

WEBVTT

00:00:00.000 --> 00:00:02.510 Support for Yale Cancer Answers

NOTE Confidence: 0.86830026

00:00:02.510 --> 00:00:05.020 comes from AstraZeneca, working

NOTE Confidence: 0.86830026

00:00:05.102 --> 00:00:07.532 side by side with leading

NOTE Confidence: 0.86830026

00:00:07.532 --> 00:00:09.962 scientists to better understand how

NOTE Confidence: 0.86830026

00:00:10.045 --> 00:00:15.170 complex data can be converted

NOTE Confidence: 0.86830026

00:00:15.170 --> 00:00:16.195 into innovative treatments. More

NOTE Confidence: 0.86830026

00:00:16.195 --> 00:00:17.220 information at astrazeneca-us.com.

NOTE Confidence: 0.86830026

00:00:17.220 --> 00:00:19.368 Welcome to Yale Cancer Answers with

NOTE Confidence: 0.86830026

00:00:19.368 --> 00:00:21.890 your host Doctor Anees Chagpar.

NOTE Confidence: 0.86830026

00:00:21.890 --> 00:00:23.805 Yale Cancer Answers features the

NOTE Confidence: 0.86830026

00:00:23.805 --> 00:00:25.720 latest information on cancer care

NOTE Confidence: 0.86830026

00:00:25.782 --> 00:00:27.290 by welcoming oncologists and

NOTE Confidence: 0.86830026

00:00:27.290 --> 00:00:29.175 specialists who are on the

NOTE Confidence: 0.86830026

00:00:29.175 --> 00:00:31.066 forefront of the battle to fight

NOTE Confidence: 0.86830026

00:00:31.066 --> 00:00:32.640 cancer. This week it's a

NOTE Confidence: 0.86830026

00:00:32.640 --> 00:00:33.690 conversation about neuropsychology  
NOTE Confidence: 0.86830026

00:00:33.690 --> 00:00:35.440 and brain cancer with doctor  
NOTE Confidence: 0.86830026

00:00:35.498 --> 00:00:37.734 Franklin Brown. Doctor Brown is an  
NOTE Confidence: 0.86830026

00:00:37.734 --> 00:00:39.218 assistant professor of neurology  
NOTE Confidence: 0.86830026

00:00:39.218 --> 00:00:41.383 and chief of the division of  
NOTE Confidence: 0.86830026

00:00:41.383 --> 00:00:43.083 neuropsychology at the Yale School  
NOTE Confidence: 0.86830026

00:00:43.083 --> 00:00:45.251 of Medicine where Doctor Chagpar  
NOTE Confidence: 0.86830026

00:00:45.251 --> 00:00:47.011 is a professor of surgical  
NOTE Confidence: 0.86830026

00:00:47.020 --> 00:00:49.660 oncology.  
NOTE Confidence: 0.8834187

00:00:49.660 --> 00:00:52.042 Dr. Brown, maybe we can start  
NOTE Confidence: 0.8834187

00:00:52.042 --> 00:00:55.539 off by you telling us a little bit  
NOTE Confidence: 0.8834187

00:00:55.539 --> 00:00:57.829 about what exactly is neuropsychology,  
NOTE Confidence: 0.8834187

00:00:57.830 --> 00:00:59.980 and how does that  
NOTE Confidence: 0.8834187

00:00:59.980 --> 00:01:02.560 interface with the world of cancer?  
NOTE Confidence: 0.8834187

00:01:02.560 --> 00:01:04.280 Neuropsychology is really  
NOTE Confidence: 0.8834187

00:01:04.280 --> 00:01:06.000 the study of cognition.

NOTE Confidence: 0.8834187  
00:01:06.000 --> 00:01:07.290 Things like memory,  
NOTE Confidence: 0.8834187  
00:01:07.290 --> 00:01:09.010 attention span, language skills,  
NOTE Confidence: 0.8834187  
00:01:09.010 --> 00:01:11.160 visual spatial skills,  
NOTE Confidence: 0.8834187  
00:01:11.160 --> 00:01:13.210 all these different things that  
NOTE Confidence: 0.8834187  
00:01:13.210 --> 00:01:16.740 your brain does on a daily basis to  
NOTE Confidence: 0.8834187  
00:01:16.740 --> 00:01:19.530 basically think and talk and interact.  
NOTE Confidence: 0.8834187  
00:01:19.530 --> 00:01:22.032 So that's basically what the field  
NOTE Confidence: 0.8834187  
00:01:22.032 --> 00:01:24.300 looks at within brain tumors.  
NOTE Confidence: 0.8834187  
00:01:24.300 --> 00:01:26.784 It's important because it helps assess  
NOTE Confidence: 0.8834187  
00:01:26.784 --> 00:01:29.948 the impact of brain tumors on cognition,  
NOTE Confidence: 0.8834187  
00:01:29.950 --> 00:01:32.950 but we can also use it to predict  
NOTE Confidence: 0.8834187  
00:01:32.950 --> 00:01:35.747 in some cases what might happen  
NOTE Confidence: 0.8834187  
00:01:35.747 --> 00:01:38.187 if the tumor is removed,  
NOTE Confidence: 0.8834187  
00:01:38.190 --> 00:01:40.980 and it also might help guide  
NOTE Confidence: 0.8834187  
00:01:40.980 --> 00:01:43.315 various methods of removal in  
NOTE Confidence: 0.8834187

00:01:43.315 --> 00:01:45.982 some cases so it can help guide  
NOTE Confidence: 0.8834187

00:01:45.982 --> 00:01:48.607 the impact of the tumor removal,  
NOTE Confidence: 0.8834187

00:01:48.610 --> 00:01:50.860 but also help the patient  
NOTE Confidence: 0.8834187

00:01:50.860 --> 00:01:52.595 and health care providers understand  
NOTE Confidence: 0.8834187

00:01:52.595 --> 00:01:54.330 the impact after it happens  
NOTE Confidence: 0.8834187

00:01:54.391 --> 00:01:56.016 and also help guide therapies.  
00:01:56.364 --> 00:01:59.116 And I can imagine that if somebody is  
NOTE Confidence: 0.86267376

00:01:59.120 --> 00:02:00.840 diagnosed with a brain tumor,  
NOTE Confidence: 0.86267376

00:02:00.840 --> 00:02:02.560 I mean just the concept and  
NOTE Confidence: 0.86267376

00:02:02.560 --> 00:02:05.647 the words itself makes you think, Oh my gosh,  
NOTE Confidence: 0.86267376

00:02:05.650 --> 00:02:07.026 what's going to happen?  
00:02:08.768 --> 00:02:11.600 Am I going to be able to think,  
NOTE Confidence: 0.86267376

00:02:11.694 --> 00:02:13.906 am I going to lose my IQ?  
NOTE Confidence: 0.86267376

00:02:13.910 --> 00:02:16.654 Am I going to be able to speak?  
00:02:18.380 --> 00:02:21.300 I'd imagine that there are a lot of  
NOTE Confidence: 0.86267376

00:02:21.300 --> 00:02:24.010 factors that go into that in terms of  
NOTE Confidence: 0.86267376

00:02:24.010 --> 00:02:27.385 where in the brain is this tumor and  
NOTE Confidence: 0.86267376

00:02:27.385 --> 00:02:31.003 what part of the brain does it affect?  
NOTE Confidence: 0.86267376

00:02:31.010 --> 00:02:33.425 Tell us a little bit more about  
NOTE Confidence: 0.86267376

00:02:33.425 --> 00:02:36.719 how you do that and how you  
NOTE Confidence: 0.86267376

00:02:36.719 --> 00:02:38.894 help patients and clinicians  
NOTE Confidence: 0.86267376

00:02:38.982 --> 00:02:41.565 get a sense of what this brain  
NOTE Confidence: 0.86267376

00:02:41.565 --> 00:02:43.844 tumor is doing and what  
NOTE Confidence: 0.86267376

00:02:43.844 --> 00:02:46.172 the ramifications of treatment are.  
NOTE Confidence: 0.8728792

00:02:46.180 --> 00:02:48.130 As you can imagine,  
NOTE Confidence: 0.8728792

00:02:48.130 --> 00:02:50.510 there all kinds of brain  
NOTE Confidence: 0.8728792

00:02:50.510 --> 00:02:53.016 tumors and they are discovered in  
NOTE Confidence: 0.8728792

00:02:53.016 --> 00:02:54.983 different ways. One way that  
NOTE Confidence: 0.8728792

00:02:54.983 --> 00:02:58.260 my field tends to interact a lot with brain  
NOTE Confidence: 0.8728792

00:02:58.260 --> 00:02:59.900 tumors can be from seizures.  
NOTE Confidence: 0.8728792

00:02:59.900 --> 00:03:01.937 In epilepsy there are some patients that  
NOTE Confidence: 0.8728792

00:03:01.937 --> 00:03:03.839 will randomly start developing seizures,  
NOTE Confidence: 0.8728792

00:03:03.840 --> 00:03:06.567 and as part of the work up they might

NOTE Confidence: 0.8728792

00:03:06.567 --> 00:03:09.017 find the tumor and in some cases it

NOTE Confidence: 0.8728792

00:03:09.017 --> 00:03:11.709 might be a very slow growing tumor,

NOTE Confidence: 0.8728792

00:03:11.710 --> 00:03:14.644 in which case they might watch it for awhile

NOTE Confidence: 0.8728792

00:03:14.644 --> 00:03:17.284 and they may not do anything with it,

NOTE Confidence: 0.8728792

00:03:17.290 --> 00:03:19.579 because it might discover that it's been there

NOTE Confidence: 0.8728792

00:03:19.580 --> 00:03:21.215 for the patients whole life for

NOTE Confidence: 0.8728792

00:03:21.215 --> 00:03:22.523 most of their life,

NOTE Confidence: 0.8728792

00:03:22.530 --> 00:03:24.402 and sometimes the resection or the

NOTE Confidence: 0.8728792

00:03:24.402 --> 00:03:26.580 taking of the tumor might actually

NOTE Confidence: 0.8728792

00:03:26.580 --> 00:03:30.054 put them at risk, so the slow growing to

NOTE Confidence: 0.8728792

00:03:30.054 --> 00:03:33.247 more or less stable tumor like that,

00:03:34.246 --> 00:03:36.482 it's much more of a thoughtful process

NOTE Confidence: 0.8728792

00:03:36.482 --> 00:03:39.630 and I would evaluate them and then we would

NOTE Confidence: 0.8728792

00:03:39.630 --> 00:03:41.460 test to see OK,

NOTE Confidence: 0.8728792

00:03:41.460 --> 00:03:44.187 what are there risks in this case?

NOTE Confidence: 0.8728792

00:03:44.190 --> 00:03:46.342 And so in that kind of tumor it's

NOTE Confidence: 0.8728792

00:03:46.342 --> 00:03:48.747 I'm sure it's scary for that patient.

NOTE Confidence: 0.8728792

00:03:48.750 --> 00:03:51.243 Have a tumor, but I think in those cases

NOTE Confidence: 0.8728792

00:03:51.243 --> 00:03:53.615 that doctors are pretty clear of, well,

NOTE Confidence: 0.8728792

00:03:53.615 --> 00:03:55.750 this might have been their whole life.

NOTE Confidence: 0.8728792

00:03:55.750 --> 00:03:57.568 We don't know if it's growing,

NOTE Confidence: 0.8728792

00:03:57.570 --> 00:04:00.324 we can kind of look at this and take

NOTE Confidence: 0.8728792

00:04:00.324 --> 00:04:03.305 our time and figure out the next step.

NOTE Confidence: 0.8728792

00:04:03.310 --> 00:04:06.046 So in that kind of situation I don't.

NOTE Confidence: 0.8728792

00:04:06.050 --> 00:04:07.434 I mean, I'm not.

NOTE Confidence: 0.8728792

00:04:07.434 --> 00:04:09.830 I've not had that happen to me,

NOTE Confidence: 0.8728792

00:04:09.830 --> 00:04:12.414 but I don't imagine it sounds quite as

NOTE Confidence: 0.8728792

00:04:12.414 --> 00:04:15.036 urgent as in cases where there is a

NOTE Confidence: 0.8728792

00:04:15.036 --> 00:04:17.718 tumor that appears to have grown abruptly,

NOTE Confidence: 0.8728792

00:04:17.720 --> 00:04:20.798 and that can be quite scary for the patients,

NOTE Confidence: 0.8728792

00:04:20.800 --> 00:04:23.180 and so in those cases there's not

NOTE Confidence: 0.8728792

00:04:23.180 --> 00:04:26.148 the time for me to kind of do a  
NOTE Confidence: 0.8728792

00:04:26.148 --> 00:04:28.207 presurgical work up and help them  
NOTE Confidence: 0.8728792

00:04:28.207 --> 00:04:30.057 figure out the next step.  
NOTE Confidence: 0.8728792

00:04:30.060 --> 00:04:32.804 In those cases where the tumors fast moving,  
NOTE Confidence: 0.8728792

00:04:32.810 --> 00:04:35.519 I'm sure it's much scarier for people.  
NOTE Confidence: 0.8728792

00:04:35.520 --> 00:04:38.384 Because it's so fast and many times I  
NOTE Confidence: 0.8728792

00:04:38.384 --> 00:04:41.226 cannot help at that point it's you know.  
NOTE Confidence: 0.8728792

00:04:41.230 --> 00:04:42.638 Like for example, this,  
NOTE Confidence: 0.8728792

00:04:42.638 --> 00:04:45.178 the surgeon might have to go in  
NOTE Confidence: 0.8728792

00:04:45.178 --> 00:04:46.586 and operate right away,  
NOTE Confidence: 0.8728792

00:04:46.590 --> 00:04:49.560 and so there's not even any time for the  
NOTE Confidence: 0.8728792

00:04:49.560 --> 00:04:52.295 patient to process what's about to happen,  
NOTE Confidence: 0.8728792

00:04:52.300 --> 00:04:54.750 let alone have them see me to  
NOTE Confidence: 0.8728792

00:04:54.750 --> 00:04:56.580 predict what's going to happen.  
NOTE Confidence: 0.8728792

00:04:56.580 --> 00:04:59.793 So in those cases, it's much more of a.  
NOTE Confidence: 0.8728792

00:04:59.800 --> 00:05:00.871 I'm following up,



NOTE Confidence: 0.8728792

00:05:00.871 --> 00:05:03.370 and I'm seeing how they're doing afterwards,

NOTE Confidence: 0.8728792

00:05:03.370 --> 00:05:05.610 but as you can imagine.

NOTE Confidence: 0.8728792

00:05:05.610 --> 00:05:07.416 If it's a fast moving tumor,

NOTE Confidence: 0.8728792

00:05:07.420 --> 00:05:09.184 the patient just wants to know

NOTE Confidence: 0.8728792

00:05:09.184 --> 00:05:11.050 that they're going to live there.

NOTE Confidence: 0.8728792

00:05:11.050 --> 00:05:12.856 Not worried about what I do.

NOTE Confidence: 0.8728792

00:05:12.860 --> 00:05:15.578 In most cases, they just want to be OK,

NOTE Confidence: 0.8728792

00:05:15.580 --> 00:05:17.386 'cause you know the brain tumor.

NOTE Confidence: 0.8728792

00:05:17.390 --> 00:05:20.410 It's gotta be a scary thing to hear a doctor,

NOTE Confidence: 0.8728792

00:05:20.410 --> 00:05:21.316 say to you.

NOTE Confidence: 0.8728792

00:05:21.316 --> 00:05:23.124 You know, I can't imagine how,

NOTE Confidence: 0.8728792

00:05:23.124 --> 00:05:24.328 how fearful that is.

NOTE Confidence: 0.8728792

00:05:24.330 --> 00:05:25.482 But like I said,

NOTE Confidence: 0.8728792

00:05:25.482 --> 00:05:26.634 there's different types and

NOTE Confidence: 0.8728792

00:05:26.634 --> 00:05:27.960 more slow growing ones.

NOTE Confidence: 0.8728792

00:05:27.960 --> 00:05:29.730 I'm sure the doctors can describe  
NOTE Confidence: 0.8728792

00:05:29.730 --> 00:05:31.280 those in a com away,  
NOTE Confidence: 0.8728792

00:05:31.280 --> 00:05:32.376 then when it's OK,  
NOTE Confidence: 0.8728792

00:05:32.376 --> 00:05:34.020 it's a tumor we have to  
NOTE Confidence: 0.856491

00:05:34.091 --> 00:05:36.162 go and operate tomorrow. I can't  
NOTE Confidence: 0.856491

00:05:36.162 --> 00:05:37.668 imagine how scary that would sound.  
NOTE Confidence: 0.88274884

00:05:38.230 --> 00:05:41.630 Yeah, and I would imagine that you know,  
NOTE Confidence: 0.88274884

00:05:41.630 --> 00:05:43.945 there's certainly a balance between  
NOTE Confidence: 0.88274884

00:05:43.945 --> 00:05:46.705 the symptoms that the brain tumor  
NOTE Confidence: 0.88274884

00:05:46.705 --> 00:05:49.274 is causing by being in your brain.  
NOTE Confidence: 0.88274884

00:05:49.280 --> 00:05:52.440 So for example, the seizures that you have  
NOTE Confidence: 0.88274884

00:05:52.440 --> 00:05:55.675 that maybe there on a daily or weekly  
NOTE Confidence: 0.88274884

00:05:55.675 --> 00:05:57.820 basis versus the potential disabilities  
NOTE Confidence: 0.88274884

00:05:57.820 --> 00:06:00.754 that you may have with resection.  
NOTE Confidence: 0.88274884

00:06:00.760 --> 00:06:03.864 How do you kind of balance that in  
NOTE Confidence: 0.88274884

00:06:03.864 --> 00:06:06.707 patients who might be thinking about,

NOTE Confidence: 0.88274884

00:06:06.710 --> 00:06:09.678 you know, do I undergo a treatment,

NOTE Confidence: 0.88274884

00:06:09.680 --> 00:06:12.600 whether it's surgery or radiation?

NOTE Confidence: 0.88274884

00:06:12.600 --> 00:06:15.480 Versus do I live with this tumor if if

NOTE Confidence: 0.88274884

00:06:15.480 --> 00:06:17.957 they're kind of facing that dichotomy,

NOTE Confidence: 0.88274884

00:06:17.960 --> 00:06:20.445 how do you kind of counsel them?

NOTE Confidence: 0.88274884

00:06:20.450 --> 00:06:21.170 So if

NOTE Confidence: 0.7866552

00:06:21.170 --> 00:06:24.018 it's if it's a creditor that you describe,

NOTE Confidence: 0.7866552

00:06:24.020 --> 00:06:27.219 which is usually the type that's not.

NOTE Confidence: 0.7866552

00:06:27.220 --> 00:06:28.828 That did not going to die

NOTE Confidence: 0.7866552

00:06:28.828 --> 00:06:30.510 immediately if it's not taken out.

NOTE Confidence: 0.7866552

00:06:30.510 --> 00:06:31.880 There are of course case

NOTE Confidence: 0.7866552

00:06:31.880 --> 00:06:33.250 where there's whether it so,

NOTE Confidence: 0.7866552

00:06:33.250 --> 00:06:35.168 like if you don't take this out,

NOTE Confidence: 0.7866552

00:06:35.170 --> 00:06:37.086 that's going to be it. You know,

NOTE Confidence: 0.7866552

00:06:37.086 --> 00:06:38.997 I'm sure that those are the squirrels,

NOTE Confidence: 0.7866552

00:06:39.000 --> 00:06:41.128 but the kind that you were talking about  
NOTE Confidence: 0.7866552

00:06:41.128 --> 00:06:43.657 are the ones that we actually have time to.  
NOTE Confidence: 0.7866552

00:06:43.660 --> 00:06:45.564 Maybe evaluate them before surgery and the  
NOTE Confidence: 0.7866552

00:06:45.564 --> 00:06:47.768 way that the test student works is well,  
NOTE Confidence: 0.7866552

00:06:47.770 --> 00:06:49.140 so will test different things.  
NOTE Confidence: 0.7866552

00:06:49.140 --> 00:06:49.962 Like I said,  
NOTE Confidence: 0.7866552

00:06:49.962 --> 00:06:51.880 the language in different kinds of memory,  
NOTE Confidence: 0.7866552

00:06:51.880 --> 00:06:53.792 and if it turns out that that part  
NOTE Confidence: 0.7866552

00:06:53.792 --> 00:06:55.992 of the brain with the tumors in  
NOTE Confidence: 0.7866552

00:06:55.992 --> 00:06:57.652 is not working properly anyways.  
NOTE Confidence: 0.7866552

00:06:57.660 --> 00:06:59.571 Like let's say the tumors in the  
NOTE Confidence: 0.7866552

00:06:59.571 --> 00:07:01.594 part of the brain that's important  
NOTE Confidence: 0.7866552

00:07:01.594 --> 00:07:03.868 for verbal memory and verbal memory  
NOTE Confidence: 0.7866552

00:07:03.868 --> 00:07:06.296 is terribly impaired at that point.  
NOTE Confidence: 0.7866552

00:07:06.300 --> 00:07:08.436 But that point we could say to them,  
NOTE Confidence: 0.7866552

00:07:08.440 --> 00:07:10.156 while you know there's very little

NOTE Confidence: 0.7866552

00:07:10.156 --> 00:07:11.576 risk because you're already having

NOTE Confidence: 0.7866552

00:07:11.576 --> 00:07:12.726 a lot of problems here,

NOTE Confidence: 0.7866552

00:07:12.730 --> 00:07:14.606 and it's unlikely to get much worse,

NOTE Confidence: 0.7866552

00:07:14.610 --> 00:07:17.310 and it might actually get better.

NOTE Confidence: 0.7866552

00:07:17.310 --> 00:07:18.219 In that conversation,

NOTE Confidence: 0.7866552

00:07:18.219 --> 00:07:20.037 the patient can take oh OK,

NOTE Confidence: 0.7866552

00:07:20.040 --> 00:07:20.401 well,

NOTE Confidence: 0.7866552

00:07:20.401 --> 00:07:23.650 so this is just causing problems and if he

NOTE Confidence: 0.7866552

00:07:23.733 --> 00:07:27.045 takes it out of something to get much worse.

NOTE Confidence: 0.7866552

00:07:27.050 --> 00:07:27.989 In other cases,

NOTE Confidence: 0.7866552

00:07:27.989 --> 00:07:28.928 if the paint,

NOTE Confidence: 0.7866552

00:07:28.930 --> 00:07:30.250 let's say a patient,

NOTE Confidence: 0.7866552

00:07:30.250 --> 00:07:31.900 is very high functioning and

NOTE Confidence: 0.7866552

00:07:31.900 --> 00:07:33.974 they have no problems and their

NOTE Confidence: 0.7866552

00:07:33.974 --> 00:07:35.983 memories all their memory is great

NOTE Confidence: 0.7866552

00:07:35.983 --> 00:07:38.087 and the tumors in a spot that if  
NOTE Confidence: 0.7866552

00:07:38.087 --> 00:07:40.234 they take it out it might impact  
NOTE Confidence: 0.7866552

00:07:40.234 --> 00:07:41.490 some important cognitive function.  
NOTE Confidence: 0.7866552

00:07:41.490 --> 00:07:42.088 You know,  
NOTE Confidence: 0.7866552

00:07:42.088 --> 00:07:43.882 let's say the persons a physician  
NOTE Confidence: 0.7866552

00:07:43.882 --> 00:07:46.227 or a physicist or chemist or an  
NOTE Confidence: 0.7866552

00:07:46.227 --> 00:07:48.271 engineer or or just anybody who's  
NOTE Confidence: 0.7866552

00:07:48.271 --> 00:07:50.615 brain is doing just fine is now told  
NOTE Confidence: 0.7866552

00:07:50.615 --> 00:07:53.451 that we the doctor may want to cut  
NOTE Confidence: 0.7866552

00:07:53.451 --> 00:07:56.758 out or take out part of their brain.  
NOTE Confidence: 0.7866552

00:07:56.760 --> 00:07:57.131 Naturally,  
NOTE Confidence: 0.7866552

00:07:57.131 --> 00:07:59.728 if there's if there's no pre existing  
NOTE Confidence: 0.7866552

00:07:59.728 --> 00:08:01.520 impairment from the tumor itself,  
NOTE Confidence: 0.7866552

00:08:01.520 --> 00:08:03.350 then you've gotta start asking.  
NOTE Confidence: 0.7866552

00:08:03.350 --> 00:08:04.542 Is this worth it?  
NOTE Confidence: 0.7866552

00:08:04.542 --> 00:08:06.832 And I think that in many cases

NOTE Confidence: 0.7866552  
00:08:06.832 --> 00:08:09.388 that depends on what's going on  
NOTE Confidence: 0.7866552  
00:08:09.388 --> 00:08:10.666 with the neurosurgeon.  
NOTE Confidence: 0.7866552  
00:08:10.670 --> 00:08:11.352 By say,  
NOTE Confidence: 0.7866552  
00:08:11.352 --> 00:08:13.398 let's wait and watch and see  
NOTE Confidence: 0.7866552  
00:08:13.398 --> 00:08:15.060 if it even grows.  
NOTE Confidence: 0.7866552  
00:08:15.060 --> 00:08:16.890 There might be other alternatives.  
NOTE Confidence: 0.7866552  
00:08:16.890 --> 00:08:17.800 For example,  
NOTE Confidence: 0.7866552  
00:08:17.800 --> 00:08:19.620 maybe they'll try chemotherapy  
NOTE Confidence: 0.7866552  
00:08:19.620 --> 00:08:21.440 or focused radiation therapy.  
NOTE Confidence: 0.7866552  
00:08:21.440 --> 00:08:22.090 You know,  
NOTE Confidence: 0.7866552  
00:08:22.090 --> 00:08:24.040 that's where it really gets in  
NOTE Confidence: 0.7866552  
00:08:24.040 --> 00:08:26.186 the thick of what we want to do,  
NOTE Confidence: 0.7866552  
00:08:26.190 --> 00:08:28.269 but I think that's really the next,  
NOTE Confidence: 0.7866552  
00:08:28.270 --> 00:08:28.864 you know,  
NOTE Confidence: 0.7866552  
00:08:28.864 --> 00:08:29.755 there's excellent conditions  
NOTE Confidence: 0.7866552

00:08:29.755 --> 00:08:31.240 in various places in it.  
NOTE Confidence: 0.7866552

00:08:31.240 --> 00:08:31.525 Yeah,  
NOTE Confidence: 0.7866552

00:08:31.525 --> 00:08:34.090 we have some very good ones that are very  
NOTE Confidence: 0.7866552

00:08:34.158 --> 00:08:36.590 good at detecting what can be taken out,  
NOTE Confidence: 0.7866552

00:08:36.590 --> 00:08:38.354 so they might take out part  
NOTE Confidence: 0.7866552

00:08:38.354 --> 00:08:40.150 of it but leave in part,  
NOTE Confidence: 0.7866552

00:08:40.150 --> 00:08:41.029 which sounds scary.  
NOTE Confidence: 0.7866552

00:08:41.029 --> 00:08:42.787 But it might be that if  
NOTE Confidence: 0.7866552

00:08:42.787 --> 00:08:44.308 they leave in that part,  
NOTE Confidence: 0.7866552

00:08:44.310 --> 00:08:46.086 there's a low risk for recurrence.  
NOTE Confidence: 0.7866552

00:08:46.090 --> 00:08:48.169 So there's many factors taken into account.  
NOTE Confidence: 0.7866552

00:08:48.170 --> 00:08:49.067 And believe me,  
NOTE Confidence: 0.7866552

00:08:49.067 --> 00:08:50.562 when the neurosurgeon has that  
NOTE Confidence: 0.7866552

00:08:50.562 --> 00:08:51.879 meeting with the patients.  
NOTE Confidence: 0.7866552

00:08:51.880 --> 00:08:54.124 They have looked at all different  
NOTE Confidence: 0.7866552

00:08:54.124 --> 00:08:56.310 options and I have to say



NOTE Confidence: 0.7866552

00:08:56.310 --> 00:08:58.473 that the ones that I work with

NOTE Confidence: 0.7866552

00:08:58.473 --> 00:09:00.264 their very thoughtful and very

NOTE Confidence: 0.7866552

00:09:00.264 --> 00:09:02.376 much do not just say OK,

NOTE Confidence: 0.90520287

00:09:02.380 --> 00:09:03.732 let's take it out.

NOTE Confidence: 0.90520287

00:09:03.732 --> 00:09:05.422 Unless of course it's vital

NOTE Confidence: 0.90520287

00:09:05.422 --> 00:09:07.280 for their life, you know.

NOTE Confidence: 0.90520287

00:09:07.280 --> 00:09:09.380 So it does depend the type.

NOTE Confidence: 0.90520287

00:09:09.380 --> 00:09:11.060 But Yes, there's many ways

NOTE Confidence: 0.90520287

00:09:11.060 --> 00:09:13.168 that we could be careful to

NOTE Confidence: 0.90520287

00:09:13.168 --> 00:09:14.978 reduce the risk after surgery.

NOTE Confidence: 0.90520287

00:09:14.980 --> 00:09:17.080 So how exactly does that happen?

NOTE Confidence: 0.90520287

00:09:17.080 --> 00:09:19.180 I mean, when we think about,

NOTE Confidence: 0.90520287

00:09:19.180 --> 00:09:20.604 you know the neurosurgeon

NOTE Confidence: 0.90520287

00:09:20.604 --> 00:09:22.740 going in there to take out.

NOTE Confidence: 0.90520287

00:09:22.740 --> 00:09:25.916 Part of the brain where the tumor is.

NOTE Confidence: 0.90520287

00:09:25.920 --> 00:09:28.734 But you know making sure that they  
NOTE Confidence: 0.90520287

00:09:28.734 --> 00:09:31.469 don't damage other parts of the brain,  
NOTE Confidence: 0.90520287

00:09:31.470 --> 00:09:34.646 that the tumor might be next to that.  
NOTE Confidence: 0.90520287

00:09:34.650 --> 00:09:37.548 If they they do take out or or damage  
NOTE Confidence: 0.90520287

00:09:37.548 --> 00:09:40.672 that area that the patient could be  
NOTE Confidence: 0.90520287

00:09:40.672 --> 00:09:43.362 left with severe deformities in terms  
NOTE Confidence: 0.90520287

00:09:43.362 --> 00:09:46.155 of you know their memory or their  
NOTE Confidence: 0.90520287

00:09:46.155 --> 00:09:50.108 cognition or their language skills.  
NOTE Confidence: 0.90520287

00:09:50.110 --> 00:09:52.959 Can the surgeons actually see which areas  
NOTE Confidence: 0.90520287

00:09:52.959 --> 00:09:56.186 which or do they need fancy image Ng?  
NOTE Confidence: 0.90520287

00:09:56.190 --> 00:10:00.105 Or is there a way that that's done with?  
NOTE Confidence: 0.90520287

00:10:00.110 --> 00:10:02.240 You know, while patients are awake,  
NOTE Confidence: 0.90520287

00:10:02.240 --> 00:10:04.263 I know that we've all seen kind  
NOTE Confidence: 0.90520287

00:10:04.263 --> 00:10:06.484 of shows on people taking care  
NOTE Confidence: 0.90520287

00:10:06.484 --> 00:10:08.624 of seizures with patients awake.  
NOTE Confidence: 0.90520287

00:10:08.630 --> 00:10:10.760 How does that happen for patients

NOTE Confidence: 0.90520287  
00:10:10.760 --> 00:10:11.470 with cancer?  
NOTE Confidence: 0.90520287  
00:10:11.470 --> 00:10:12.538 So this is  
NOTE Confidence: 0.8188981  
00:10:12.540 --> 00:10:14.622 a great question, and there's a  
NOTE Confidence: 0.8188981  
00:10:14.622 --> 00:10:17.149 lot of tools that are now used  
NOTE Confidence: 0.8188981  
00:10:17.149 --> 00:10:19.273 before the surgeon even goes in.  
NOTE Confidence: 0.8188981  
00:10:19.280 --> 00:10:21.765 They have all these kinds of data.  
NOTE Confidence: 0.8188981  
00:10:21.770 --> 00:10:22.832 I have time.  
NOTE Confidence: 0.8188981  
00:10:22.832 --> 00:10:24.956 They've done different kinds of Mrs.  
NOTE Confidence: 0.8188981  
00:10:24.960 --> 00:10:27.090 There's a kind of MRI called  
NOTE Confidence: 0.8188981  
00:10:27.090 --> 00:10:28.155 diffusion tensor imaging,  
NOTE Confidence: 0.8188981  
00:10:28.160 --> 00:10:29.688 which actually tracks the  
NOTE Confidence: 0.8188981  
00:10:29.688 --> 00:10:31.598 pathways in the brain because.  
NOTE Confidence: 0.8188981  
00:10:31.600 --> 00:10:33.220 What are the biggest risks with  
NOTE Confidence: 0.8188981  
00:10:33.220 --> 00:10:35.335 surgery is if they if they hit a  
NOTE Confidence: 0.8188981  
00:10:35.335 --> 00:10:36.793 pathway they might not hit this  
NOTE Confidence: 0.8188981

00:10:36.856 --> 00:10:38.590 Center for some kinds of ticket.

NOTE Confidence: 0.8188981

00:10:38.590 --> 00:10:40.116 But if you hit the wrong path

NOTE Confidence: 0.8188981

00:10:40.116 --> 00:10:41.515 way you know could cause

NOTE Confidence: 0.8188981

00:10:41.515 --> 00:10:42.899 some pretty global problems.

NOTE Confidence: 0.8188981

00:10:42.900 --> 00:10:44.514 So with all the image Ng

NOTE Confidence: 0.8188981

00:10:44.514 --> 00:10:45.590 data that's available today,

NOTE Confidence: 0.8188981

00:10:45.590 --> 00:10:47.150 there are many ways that before

NOTE Confidence: 0.8188981

00:10:47.150 --> 00:10:49.081 they even go in they already have

NOTE Confidence: 0.8188981

00:10:49.081 --> 00:10:51.020 an idea of what they're going to

NOTE Confidence: 0.8188981

00:10:51.077 --> 00:10:52.848 say that I can't speak for them,

NOTE Confidence: 0.8188981

00:10:52.850 --> 00:10:54.762 but in the in the T meetings that

NOTE Confidence: 0.8188981

00:10:54.762 --> 00:10:56.689 have been part of pretty much they

NOTE Confidence: 0.8188981

00:10:56.689 --> 00:10:58.971 have an eye discharge and has a very

NOTE Confidence: 0.8188981

00:10:58.971 --> 00:11:00.639 good idea exactly what they're going

NOTE Confidence: 0.8188981

00:11:00.639 --> 00:11:03.244 to take out before they ever go in.

NOTE Confidence: 0.8188981

00:11:03.250 --> 00:11:04.770 Now, sometimes once they're in,

NOTE Confidence: 0.8188981

00:11:04.770 --> 00:11:06.594 they'll find the tumors more extensive

NOTE Confidence: 0.8188981

00:11:06.594 --> 00:11:08.420 or has something more to problem,

NOTE Confidence: 0.8188981

00:11:08.420 --> 00:11:09.743 but they were.

NOTE Confidence: 0.8188981

00:11:09.743 --> 00:11:11.507 They are very careful.

NOTE Confidence: 0.8188981

00:11:11.510 --> 00:11:14.358 You know, and that's that's really the key.

NOTE Confidence: 0.8188981

00:11:14.360 --> 00:11:15.976 Now the other pieces.

NOTE Confidence: 0.8188981

00:11:15.976 --> 00:11:17.996 Sometimes there is awake intra

NOTE Confidence: 0.8188981

00:11:17.996 --> 00:11:20.293 operative map and it's called and

NOTE Confidence: 0.8188981

00:11:20.293 --> 00:11:22.118 that means the patients actually

NOTE Confidence: 0.8188981

00:11:22.184 --> 00:11:24.254 kept awake and some like myself

NOTE Confidence: 0.8188981

00:11:24.254 --> 00:11:26.378 or other providers or even the

NOTE Confidence: 0.8188981

00:11:26.378 --> 00:11:28.592 surgeon will talk to the patient

NOTE Confidence: 0.8188981

00:11:28.592 --> 00:11:31.280 while doing the surgery to kind of

NOTE Confidence: 0.8188981

00:11:31.280 --> 00:11:33.160 predict what's going to happen.

NOTE Confidence: 0.8188981

00:11:33.160 --> 00:11:34.336 And there might.

NOTE Confidence: 0.8188981

00:11:34.336 --> 00:11:36.688 They might even use a little  
NOTE Confidence: 0.8188981

00:11:36.688 --> 00:11:38.799 stimulation to kind of determine OK,  
NOTE Confidence: 0.8188981

00:11:38.800 --> 00:11:41.593 if we you know the stimulate the  
NOTE Confidence: 0.8188981

00:11:41.593 --> 00:11:44.370 area around the tumor to find out.  
NOTE Confidence: 0.8188981

00:11:44.370 --> 00:11:46.120 If they stimulate certain parts,  
NOTE Confidence: 0.8188981

00:11:46.120 --> 00:11:47.520 is it stopped language?  
NOTE Confidence: 0.8188981

00:11:47.520 --> 00:11:48.570 This language continue,  
NOTE Confidence: 0.8188981

00:11:48.570 --> 00:11:50.370 so sometimes during the actual  
NOTE Confidence: 0.8188981

00:11:50.370 --> 00:11:52.566 procedure the patient will be awake  
NOTE Confidence: 0.8188981

00:11:52.566 --> 00:11:54.582 and areas are under tomorrow be  
NOTE Confidence: 0.8188981

00:11:54.582 --> 00:11:56.970 stimulated to find out what would impact.  
NOTE Confidence: 0.8188981

00:11:56.970 --> 00:11:59.070 The impact would be if that  
NOTE Confidence: 0.8188981

00:11:59.070 --> 00:12:00.470 part was taken out.  
NOTE Confidence: 0.8188981

00:12:00.470 --> 00:12:02.258 So it's really quite amazing what  
NOTE Confidence: 0.8188981

00:12:02.258 --> 00:12:04.365 what they do in the neurosurgery  
NOTE Confidence: 0.8188981

00:12:04.365 --> 00:12:06.069 suite during these cases.

NOTE Confidence: 0.8188981

00:12:06.070 --> 00:12:08.870 And now there's all kinds of newer tools.

NOTE Confidence: 0.8188981

00:12:08.870 --> 00:12:10.770 There's a laser ablation therapy

NOTE Confidence: 0.8188981

00:12:10.770 --> 00:12:13.394 where they'll take a laser and it's

NOTE Confidence: 0.8188981

00:12:13.394 --> 00:12:15.697 like a same day procedure where they.

NOTE Confidence: 0.8188981

00:12:15.700 --> 00:12:18.610 The next day, their home.

NOTE Confidence: 0.8188981

00:12:18.610 --> 00:12:19.216 Of course.

NOTE Confidence: 0.8188981

00:12:19.216 --> 00:12:20.428 Is there radiation types,

NOTE Confidence: 0.8188981

00:12:20.430 --> 00:12:22.285 but but there are a lot of

NOTE Confidence: 0.8188981

00:12:22.285 --> 00:12:24.127 different ways now that the surgeon

NOTE Confidence: 0.8188981

00:12:24.127 --> 00:12:26.101 has to really know exactly what

NOTE Confidence: 0.8188981

00:12:26.101 --> 00:12:28.028 they're going to be further going,

NOTE Confidence: 0.8188981

00:12:28.030 --> 00:12:30.158 and so we will work with them.

NOTE Confidence: 0.8188981

00:12:30.160 --> 00:12:31.984 We will have them do what's

NOTE Confidence: 0.8188981

00:12:31.984 --> 00:12:33.200 called a functional MRI,

NOTE Confidence: 0.8188981

00:12:33.200 --> 00:12:35.000 which Maps were different language

NOTE Confidence: 0.8188981

00:12:35.000 --> 00:12:36.440 and other cognitive functions  
NOTE Confidence: 0.8188981

00:12:36.440 --> 00:12:38.094 might be occurring will do our  
NOTE Confidence: 0.8188981

00:12:38.094 --> 00:12:39.590 testing to kind of find out.  
NOTE Confidence: 0.8188981

00:12:39.590 --> 00:12:39.894 OK,  
NOTE Confidence: 0.8188981

00:12:39.894 --> 00:12:42.022 that tumor is in this area that  
NOTE Confidence: 0.8188981

00:12:42.022 --> 00:12:44.570 braid it would affect this function.  
NOTE Confidence: 0.8188981

00:12:44.570 --> 00:12:46.817 But see how that functions working now.  
NOTE Confidence: 0.8188981

00:12:46.820 --> 00:12:48.108 Let's predict what's going  
NOTE Confidence: 0.8188981

00:12:48.108 --> 00:12:49.074 to happen afterwards,  
NOTE Confidence: 0.8188981

00:12:49.080 --> 00:12:51.012 so it's really by the time  
NOTE Confidence: 0.8188981

00:12:51.012 --> 00:12:52.300 they go into surgery.  
NOTE Confidence: 0.8188981

00:12:52.300 --> 00:12:53.910 Unless it's an emergency situation,  
NOTE Confidence: 0.8188981

00:12:53.910 --> 00:12:55.836 there is a lot of planning,  
NOTE Confidence: 0.8188981

00:12:55.840 --> 00:12:58.250 and they pretty much know.  
NOTE Confidence: 0.8188981

00:12:58.250 --> 00:12:59.366 With a fairly good,  
NOTE Confidence: 0.8188981

00:12:59.366 --> 00:13:01.040 certainly what's going to happen before



NOTE Confidence: 0.8308033

00:13:01.093 --> 00:13:02.229 the surgery even occurs.

NOTE Confidence: 0.8308033

00:13:02.230 --> 00:13:03.886 That way, the patient and their

NOTE Confidence: 0.8308033

00:13:03.886 --> 00:13:05.350 family could be talked about.

NOTE Confidence: 0.8308033

00:13:05.350 --> 00:13:07.390 OK, here's what to expect.

NOTE Confidence: 0.8308033

00:13:07.390 --> 00:13:08.992 Now of course, every once awhile

NOTE Confidence: 0.8308033

00:13:08.992 --> 00:13:10.610 there might be a surprise,

NOTE Confidence: 0.8308033

00:13:10.610 --> 00:13:12.080 and that's always your risk.

NOTE Confidence: 0.8308033

00:13:12.080 --> 00:13:13.826 But many times that we really

NOTE Confidence: 0.8308033

00:13:13.826 --> 00:13:15.888 strive so they know what to expect

NOTE Confidence: 0.88041663

00:13:15.890 --> 00:13:17.058 before it even happens.

NOTE Confidence: 0.88041663

00:13:17.058 --> 00:13:19.191 Yeah, I mean, it really is cool how

NOTE Confidence: 0.88041663

00:13:19.191 --> 00:13:21.159 far surgery and technology is come.

NOTE Confidence: 0.88041663

00:13:21.160 --> 00:13:23.296 It's kind of. It's kind of weird to

NOTE Confidence: 0.88041663

00:13:23.296 --> 00:13:25.097 think about having somebody take out

NOTE Confidence: 0.88041663

00:13:25.097 --> 00:13:27.310 a brain tumor with you being awake.

NOTE Confidence: 0.88041663

00:13:27.310 --> 00:13:29.659 But on the other hand, it really is  
NOTE Confidence: 0.88041663

00:13:29.659 --> 00:13:31.710 pretty cool that you know you can.  
NOTE Confidence: 0.88041663

00:13:31.710 --> 00:13:33.175 You can give the surgeon  
NOTE Confidence: 0.88041663

00:13:33.175 --> 00:13:34.347 real time feedback of,  
NOTE Confidence: 0.88041663

00:13:34.350 --> 00:13:36.686 you know if you go in that spot.  
NOTE Confidence: 0.88041663

00:13:36.690 --> 00:13:38.160 I'm going to stop talking,  
NOTE Confidence: 0.88041663

00:13:38.160 --> 00:13:40.379 and if you go in that spot.  
NOTE Confidence: 0.88041663

00:13:40.380 --> 00:13:44.385 I'm going to start shaking and and so on.  
NOTE Confidence: 0.88041663

00:13:44.390 --> 00:13:47.060 You mentioned things like Lazaran radiation.  
NOTE Confidence: 0.88041663

00:13:47.060 --> 00:13:49.832 Are those more or less toxic to  
NOTE Confidence: 0.88041663

00:13:49.832 --> 00:13:52.945 your brain in terms of causing side  
NOTE Confidence: 0.88041663

00:13:52.945 --> 00:13:56.400 effects in terms of a bleeding tumors?  
NOTE Confidence: 0.88041663

00:13:56.400 --> 00:13:58.782 I mean, are they better in  
NOTE Confidence: 0.88041663

00:13:58.782 --> 00:14:00.967 terms of reducing the cognitive  
NOTE Confidence: 0.88041663

00:14:00.967 --> 00:14:03.517 side effects of having your  
NOTE Confidence: 0.85770196

00:14:03.520 --> 00:14:04.855 cancer treated well?

NOTE Confidence: 0.85770196

00:14:04.855 --> 00:14:07.970 I know more about laser ablation from

NOTE Confidence: 0.85770196

00:14:08.052 --> 00:14:10.740 the epilepsy patients at that time.

NOTE Confidence: 0.85770196

00:14:10.740 --> 00:14:13.564 Part of seeing and I know that in

NOTE Confidence: 0.85770196

00:14:13.564 --> 00:14:16.040 the research, a good friend of mine,

NOTE Confidence: 0.85770196

00:14:16.040 --> 00:14:18.504 there's a lot of these another institution,

NOTE Confidence: 0.85770196

00:14:18.510 --> 00:14:20.701 and they've had a large data set

NOTE Confidence: 0.85770196

00:14:20.701 --> 00:14:22.671 of patients and they find that

NOTE Confidence: 0.85770196

00:14:22.671 --> 00:14:24.911 the laser ablation has very has at

NOTE Confidence: 0.85770196

00:14:24.978 --> 00:14:27.328 least Kogda Side Effects afterwards,

NOTE Confidence: 0.85770196

00:14:27.330 --> 00:14:29.634 and we've actually learned that the

NOTE Confidence: 0.85770196

00:14:29.634 --> 00:14:32.092 laser ablation you could take out

NOTE Confidence: 0.85770196

00:14:32.092 --> 00:14:33.800 parts that traditional surgery.

NOTE Confidence: 0.85770196

00:14:33.800 --> 00:14:36.110 It would have damage to surrounding area,

NOTE Confidence: 0.85770196

00:14:36.110 --> 00:14:38.679 but laser ablation might be able to

NOTE Confidence: 0.85770196

00:14:38.679 --> 00:14:41.297 pinpoint a very precise location so

NOTE Confidence: 0.85770196

00:14:41.297 --> 00:14:44.177 that actually has fewer cognitive risks.  
NOTE Confidence: 0.85770196

00:14:44.180 --> 00:14:45.970 And in terms of radiation,  
NOTE Confidence: 0.85770196

00:14:45.970 --> 00:14:48.160 you know there's more focused beam  
NOTE Confidence: 0.85770196

00:14:48.160 --> 00:14:50.360 radiation that they use now they  
NOTE Confidence: 0.85770196

00:14:50.360 --> 00:14:52.388 used to use whole brain radiation,  
NOTE Confidence: 0.85770196

00:14:52.390 --> 00:14:55.022 which was not good because that would  
NOTE Confidence: 0.85770196

00:14:55.022 --> 00:14:58.098 affect the whole brain as as a name implies,  
NOTE Confidence: 0.85770196

00:14:58.100 --> 00:14:59.888 it's a whole brain.  
NOTE Confidence: 0.85770196

00:14:59.888 --> 00:15:02.123 Radiation would impact the cognition  
NOTE Confidence: 0.85770196

00:15:02.123 --> 00:15:03.870 in a larger degree.  
NOTE Confidence: 0.85770196

00:15:03.870 --> 00:15:05.338 Whereas focused beam radiation  
NOTE Confidence: 0.85770196

00:15:05.338 --> 00:15:06.806 would affect that area.  
NOTE Confidence: 0.85770196

00:15:06.810 --> 00:15:09.602 Now the risk to radiation is that is  
NOTE Confidence: 0.85770196

00:15:09.602 --> 00:15:12.326 not just a time that's being used,  
NOTE Confidence: 0.85770196

00:15:12.330 --> 00:15:14.170 but there's also after effects,  
NOTE Confidence: 0.85770196

00:15:14.170 --> 00:15:16.000 so the radiation might continue

NOTE Confidence: 0.85770196

00:15:16.000 --> 00:15:18.589 to affect the area of the brain.

NOTE Confidence: 0.85770196

00:15:18.590 --> 00:15:21.145 So some of the cognition might actually

NOTE Confidence: 0.85770196

00:15:21.145 --> 00:15:23.738 decline a little bit after the surgery,

NOTE Confidence: 0.85770196

00:15:23.740 --> 00:15:25.575 after the radiation is even

NOTE Confidence: 0.85770196

00:15:25.575 --> 00:15:27.043 over down the road,

NOTE Confidence: 0.85770196

00:15:27.050 --> 00:15:29.318 you can have a little bit of

NOTE Confidence: 0.85770196

00:15:29.318 --> 00:15:31.469 decline in that immediate area.

NOTE Confidence: 0.85770196

00:15:31.470 --> 00:15:32.204 So yeah,

NOTE Confidence: 0.85770196

00:15:32.204 --> 00:15:32.938 no sorry.

NOTE Confidence: 0.871784704285715

00:15:32.940 --> 00:15:34.870 So this is. Really fascinating

NOTE Confidence: 0.871784704285715

00:15:34.870 --> 00:15:37.831 in terms of how we can influence

NOTE Confidence: 0.871784704285715

00:15:37.831 --> 00:15:39.723 our cognition while still

NOTE Confidence: 0.871784704285715

00:15:39.723 --> 00:15:42.250 taking care of brain tumors.

NOTE Confidence: 0.871784704285715

00:15:42.250 --> 00:15:45.162 We need to take a short break

NOTE Confidence: 0.871784704285715

00:15:45.162 --> 00:15:47.190 for a medical minute,

NOTE Confidence: 0.871784704285715

00:15:47.190 --> 00:15:50.326 but will learn more right after this  
NOTE Confidence: 0.87507236

00:15:50.330 --> 00:15:53.480 break with my guest. Doctor Franklin Brown.  
NOTE Confidence: 0.87507236

00:15:53.480 --> 00:15:56.021 Support for Yale cancer answers comes from  
NOTE Confidence: 0.87507236

00:15:56.021 --> 00:15:58.870 Astra Zeneca of biopharmaceutical business.  
NOTE Confidence: 0.87507236

00:15:58.870 --> 00:16:01.750 With a deep rooted heritage in oncology and  
NOTE Confidence: 0.87507236

00:16:01.750 --> 00:16:05.625 a commitment to developing cancer medicines  
NOTE Confidence: 0.87507236

00:16:05.625 --> 00:16:07.169 for patientslearnmore@astrazeneca-us.com.  
NOTE Confidence: 0.87507236

00:16:07.170 --> 00:16:09.642 This is a medical minute about  
NOTE Confidence: 0.87507236

00:16:09.642 --> 00:16:11.296 pancreatic cancer, which represents  
NOTE Confidence: 0.87507236

00:16:11.296 --> 00:16:14.600 about 3% of all cancers in the US,  
NOTE Confidence: 0.87507236

00:16:14.600 --> 00:16:17.078 Ann, about 7% of cancer deaths.  
NOTE Confidence: 0.87507236

00:16:17.080 --> 00:16:19.230 Clinical trials are currently being  
NOTE Confidence: 0.87507236

00:16:19.230 --> 00:16:20.950 offered at Federale designated  
NOTE Confidence: 0.87507236

00:16:20.950 --> 00:16:22.843 comprehensive cancer Centers for the  
NOTE Confidence: 0.87507236

00:16:22.843 --> 00:16:24.943 treatment of advanced stage and metastatic  
NOTE Confidence: 0.87507236

00:16:24.997 --> 00:16:26.989 pancreatic cancer using chemotherapy.

NOTE Confidence: 0.87507236

00:16:26.990 --> 00:16:28.232 Another novel therapies,

NOTE Confidence: 0.87507236

00:16:28.232 --> 00:16:30.708 Phil Fearon, ox or combination of

NOTE Confidence: 0.87507236

00:16:30.708 --> 00:16:31.944 five different chemotherapies,

NOTE Confidence: 0.87507236

00:16:31.950 --> 00:16:34.946 is the latest advance in the treatment

NOTE Confidence: 0.87507236

00:16:34.946 --> 00:16:36.780 of metastatic pancreatic cancer.

NOTE Confidence: 0.87507236

00:16:36.780 --> 00:16:37.893 And research continues.

NOTE Confidence: 0.87507236

00:16:37.893 --> 00:16:39.748 It centers around the world

NOTE Confidence: 0.87507236

00:16:39.748 --> 00:16:41.660 looking into targeted therapies,

NOTE Confidence: 0.87507236

00:16:41.660 --> 00:16:44.509 and a recently discovered marker HENT one.

NOTE Confidence: 0.87507236

00:16:44.510 --> 00:16:47.867 This is been a medical minute brought to you

NOTE Confidence: 0.87507236

00:16:47.867 --> 00:16:51.429 as a public service by Yale Cancer Center.

NOTE Confidence: 0.87507236

00:16:51.430 --> 00:16:54.000 More information is available at

NOTE Confidence: 0.87507236

00:16:54.000 --> 00:16:55.542 yalecancercenter.org you're listening

NOTE Confidence: 0.87507236

00:16:55.542 --> 00:16:57.419 to Connecticut public radio.

NOTE Confidence: 0.87507236

00:16:57.420 --> 00:16:57.820 Welcome

NOTE Confidence: 0.8709094

00:16:57.820 --> 00:16:59.830 back to Yale cancer answers.

NOTE Confidence: 0.8709094

00:16:59.830 --> 00:17:02.098 This is doctor in East shag part

NOTE Confidence: 0.8709094

00:17:02.098 --> 00:17:04.794 and I'm joined tonight by my guest

NOTE Confidence: 0.8709094

00:17:04.794 --> 00:17:06.859 doctor Franklin Brown were talking

NOTE Confidence: 0.8709094

00:17:06.859 --> 00:17:08.730 about neuropsychology and brain

NOTE Confidence: 0.8709094

00:17:08.730 --> 00:17:11.490 cancer and right before the break.

NOTE Confidence: 0.8709094

00:17:11.490 --> 00:17:14.451 Franklin we were talking a little bit

NOTE Confidence: 0.8709094

00:17:14.451 --> 00:17:16.606 about surgery versus radiation which

NOTE Confidence: 0.8709094

00:17:16.606 --> 00:17:19.822 can be focused or even lasers which can

NOTE Confidence: 0.8709094

00:17:19.895 --> 00:17:22.450 be perhaps even more focused where you

NOTE Confidence: 0.8709094

00:17:22.450 --> 00:17:25.158 know we can really address brain cancers

NOTE Confidence: 0.8709094

00:17:25.158 --> 00:17:27.168 without affecting the entire brain.

NOTE Confidence: 0.8709094

00:17:27.170 --> 00:17:29.380 Now the. The other modality,

NOTE Confidence: 0.8709094

00:17:29.380 --> 00:17:32.008 of course that is sometimes used

NOTE Confidence: 0.8709094

00:17:32.008 --> 00:17:34.614 is is chemotherapy and, you know,

NOTE Confidence: 0.8709094

00:17:34.614 --> 00:17:37.603 chemotherapy can affect your brain to a



NOTE Confidence: 0.8709094

00:17:37.603 --> 00:17:40.769 lot of people talk about chemo brain.

NOTE Confidence: 0.8709094

00:17:40.770 --> 00:17:43.706 Can you talk a little bit about how

NOTE Confidence: 0.8709094

00:17:43.706 --> 00:17:46.897 exactly does chemotherapy affect your brain?

NOTE Confidence: 0.8709094

00:17:46.900 --> 00:17:49.854 I mean, it's certainly not a structural

NOTE Confidence: 0.8709094

00:17:49.854 --> 00:17:53.038 thing of taking actual brain tissue out,

NOTE Confidence: 0.8709094

00:17:53.040 --> 00:17:55.230 but it seems to still

NOTE Confidence: 0.86548555

00:17:55.230 --> 00:17:57.420 affect people's cognition was sure,

NOTE Confidence: 0.86548555

00:17:57.420 --> 00:17:59.204 and in fact, chemo.

NOTE Confidence: 0.86548555

00:17:59.204 --> 00:18:00.784 Chemotherapy, while it's important,

NOTE Confidence: 0.86548555

00:18:00.784 --> 00:18:02.296 can leave comments effects

NOTE Confidence: 0.86548555

00:18:02.296 --> 00:18:04.289 regardless of the type of tumor.

NOTE Confidence: 0.86548555

00:18:04.290 --> 00:18:06.426 Sowerby regards the type of cancer,

NOTE Confidence: 0.86548555

00:18:06.430 --> 00:18:08.566 so we're talking about brain tumors,

NOTE Confidence: 0.86548555

00:18:08.570 --> 00:18:10.712 but in any kind of cancer

NOTE Confidence: 0.86548555

00:18:10.712 --> 00:18:12.140 that chemotherapy is used,

NOTE Confidence: 0.86548555

00:18:12.140 --> 00:18:14.639 it can cross the blood brain barrier,  
NOTE Confidence: 0.86548555

00:18:14.640 --> 00:18:17.310 an effect the brain now.  
NOTE Confidence: 0.86548555

00:18:17.310 --> 00:18:19.966 The way this typically happens in the brain,  
NOTE Confidence: 0.86548555

00:18:19.970 --> 00:18:21.968 there's what's called the Gray matter,  
NOTE Confidence: 0.86548555

00:18:21.970 --> 00:18:24.294 which is where our actual thinking sells.  
NOTE Confidence: 0.86548555

00:18:24.300 --> 00:18:27.788 For like, a better term would be located.  
NOTE Confidence: 0.86548555

00:18:27.790 --> 00:18:31.326 But then this was called the white matter,  
NOTE Confidence: 0.86548555

00:18:31.330 --> 00:18:34.200 which connects to different parts of the  
NOTE Confidence: 0.86548555

00:18:34.200 --> 00:18:36.756 brain together and that white matter  
NOTE Confidence: 0.86548555

00:18:36.756 --> 00:18:38.841 is very important for functioning  
NOTE Confidence: 0.86548555

00:18:38.841 --> 00:18:41.490 but also for function efficiently.  
NOTE Confidence: 0.86548555

00:18:41.490 --> 00:18:44.598 So let's say that the chemotherapy because  
NOTE Confidence: 0.86548555

00:18:44.598 --> 00:18:47.889 it affects the person's general health.  
NOTE Confidence: 0.86548555

00:18:47.890 --> 00:18:50.070 This effects white matter.  
NOTE Confidence: 0.86548555

00:18:50.070 --> 00:18:52.250 More than Gray matter.  
NOTE Confidence: 0.86548555

00:18:52.250 --> 00:18:52.928 In fact,

NOTE Confidence: 0.86548555

00:18:52.928 --> 00:18:55.301 it tested target white matter because white

NOTE Confidence: 0.86548555

00:18:55.301 --> 00:18:57.790 matters affected by the body's health, so.

NOTE Confidence: 0.86548555

00:18:57.790 --> 00:19:00.520 You have the white matter that gets

NOTE Confidence: 0.86548555

00:19:00.520 --> 00:19:03.020 affected by chemotherapy and afterwards

NOTE Confidence: 0.86548555

00:19:03.020 --> 00:19:06.290 patients have they feel foggy there.

NOTE Confidence: 0.86548555

00:19:06.290 --> 00:19:08.816 Say they can't focus very well.

NOTE Confidence: 0.86548555

00:19:08.820 --> 00:19:10.348 They're complaining memory problems,

NOTE Confidence: 0.86548555

00:19:10.348 --> 00:19:13.657 and it really comes down to the brain

NOTE Confidence: 0.86548555

00:19:13.657 --> 00:19:15.565 not communicating efficiently anymore.

NOTE Confidence: 0.86548555

00:19:15.570 --> 00:19:16.836 And so it's.

NOTE Confidence: 0.86548555

00:19:16.836 --> 00:19:19.368 There's different networks in the brain.

NOTE Confidence: 0.86548555

00:19:19.370 --> 00:19:21.480 So let's say the actual.

NOTE Confidence: 0.86548555

00:19:21.480 --> 00:19:22.746 Like I said,

NOTE Confidence: 0.86548555

00:19:22.746 --> 00:19:25.278 the brain centers might be intact,

NOTE Confidence: 0.86548555

00:19:25.280 --> 00:19:27.248 but the communication between

NOTE Confidence: 0.86548555

00:19:27.248 --> 00:19:29.708 those centers are slowed down.  
NOTE Confidence: 0.86548555

00:19:29.710 --> 00:19:30.054 Therefore,  
NOTE Confidence: 0.86548555

00:19:30.054 --> 00:19:31.430 kits at a sink.  
NOTE Confidence: 0.86548555

00:19:31.430 --> 00:19:33.614 So imagine one way it imagine this  
NOTE Confidence: 0.86548555

00:19:33.614 --> 00:19:35.879 is like if you're very tired.  
NOTE Confidence: 0.86548555

00:19:35.880 --> 00:19:38.368 Let's say that you only got a few  
NOTE Confidence: 0.86548555

00:19:38.368 --> 00:19:40.901 hours sleep the night before and the  
NOTE Confidence: 0.86548555

00:19:40.901 --> 00:19:43.429 next day you're feeling kind of foggy.  
NOTE Confidence: 0.86548555

00:19:43.430 --> 00:19:45.150 You can't think as well.  
NOTE Confidence: 0.86548555

00:19:45.150 --> 00:19:46.618 You mind might wander,  
NOTE Confidence: 0.86548555

00:19:46.618 --> 00:19:49.514 you know all those things that you feel  
NOTE Confidence: 0.86548555

00:19:49.514 --> 00:19:52.002 when you're very tired and in a way,  
NOTE Confidence: 0.86548555

00:19:52.010 --> 00:19:54.848 this is kind of what chemotherapy  
NOTE Confidence: 0.86548555

00:19:54.848 --> 00:19:56.267 does the brain.  
NOTE Confidence: 0.86548555

00:19:56.270 --> 00:19:58.040 Because it makes it less efficient.  
NOTE Confidence: 0.86548555

00:19:58.040 --> 00:20:00.189 Your brain. It takes a lot more.

NOTE Confidence: 0.86548555

00:20:00.190 --> 00:20:01.630 For to do things.

NOTE Confidence: 0.86548555

00:20:01.630 --> 00:20:03.790 So this will result in the

NOTE Confidence: 0.86548555

00:20:03.872 --> 00:20:06.010 person feeling tired, unfocused.

NOTE Confidence: 0.86548555

00:20:06.010 --> 00:20:08.530 You know other factors that make

NOTE Confidence: 0.86548555

00:20:08.530 --> 00:20:10.979 them less able to pay attention

NOTE Confidence: 0.86548555

00:20:10.979 --> 00:20:12.467 to what's going on,

NOTE Confidence: 0.86548555

00:20:12.470 --> 00:20:14.760 so cognitive efficiency is actually

NOTE Confidence: 0.86548555

00:20:14.760 --> 00:20:18.085 is one of my areas of interest

NOTE Confidence: 0.86548555

00:20:18.085 --> 00:20:20.450 is very vital for thinking.

NOTE Confidence: 0.86548555

00:20:20.450 --> 00:20:21.490 Paid attention.

NOTE Confidence: 0.86548555

00:20:21.490 --> 00:20:24.090 You know finding towards another

NOTE Confidence: 0.86548555

00:20:24.090 --> 00:20:26.328 actions that are required

NOTE Confidence: 0.86548555

00:20:26.328 --> 00:20:28.696 that chemotherapy affects so

NOTE Confidence: 0.8753082

00:20:28.700 --> 00:20:32.165 you know, having thought about that right?

NOTE Confidence: 0.8753082

00:20:32.170 --> 00:20:34.645 So especially when there is

NOTE Confidence: 0.8753082

00:20:34.645 --> 00:20:37.147 some time to prepare, right?  
NOTE Confidence: 0.8753082

00:20:37.147 --> 00:20:39.732 So usually, regardless of whether  
NOTE Confidence: 0.8753082

00:20:39.732 --> 00:20:42.705 somebody is taking out a piece  
NOTE Confidence: 0.8753082

00:20:42.705 --> 00:20:45.165 of brain from brain tumor or  
NOTE Confidence: 0.8753082

00:20:45.165 --> 00:20:47.550 planning some focused radiation,  
NOTE Confidence: 0.8753082

00:20:47.550 --> 00:20:50.988 or whether you're going to be  
NOTE Confidence: 0.8753082

00:20:50.988 --> 00:20:52.707 getting some chemotherapy.  
NOTE Confidence: 0.8753082

00:20:52.710 --> 00:20:54.290 For brain cancer or any  
NOTE Confidence: 0.8753082

00:20:54.290 --> 00:20:55.870 other cancer for that matter,  
NOTE Confidence: 0.8753082

00:20:55.870 --> 00:20:57.130 oftentimes there's some preparatory  
NOTE Confidence: 0.8753082

00:20:57.130 --> 00:20:58.705 work that goes into that,  
NOTE Confidence: 0.8753082

00:20:58.710 --> 00:21:00.488 and we had talked before the break  
NOTE Confidence: 0.8753082

00:21:00.488 --> 00:21:02.302 about you know certainly in preparation  
NOTE Confidence: 0.8753082

00:21:02.302 --> 00:21:04.294 for brain surgery to remove tumors  
NOTE Confidence: 0.8753082

00:21:04.294 --> 00:21:05.978 that there's functional MRI's,  
NOTE Confidence: 0.8753082

00:21:05.980 --> 00:21:07.876 and so on and so forth.

NOTE Confidence: 0.8753082

00:21:07.880 --> 00:21:10.120 So you have some time now I can

NOTE Confidence: 0.8753082

00:21:10.120 --> 00:21:12.212 imagine that a lot of people who

NOTE Confidence: 0.8753082

00:21:12.212 --> 00:21:14.555 might be listening to this show might

NOTE Confidence: 0.8753082

00:21:14.555 --> 00:21:16.644 be asking themselves, you know,

NOTE Confidence: 0.8753082

00:21:16.644 --> 00:21:19.236 is there something I can do?

NOTE Confidence: 0.8753082

00:21:19.240 --> 00:21:21.648 In that period of time when I know

NOTE Confidence: 0.8753082

00:21:21.648 --> 00:21:24.649 that my brain is going to be affected

NOTE Confidence: 0.8753082

00:21:24.649 --> 00:21:26.850 by whatever treatment is to come,

NOTE Confidence: 0.8753082

00:21:26.850 --> 00:21:29.658 is there something that I can do to help

NOTE Confidence: 0.8753082

00:21:29.658 --> 00:21:32.039 myself preserve some of my cognition?

NOTE Confidence: 0.8753082

00:21:32.040 --> 00:21:34.581 You know whether that is particularly a

NOTE Confidence: 0.8753082

00:21:34.581 --> 00:21:36.890 particular diet that I should be eating,

NOTE Confidence: 0.8753082

00:21:36.890 --> 00:21:38.270 or particular vitamins that

NOTE Confidence: 0.8753082

00:21:38.270 --> 00:21:39.650 I should be taking,

NOTE Confidence: 0.8753082

00:21:39.650 --> 00:21:41.750 or whether I should be doing

NOTE Confidence: 0.8753082

00:21:41.750 --> 00:21:43.545 more crossword puzzles and trying  
NOTE Confidence: 0.8753082

00:21:43.545 --> 00:21:45.190 to keep my brain active?  
NOTE Confidence: 0.8753082

00:21:45.190 --> 00:21:47.266 Like what advice do you have,  
NOTE Confidence: 0.8753082

00:21:47.270 --> 00:21:49.540 or is there any advice?  
NOTE Confidence: 0.8753082

00:21:49.540 --> 00:21:52.036 For helping people to kind of  
NOTE Confidence: 0.8753082

00:21:52.036 --> 00:21:54.710 shore up their their brainpower,  
NOTE Confidence: 0.8753082

00:21:54.710 --> 00:21:57.115 their cognition to best withstand  
NOTE Confidence: 0.8753082

00:21:57.115 --> 00:22:00.350 the insult that is about to occur.  
NOTE Confidence: 0.8863525

00:22:01.360 --> 00:22:03.961 Well, one of the things that a lot of  
NOTE Confidence: 0.8863525

00:22:03.961 --> 00:22:06.406 people may not realize is that your  
NOTE Confidence: 0.8863525

00:22:06.406 --> 00:22:08.563 brain health things that make your  
NOTE Confidence: 0.8863525

00:22:08.563 --> 00:22:10.651 brain healthy are the same things  
NOTE Confidence: 0.8863525

00:22:10.651 --> 00:22:12.860 that make your heart healthy and in  
NOTE Confidence: 0.8863525

00:22:12.860 --> 00:22:14.805 fact was a big connection between  
NOTE Confidence: 0.8863525

00:22:14.805 --> 00:22:16.680 brain health and heart health.  
NOTE Confidence: 0.8863525

00:22:16.680 --> 00:22:18.822 In other words, if someones if



NOTE Confidence: 0.8863525

00:22:18.822 --> 00:22:20.597 someone's cardiovascular system is is

NOTE Confidence: 0.8863525

00:22:20.597 --> 00:22:22.337 at risk than their brain function,

NOTE Confidence: 0.8863525

00:22:22.340 --> 00:22:24.000 it can be at risk,

NOTE Confidence: 0.8863525

00:22:24.000 --> 00:22:25.998 which is a whole other topic,

NOTE Confidence: 0.8863525

00:22:26.000 --> 00:22:28.268 but I think that one of the big things

NOTE Confidence: 0.8863525

00:22:28.268 --> 00:22:30.516 is the healthier person is going

NOTE Confidence: 0.8863525

00:22:30.516 --> 00:22:32.451 into a therapeutic situation like

NOTE Confidence: 0.8863525

00:22:32.515 --> 00:22:34.850 chemotherapy or radiation or whatever.

NOTE Confidence: 0.8863525

00:22:34.850 --> 00:22:37.050 The better the outcome generally,

NOTE Confidence: 0.8863525

00:22:37.050 --> 00:22:39.938 so this means that if the person is

NOTE Confidence: 0.8863525

00:22:39.938 --> 00:22:42.769 someone that exercises fairly regularly,

NOTE Confidence: 0.8863525

00:22:42.770 --> 00:22:45.398 eats fairly healthy and you know

NOTE Confidence: 0.8863525

00:22:45.398 --> 00:22:47.610 there's other things like that,

NOTE Confidence: 0.8863525

00:22:47.610 --> 00:22:50.795 then they are going to be at

NOTE Confidence: 0.8863525

00:22:50.795 --> 00:22:53.140 lower risk in general.

NOTE Confidence: 0.8863525

00:22:53.140 --> 00:22:55.195 After surgery for cognitive problems  
NOTE Confidence: 0.8863525

00:22:55.195 --> 00:22:58.064 that people that let's say or less  
NOTE Confidence: 0.8863525

00:22:58.064 --> 00:23:00.296 healthy that might have some medical  
NOTE Confidence: 0.8863525

00:23:00.296 --> 00:23:02.739 risk factors like high blood pressure,  
NOTE Confidence: 0.8863525

00:23:02.740 --> 00:23:03.540 high cholesterol,  
NOTE Confidence: 0.8863525

00:23:03.540 --> 00:23:05.540 maybe they don't exercise really.  
NOTE Confidence: 0.8863525

00:23:05.540 --> 00:23:07.200 Maybe they are overweight,  
NOTE Confidence: 0.8863525

00:23:07.200 --> 00:23:10.135 you know there's all these things that  
NOTE Confidence: 0.8863525

00:23:10.135 --> 00:23:12.739 the more of these problems that occur,  
NOTE Confidence: 0.8863525

00:23:12.740 --> 00:23:15.540 the higher risk your brain is for.  
NOTE Confidence: 0.8863525

00:23:15.540 --> 00:23:17.904 For not being as healthy both  
NOTE Confidence: 0.8863525

00:23:17.904 --> 00:23:20.340 before and then after a surgery.  
NOTE Confidence: 0.8863525

00:23:20.340 --> 00:23:22.340 Sleep is also very important,  
NOTE Confidence: 0.8863525

00:23:22.340 --> 00:23:24.340 so following good sleep hygiene  
NOTE Confidence: 0.8863525

00:23:24.340 --> 00:23:25.540 recommendations is important,  
NOTE Confidence: 0.8863525

00:23:25.540 --> 00:23:28.011 but if you have someone that doesn't

NOTE Confidence: 0.8863525

00:23:28.011 --> 00:23:30.360 exercise from that doesn't sleep well,

NOTE Confidence: 0.8863525

00:23:30.360 --> 00:23:32.150 maybe they work long hours.

NOTE Confidence: 0.8863525

00:23:32.150 --> 00:23:34.558 You know these are all things that

NOTE Confidence: 0.8863525

00:23:34.558 --> 00:23:36.819 that when you think of Health,

NOTE Confidence: 0.8863525

00:23:36.820 --> 00:23:38.932 the more or less healthy person

NOTE Confidence: 0.8863525

00:23:38.932 --> 00:23:41.130 is a more cognitive risks they

NOTE Confidence: 0.8863525

00:23:41.130 --> 00:23:42.558 have and vice versa.

NOTE Confidence: 0.8863525

00:23:42.560 --> 00:23:44.520 So definitely that affects

NOTE Confidence: 0.8863525

00:23:44.520 --> 00:23:47.460 the other thing is also mood.

NOTE Confidence: 0.8863525

00:23:47.460 --> 00:23:49.780 You know it could be very upsetting to

NOTE Confidence: 0.8863525

00:23:49.780 --> 00:23:52.159 find out someone has cancer and that

NOTE Confidence: 0.8863525

00:23:52.159 --> 00:23:54.450 can affect the person pretty rapidly.

NOTE Confidence: 0.8863525

00:23:54.450 --> 00:23:56.760 So the other thing is how do

NOTE Confidence: 0.8863525

00:23:56.760 --> 00:23:58.780 you keep your mood up now?

NOTE Confidence: 0.8863525

00:23:58.780 --> 00:24:00.450 Of course there are answer,

NOTE Confidence: 0.8863525

00:24:00.450 --> 00:24:02.110 depresses and things like that.  
NOTE Confidence: 0.8863525

00:24:02.110 --> 00:24:04.830 But I'm actually a big a big believer  
NOTE Confidence: 0.8863525

00:24:04.830 --> 00:24:07.874 in therapy and so I really think that  
NOTE Confidence: 0.8863525

00:24:07.874 --> 00:24:10.330 when someone gets diagnosed with cancer.  
NOTE Confidence: 0.8863525

00:24:10.330 --> 00:24:10.892 To me,  
NOTE Confidence: 0.8863525

00:24:10.892 --> 00:24:12.297 I mean maybe I'm biased,  
NOTE Confidence: 0.8863525

00:24:12.300 --> 00:24:14.589 but from my perspective think if they  
NOTE Confidence: 0.8863525

00:24:14.589 --> 00:24:17.077 could all have access to accounts are.  
NOTE Confidence: 0.8863525

00:24:17.080 --> 00:24:19.572 Added time and after the diagnosis to  
NOTE Confidence: 0.8863525

00:24:19.572 --> 00:24:22.130 help them reframe their way of thinking,  
NOTE Confidence: 0.8863525

00:24:22.130 --> 00:24:23.842 deal with their anxiety.  
NOTE Confidence: 0.8863525

00:24:23.842 --> 00:24:25.982 So they can decrease depression  
NOTE Confidence: 0.8863525

00:24:25.982 --> 00:24:28.049 and anxiety going into it.  
NOTE Confidence: 0.8863525

00:24:28.050 --> 00:24:30.402 They're going to be better off  
NOTE Confidence: 0.8863525

00:24:30.402 --> 00:24:32.819 shape when they come out of it.  
NOTE Confidence: 0.8863525

00:24:32.820 --> 00:24:35.389 So things like that are very important.

NOTE Confidence: 0.8863525

00:24:35.390 --> 00:24:38.340 An I mentioned sleep briefly.

NOTE Confidence: 0.8863525

00:24:38.340 --> 00:24:40.788 There is growing evidence that sleep

NOTE Confidence: 0.8863525

00:24:40.788 --> 00:24:43.240 definitely affects the brain functioning.

NOTE Confidence: 0.8863525

00:24:43.240 --> 00:24:44.724 Whether it's long term,

NOTE Confidence: 0.8863525

00:24:44.724 --> 00:24:45.837 for example sleep,

NOTE Confidence: 0.8863525

00:24:45.840 --> 00:24:47.808 chronic seat problems are associated with

NOTE Confidence: 0.8863525

00:24:47.808 --> 00:24:50.310 a higher risk of Alzheimer's disease,

NOTE Confidence: 0.8863525

00:24:50.310 --> 00:24:52.170 or whether it's short term.

NOTE Confidence: 0.8863525

00:24:52.170 --> 00:24:54.396 Adjust the immediate effects of fatigue.

NOTE Confidence: 0.8863525

00:24:54.400 --> 00:24:54.771 Obviously,

NOTE Confidence: 0.8863525

00:24:54.771 --> 00:24:56.997 if someone's having chronic sleep problems,

NOTE Confidence: 0.8863525

00:24:57.000 --> 00:24:59.082 they're going to be more fatigue

NOTE Confidence: 0.8863525

00:24:59.082 --> 00:25:01.100 and had more difficulty focusing.

NOTE Confidence: 0.8863525

00:25:01.100 --> 00:25:03.350 Those things are also really important

NOTE Confidence: 0.8863525

00:25:03.350 --> 00:25:05.991 for recovery from any kind of whether

NOTE Confidence: 0.8863525

00:25:05.991 --> 00:25:07.786 it's a direct brain resection,  
NOTE Confidence: 0.8863525

00:25:07.790 --> 00:25:08.684 radiation therapy,  
NOTE Confidence: 0.8863525

00:25:08.684 --> 00:25:09.578 or chemotherapy.  
NOTE Confidence: 0.8863525

00:25:09.578 --> 00:25:12.260 So those are the things that.  
NOTE Confidence: 0.8833967

00:25:12.260 --> 00:25:13.946 I think in the idea world,  
NOTE Confidence: 0.8833967

00:25:13.950 --> 00:25:15.894 if we could really help the  
NOTE Confidence: 0.8833967

00:25:15.894 --> 00:25:17.810 patients go into it healthy.  
NOTE Confidence: 0.8833967

00:25:17.810 --> 00:25:20.435 Focus on it in a healthy way.  
NOTE Confidence: 0.8833967

00:25:20.440 --> 00:25:22.310 Help help deal with feelings  
NOTE Confidence: 0.8833967

00:25:22.310 --> 00:25:23.427 of depression, anxiety.  
NOTE Confidence: 0.8833967

00:25:23.427 --> 00:25:25.262 They're going to come out  
NOTE Confidence: 0.8833967

00:25:25.262 --> 00:25:27.939 with it out of it much better.  
NOTE Confidence: 0.8833967

00:25:27.940 --> 00:25:30.178 So it definitely there are ways  
NOTE Confidence: 0.8833967

00:25:30.178 --> 00:25:32.440 that that you can improve a  
NOTE Confidence: 0.84992737

00:25:32.440 --> 00:25:34.310 person's outcome in their risks.  
NOTE Confidence: 0.84992737

00:25:34.310 --> 00:25:36.872 Yeah, you know, all of that makes

NOTE Confidence: 0.84992737

00:25:36.872 --> 00:25:39.189 me think about stress as well.

NOTE Confidence: 0.84992737

00:25:39.190 --> 00:25:41.731 And you know, the the kind of

NOTE Confidence: 0.84992737

00:25:41.731 --> 00:25:43.267 correlations between stress and

NOTE Confidence: 0.84992737

00:25:43.267 --> 00:25:45.559 inflammation and an cancer in general,

NOTE Confidence: 0.84992737

00:25:45.560 --> 00:25:48.014 but it sounds like kind of

NOTE Confidence: 0.84992737

00:25:48.014 --> 00:25:49.650 regulating your stress might

NOTE Confidence: 0.84992737

00:25:49.730 --> 00:25:51.890 might be helpful in terms of.

NOTE Confidence: 0.84992737

00:25:51.890 --> 00:25:53.430 Preserving your brain function

NOTE Confidence: 0.84992737

00:25:53.430 --> 00:25:56.134 as well are are there data on

NOTE Confidence: 0.84992737

00:25:56.134 --> 00:25:58.078 that and an any particular things

NOTE Confidence: 0.84992737

00:25:58.078 --> 00:26:00.269 in terms of stress reduction,

NOTE Confidence: 0.84992737

00:26:00.270 --> 00:26:02.556 whether it be meditation or you

NOTE Confidence: 0.84992737

00:26:02.556 --> 00:26:03.699 certainly mentioned exercise.

NOTE Confidence: 0.8520429

00:26:04.830 --> 00:26:06.906 Right, so absolutely stresses

NOTE Confidence: 0.8520429

00:26:06.906 --> 00:26:10.670 deftly can be toxic to the brain.

NOTE Confidence: 0.8520429

00:26:10.670 --> 00:26:12.620 That there's been in decades past.  
NOTE Confidence: 0.8520429

00:26:12.620 --> 00:26:14.804 There's a lot of research and stress  
NOTE Confidence: 0.8520429

00:26:14.804 --> 00:26:17.584 and anxiety in the brain and there it  
NOTE Confidence: 0.8520429

00:26:17.584 --> 00:26:19.721 actually stress levels can actually impact  
NOTE Confidence: 0.8520429

00:26:19.721 --> 00:26:22.073 the size and volume of a memory center  
NOTE Confidence: 0.8520429

00:26:22.073 --> 00:26:24.000 of the brain called the hippocampus.  
NOTE Confidence: 0.8520429

00:26:24.000 --> 00:26:26.152 There were states that they did in the  
NOTE Confidence: 0.8520429

00:26:26.152 --> 00:26:28.505 80s and 90s where they actually found  
NOTE Confidence: 0.8520429

00:26:28.505 --> 00:26:31.007 that people with higher levels of stress  
NOTE Confidence: 0.8520429

00:26:31.007 --> 00:26:33.415 will have smaller memory centers like that.  
NOTE Confidence: 0.8520429

00:26:33.420 --> 00:26:35.274 The campus and then after they  
NOTE Confidence: 0.8520429

00:26:35.274 --> 00:26:37.000 get treated for that stress,  
NOTE Confidence: 0.8520429

00:26:37.000 --> 00:26:38.620 the MRI actually shows some  
NOTE Confidence: 0.8520429

00:26:38.620 --> 00:26:39.916 rebounding of the size,  
NOTE Confidence: 0.8520429

00:26:39.920 --> 00:26:42.300 which is unbelievable but is amazing so.  
NOTE Confidence: 0.8520429

00:26:42.300 --> 00:26:44.862 Absolutely, you know, stress is such



NOTE Confidence: 0.8520429

00:26:44.862 --> 00:26:47.760 an important thing to help cope with,

NOTE Confidence: 0.8520429

00:26:47.760 --> 00:26:50.280 and I think that you know

NOTE Confidence: 0.8520429

00:26:50.280 --> 00:26:51.540 when someone's here.

NOTE Confidence: 0.8520429

00:26:51.540 --> 00:26:53.640 We get diagnosed with cancer.

NOTE Confidence: 0.8520429

00:26:53.640 --> 00:26:57.840 There focused might just be an OK I want to.

NOTE Confidence: 0.8520429

00:26:57.840 --> 00:26:59.520 I want to survive.

NOTE Confidence: 0.8520429

00:26:59.520 --> 00:27:01.620 I want to be healthy,

NOTE Confidence: 0.8520429

00:27:01.620 --> 00:27:04.224 but the way they survive in the

NOTE Confidence: 0.8520429

00:27:04.224 --> 00:27:07.078 way they feel is absolutely vital.

NOTE Confidence: 0.8520429

00:27:07.080 --> 00:27:09.130 So things like obviously just

NOTE Confidence: 0.8520429

00:27:09.130 --> 00:27:11.180 you know talking therapist really

NOTE Confidence: 0.8520429

00:27:11.250 --> 00:27:13.658 helpful thing mindfulness meditation.

NOTE Confidence: 0.8520429

00:27:13.660 --> 00:27:15.568 Some people also do well with

NOTE Confidence: 0.8520429

00:27:15.568 --> 00:27:16.840 what's called cognitive imagery,

NOTE Confidence: 0.8520429

00:27:16.840 --> 00:27:19.472 where they are asked to imagine the

NOTE Confidence: 0.8520429

00:27:19.472 --> 00:27:22.067 situation so they calm down and imagine

NOTE Confidence: 0.8520429

00:27:22.067 --> 00:27:24.510 it working out at a certain way.

NOTE Confidence: 0.8520429

00:27:24.510 --> 00:27:26.652 There's been studies in various areas

NOTE Confidence: 0.8520429

00:27:26.652 --> 00:27:28.891 that find that guided imagery where

NOTE Confidence: 0.8520429

00:27:28.891 --> 00:27:31.141 person imagines their outcome seems to

NOTE Confidence: 0.8520429

00:27:31.141 --> 00:27:33.523 produce a sense of better self control

NOTE Confidence: 0.8520429

00:27:33.523 --> 00:27:35.452 and had better locus of control,

NOTE Confidence: 0.8520429

00:27:35.452 --> 00:27:37.564 which seems to help their outcomes.

NOTE Confidence: 0.8520429

00:27:37.570 --> 00:27:38.208 You know,

NOTE Confidence: 0.8520429

00:27:38.208 --> 00:27:40.122 so definitely the level of stress

NOTE Confidence: 0.8520429

00:27:40.122 --> 00:27:41.450 is very important,

NOTE Confidence: 0.8520429

00:27:41.450 --> 00:27:43.620 and the more we can treat that

NOTE Confidence: 0.8520429

00:27:43.620 --> 00:27:45.840 and reduce the level of stress

NOTE Confidence: 0.8520429

00:27:45.840 --> 00:27:47.456 before and after surgery,

NOTE Confidence: 0.8520429

00:27:47.460 --> 00:27:48.832 the better the outcome.

NOTE Confidence: 0.8520429

00:27:48.832 --> 00:27:52.039 And of course it better the quality of life.

NOTE Confidence: 0.8520429

00:27:52.040 --> 00:27:52.748 You know.

NOTE Confidence: 0.8520429

00:27:52.748 --> 00:27:54.872 If someone is feeling depressed and

NOTE Confidence: 0.8520429

00:27:54.872 --> 00:27:57.060 they feel like they're hopeless.

NOTE Confidence: 0.8520429

00:27:57.060 --> 00:27:58.716 And they feel like there's no

NOTE Confidence: 0.8520429

00:27:58.716 --> 00:28:00.842 way out and they look at their

NOTE Confidence: 0.8520429

00:28:00.842 --> 00:28:02.750 health and they just can't imagine

NOTE Confidence: 0.8520429

00:28:02.750 --> 00:28:04.460 that it's going to workout.

NOTE Confidence: 0.8520429

00:28:04.460 --> 00:28:06.218 They're not going to do well,

NOTE Confidence: 0.8520429

00:28:06.220 --> 00:28:07.840 no matter what an versus someone

NOTE Confidence: 0.8520429

00:28:07.840 --> 00:28:09.460 that has an optimistic viewpoint.

NOTE Confidence: 0.8520429

00:28:09.460 --> 00:28:12.400 It says, OK, well, this is not a big deal.

NOTE Confidence: 0.8520429

00:28:12.400 --> 00:28:14.458 The doctor said that this could work,

NOTE Confidence: 0.8520429

00:28:14.460 --> 00:28:16.804 and I know it's going to work fine,

NOTE Confidence: 0.8520429

00:28:16.810 --> 00:28:18.868 and they imagine it's going to work.

NOTE Confidence: 0.8520429

00:28:18.870 --> 00:28:19.746 It's really remarkable.

NOTE Confidence: 0.8520429

00:28:19.746 --> 00:28:20.914 The difference in outcomes  
NOTE Confidence: 0.86047053

00:28:20.920 --> 00:28:23.008 then, and that's where I think  
NOTE Confidence: 0.86047053

00:28:23.008 --> 00:28:24.819 that that talk therapy can  
NOTE Confidence: 0.86047053

00:28:24.819 --> 00:28:26.369 really help. But you mentioned.  
NOTE Confidence: 0.8195165

00:28:26.970 --> 00:28:30.162 Yes, so there's a kind of typical  
NOTE Confidence: 0.8195165

00:28:30.162 --> 00:28:31.881 cognitive behavioral therapy. An.  
NOTE Confidence: 0.8195165

00:28:31.881 --> 00:28:33.987 That's when people that with the  
NOTE Confidence: 0.8195165

00:28:33.987 --> 00:28:35.849 provider works would help the  
NOTE Confidence: 0.8195165

00:28:35.849 --> 00:28:37.699 person to reframe their thinking.  
NOTE Confidence: 0.8195165

00:28:37.700 --> 00:28:39.475 So maybe they could take  
NOTE Confidence: 0.8195165

00:28:39.475 --> 00:28:40.895 something and instead thinking  
NOTE Confidence: 0.8195165

00:28:40.895 --> 00:28:42.419 negative negatively about it,  
NOTE Confidence: 0.8195165

00:28:42.420 --> 00:28:44.125 think more positively and effects  
NOTE Confidence: 0.8195165

00:28:44.125 --> 00:28:46.627 to give you an example of a  
NOTE Confidence: 0.8195165

00:28:46.627 --> 00:28:48.452 different area in multiple sclerosis  
NOTE Confidence: 0.8195165

00:28:48.452 --> 00:28:50.409 which also affects white matter.

NOTE Confidence: 0.8195165

00:28:50.410 --> 00:28:51.858 And I mention chemotherapy

NOTE Confidence: 0.8195165

00:28:51.858 --> 00:28:52.944 effects white matter.

NOTE Confidence: 0.8195165

00:28:52.950 --> 00:28:54.920 There's actually evidence that people

NOTE Confidence: 0.8195165

00:28:54.920 --> 00:28:57.323 that have multiple sclerosis who go

NOTE Confidence: 0.8195165

00:28:57.323 --> 00:28:58.831 through constant behavioral therapy

NOTE Confidence: 0.8195165

00:28:58.831 --> 00:29:01.111 have fewer relapses in there and

NOTE Confidence: 0.8195165

00:29:01.111 --> 00:29:02.796 their white matter looks better.

NOTE Confidence: 0.8195165

00:29:02.800 --> 00:29:05.155 So there is definitely evidence

NOTE Confidence: 0.8195165

00:29:05.155 --> 00:29:07.510 that talk therapy, guided imagery,

NOTE Confidence: 0.8195165

00:29:07.510 --> 00:29:09.390 relaxation, meditation, sleeping well,

NOTE Confidence: 0.8195165

00:29:09.390 --> 00:29:11.745 eating well and healthy exercise

NOTE Confidence: 0.8195165

00:29:11.745 --> 00:29:13.158 are very helpful.

NOTE Confidence: 0.8195165

00:29:13.160 --> 00:29:16.457 And cancer is actually some empirical data.

NOTE Confidence: 0.8195165

00:29:16.460 --> 00:29:18.830 That exercise helps recovery cognitive

NOTE Confidence: 0.8195165

00:29:18.830 --> 00:29:21.200 remediation which is like like

NOTE Confidence: 0.8195165

00:29:21.278 --> 00:29:23.588 things like speech therapy or or  
NOTE Confidence: 0.8195165

00:29:23.588 --> 00:29:25.806 focused therapy to help someone's  
NOTE Confidence: 0.8195165

00:29:25.806 --> 00:29:28.226 memory or compensation strategies.  
NOTE Confidence: 0.8195165

00:29:28.230 --> 00:29:30.918 All these things have been found  
NOTE Confidence: 0.8195165

00:29:30.918 --> 00:29:33.510 empirically to help the outcomes.  
NOTE Confidence: 0.8195165

00:29:33.510 --> 00:29:35.994 Of people that go through chemotherapy,  
NOTE Confidence: 0.8195165

00:29:35.994 --> 00:29:37.918 but definitely stress, I think,  
NOTE Confidence: 0.8195165

00:29:37.918 --> 00:29:39.382 is definitely underlying factor  
NOTE Confidence: 0.8195165

00:29:39.382 --> 00:29:41.380 in all these interventions.  
NOTE Confidence: 0.8740929

00:29:41.380 --> 00:29:43.930 Doctor Franklin Brown is an assistant  
NOTE Confidence: 0.8740929

00:29:43.930 --> 00:29:46.089 professor of neurology and chief  
NOTE Confidence: 0.8740929

00:29:46.089 --> 00:29:48.044 of the division of neuropsychology  
NOTE Confidence: 0.8740929

00:29:48.044 --> 00:29:50.479 at the Yale School of Medicine.  
NOTE Confidence: 0.8740929

00:29:50.480 --> 00:29:52.192 If you have questions,  
NOTE Confidence: 0.8740929

00:29:52.192 --> 00:29:53.904 the address is canceranswers@yale.edu  
NOTE Confidence: 0.8740929

00:29:53.904 --> 00:29:56.258 and past editions of the program

NOTE Confidence: 0.8740929

00:29:56.258 --> 00:29:58.412 are available in audio and written

NOTE Confidence: 0.8740929

00:29:58.481 --> 00:30:00.278 form at [Yalecancercenter.org](http://Yalecancercenter.org).

NOTE Confidence: 0.8740929

00:30:00.280 --> 00:30:02.128 We hope you'll join us next week to

NOTE Confidence: 0.8740929

00:30:02.128 --> 00:30:03.916 learn more about the fight against

NOTE Confidence: 0.8740929

00:30:03.916 --> 00:30:06.384 cancer here on Connecticut public radio.