19{.}540 \dashrightarrow 00{:}29{:}22{.}109$ If you have questions the address is

NOTE Confidence: 0.8727357

00:29:22.109 --> 00:29:23.584 canceranswers@yale.edu and past editions

NOTE Confidence: 0.8727357

 $00{:}29{:}23.584 \dashrightarrow 00{:}29{:}25.775$ of the program are available in audio

NOTE Confidence: 0.8727357

 $00{:}29{:}25.775 \dashrightarrow 00{:}29{:}28.028$ and written form at Yale cancercenter.org.

NOTE Confidence: 0.8727357

00:29:28.030 --> 00:29:30.782 We hope you'll join us next week to

NOTE Confidence: 0.8727357

 $00:29:30.782 \rightarrow 00:29:33.459$ learn more about the fight against

00:29:33.459 --> 00:29:36.327 cancer here on Connecticut public radio.