

WEBVTT

00:00:00.000 --> 00:00:01.965 Funding for Yale Cancer Answers

NOTE Confidence: 0.953089767857143

00:00:01.965 --> 00:00:03.930 is provided by Smilow Cancer

NOTE Confidence: 0.953089767857143

00:00:03.997 --> 00:00:05.697 Hospital and AstraZeneca.

NOTE Confidence: 0.925355759230769

00:00:07.810 --> 00:00:09.970 Welcome to Yale Cancer Answers with

NOTE Confidence: 0.925355759230769

00:00:09.970 --> 00:00:12.642 your host doctor Anees Chagpar.

NOTE Confidence: 0.925355759230769

00:00:12.642 --> 00:00:14.502 Yale Cancer Answers features the latest

NOTE Confidence: 0.925355759230769

00:00:14.502 --> 00:00:16.784 information on cancer care by welcoming

NOTE Confidence: 0.925355759230769

00:00:16.784 --> 00:00:19.346 oncologists and specialists who are on the

NOTE Confidence: 0.925355759230769

00:00:19.346 --> 00:00:21.469 forefront of the battle to fight cancer.

NOTE Confidence: 0.925355759230769

00:00:21.470 --> 00:00:23.983 This week it's a conversation about ovarian

NOTE Confidence: 0.925355759230769

00:00:23.983 --> 00:00:26.228 cancer with Doctor Vaagn Andikyan.

NOTE Confidence: 0.925355759230769

00:00:26.230 --> 00:00:28.065 Doctor Vaagn Andikyan is assistant

NOTE Confidence: 0.925355759230769

00:00:28.065 --> 00:00:29.166 professor of obstetrics,

NOTE Confidence: 0.925355759230769

00:00:29.170 --> 00:00:30.846 gynecology and reproductive sciences

NOTE Confidence: 0.925355759230769

00:00:30.846 --> 00:00:33.360 at the Yale School of Medicine,

NOTE Confidence: 0.925355759230769

00:00:33.360 --> 00:00:36.168 where Doctor Chagpar is a  
NOTE Confidence: 0.925355759230769

00:00:36.168 --> 00:00:38.250 professor of surgical oncology.  
NOTE Confidence: 0.962842166086956

00:00:38.260 --> 00:00:40.591 Maybe you can tell us a little  
NOTE Confidence: 0.962842166086956

00:00:40.591 --> 00:00:42.806 bit about how common is  
NOTE Confidence: 0.962842166086956

00:00:42.806 --> 00:00:44.870 ovarian cancer and who gets it?  
NOTE Confidence: 0.986012103636364

00:00:45.110 --> 00:00:47.140 This is a very common type of  
NOTE Confidence: 0.986012103636364

00:00:47.140 --> 00:00:48.500 cancer in numbers, it is the  
NOTE Confidence: 0.986012103636364

00:00:48.500 --> 00:00:52.532 fifth in cancer deaths among women in the US.  
NOTE Confidence: 0.986012103636364

00:00:52.540 --> 00:00:56.860 Yearly, we diagnose about 25,000 patients  
NOTE Confidence: 0.986012103636364

00:00:56.860 --> 00:01:01.298 with ovarian cancer and that leads to  
NOTE Confidence: 0.986012103636364

00:01:01.300 --> 00:01:04.258 14,000 deaths annually.  
NOTE Confidence: 0.986012103636364

00:01:04.260 --> 00:01:06.804 Often I see patients when they  
NOTE Confidence: 0.986012103636364

00:01:06.804 --> 00:01:09.100 come for their well visit  
NOTE Confidence: 0.986012103636364

00:01:09.100 --> 00:01:11.248 or other issues and  
NOTE Confidence: 0.986012103636364

00:01:11.248 --> 00:01:13.359 they often ask me the question  
NOTE Confidence: 0.986012103636364

00:01:13.360 --> 00:01:15.901 of what are their odds to develop

NOTE Confidence: 0.986012103636364

00:01:15.901 --> 00:01:18.432 ovarian cancer and a good number

NOTE Confidence: 0.986012103636364

00:01:18.432 --> 00:01:20.478 to quote is one in 80 lifetime

NOTE Confidence: 0.986012103636364

00:01:20.480 --> 00:01:22.590 risk of developing ovarian cancer.

NOTE Confidence: 0.981038000769231

00:01:22.770 --> 00:01:25.206 That sounds pretty

NOTE Confidence: 0.981038000769231

00:01:25.206 --> 00:01:28.300 good in the grand scheme of things,

NOTE Confidence: 0.981038000769231

00:01:28.300 --> 00:01:31.052 when you think about breast cancer being one

NOTE Confidence: 0.981038000769231

00:01:31.052 --> 00:01:33.817 in eight, ovarian cancer being one in 80,

NOTE Confidence: 0.981038000769231

00:01:33.820 --> 00:01:35.192 that's not bad.

NOTE Confidence: 0.981038000769231

00:01:35.192 --> 00:01:37.888 But still, ovarian cancer is a

NOTE Confidence: 0.981038000769231

00:01:37.888 --> 00:01:39.394 pretty serious condition.

NOTE Confidence: 0.981038000769231

00:01:39.400 --> 00:01:41.689 Tell us a little bit more about

NOTE Confidence: 0.981038000769231

00:01:41.689 --> 00:01:43.710 what are the risk factors.

NOTE Confidence: 0.981038000769231

00:01:43.710 --> 00:01:45.898 How does genetics play

NOTE Confidence: 0.981038000769231

00:01:45.898 --> 00:01:48.010 into ovarian cancer?

NOTE Confidence: 0.96688151

00:01:48.020 --> 00:01:50.068 You touch on a very important

NOTE Confidence: 0.96688151

00:01:50.068 --> 00:01:52.116 topic of breast cancer.  
NOTE Confidence: 0.96688151

00:01:52.120 --> 00:01:54.418 A breast cancer, ovarian cancer,  
NOTE Confidence: 0.96688151

00:01:54.420 --> 00:01:56.920 they measure some similarity.  
NOTE Confidence: 0.96688151

00:01:56.920 --> 00:02:00.045 They are both reproductive organ cancers.  
NOTE Confidence: 0.96688151

00:02:00.050 --> 00:02:02.094 However, ovarian cancer unfortunately  
NOTE Confidence: 0.96688151

00:02:02.094 --> 00:02:05.160 has no screening and breast cancer,  
NOTE Confidence: 0.96688151

00:02:05.160 --> 00:02:06.501 contrary to that,  
NOTE Confidence: 0.96688151

00:02:06.501 --> 00:02:09.183 has a screening option and  
NOTE Confidence: 0.96688151

00:02:09.183 --> 00:02:11.230 therefore we diagnosis ovarian cancer  
NOTE Confidence: 0.96688151

00:02:11.230 --> 00:02:13.442 at a later stage most often.  
NOTE Confidence: 0.96688151

00:02:13.442 --> 00:02:16.207 Genetics play a very important  
NOTE Confidence: 0.96688151

00:02:16.207 --> 00:02:19.696 role in finding patients at risks.  
NOTE Confidence: 0.96688151

00:02:19.696 --> 00:02:22.398 There was a large study  
NOTE Confidence: 0.96688151

00:02:22.398 --> 00:02:25.408 done in UK that just published  
NOTE Confidence: 0.96688151

00:02:25.408 --> 00:02:28.088 this year involving almost one  
NOTE Confidence: 0.96688151

00:02:28.088 --> 00:02:30.713 million women and unfortunately

NOTE Confidence: 0.96688151

00:02:30.713 --> 00:02:33.381 demonstrated that with screening

NOTE Confidence: 0.96688151

00:02:33.381 --> 00:02:37.016 available in modern era, that includes

NOTE Confidence: 0.96688151

00:02:37.016 --> 00:02:40.036 ultrasound and the marker C 125,

NOTE Confidence: 0.96688151

00:02:40.036 --> 00:02:43.420 there was no reduction in the death rate.

NOTE Confidence: 0.96688151

00:02:43.420 --> 00:02:45.865 That was an unfortunate study and

NOTE Confidence: 0.96688151

00:02:45.865 --> 00:02:48.310 therefore very important to

NOTE Confidence: 0.96688151

00:02:48.399 --> 00:02:51.219 bring attention to your physician

NOTE Confidence: 0.96688151

00:02:51.220 --> 00:02:54.340 if you experiencing symptoms that

NOTE Confidence: 0.96688151

00:02:54.340 --> 00:02:57.249 could potentially be cancer.

NOTE Confidence: 0.96688151

00:02:57.250 --> 00:03:00.134 And we look at the symptoms

NOTE Confidence: 0.96688151

00:03:00.134 --> 00:03:02.779 whether they are specific or not,

NOTE Confidence: 0.96688151

00:03:02.780 --> 00:03:04.600 most of them are nonspecific,

NOTE Confidence: 0.96688151

00:03:04.600 --> 00:03:09.208 but symptoms such as weight loss,

NOTE Confidence: 0.96688151

00:03:09.210 --> 00:03:12.426 bloating, abdominal pain,

NOTE Confidence: 0.96688151

00:03:12.426 --> 00:03:15.330 changes in your bowel habits,

NOTE Confidence: 0.96688151

00:03:15.330 --> 00:03:16.666 those are concerning  
NOTE Confidence: 0.96688151

00:03:16.666 --> 00:03:18.670 features and can be seen  
NOTE Confidence: 0.96688151

00:03:18.730 --> 00:03:20.430 in many different conditions.  
NOTE Confidence: 0.96688151

00:03:20.430 --> 00:03:22.305 Even benign conditions,  
NOTE Confidence: 0.96688151

00:03:22.305 --> 00:03:25.546 bowel disease, but however they are  
NOTE Confidence: 0.96688151

00:03:25.546 --> 00:03:28.122 not uncommon and can be seen mostly  
NOTE Confidence: 0.96688151

00:03:28.122 --> 00:03:30.770 in patients in advanced disease.  
NOTE Confidence: 0.96688151

00:03:30.770 --> 00:03:33.110 In early stage disease,  
NOTE Confidence: 0.96688151

00:03:33.110 --> 00:03:36.035 unfortunately there's not a lot of  
NOTE Confidence: 0.96688151

00:03:36.035 --> 00:03:39.280 symptoms and in an annual visit to OBGYN  
NOTE Confidence: 0.96688151

00:03:39.280 --> 00:03:42.000 they may discover a cyst or mass in ovary  
NOTE Confidence: 0.96688151

00:03:42.000 --> 00:03:45.079 that may trigger additional intervention.  
00:03:47.665 --> 00:03:51.288 A large study was  
NOTE Confidence: 0.96688151

00:03:51.288 --> 00:03:54.592 done in the last 10-20 years in molecular  
NOTE Confidence: 0.96688151

00:03:54.592 --> 00:03:57.477 biology and discovered that the  
NOTE Confidence: 0.96688151

00:03:57.477 --> 00:04:00.372 genes associated with ovarian cancer  
NOTE Confidence: 0.96688151

00:04:00.372 --> 00:04:02.630 also related to breast cancer.  
NOTE Confidence: 0.96688151

00:04:02.630 --> 00:04:05.024 BRCA 1 and BRCA 2,  
NOTE Confidence: 0.96688151

00:04:05.024 --> 00:04:07.875 in patients with those gene  
NOTE Confidence: 0.96688151

00:04:07.875 --> 00:04:11.280 mutations, we often see breast cancer, however,  
NOTE Confidence: 0.96688151

00:04:11.280 --> 00:04:14.304 ovarian cancer is also on the rise.  
NOTE Confidence: 0.96688151

00:04:14.310 --> 00:04:16.608 About 50% of patients with BRCA 1  
NOTE Confidence: 0.96688151

00:04:16.610 --> 00:04:19.790 mutation may develop ovarian cancer  
NOTE Confidence: 0.96688151

00:04:19.790 --> 00:04:23.587 and about 25 to 35% with BRCA 2.  
00:04:26.382 --> 00:04:30.433 And fortunately there is a new  
NOTE Confidence: 0.96688151

00:04:30.433 --> 00:04:33.273 group of drugs available especially  
NOTE Confidence: 0.96688151

00:04:33.368 --> 00:04:35.108 for those patients.  
NOTE Confidence: 0.96688151

00:04:35.110 --> 00:04:36.806 On one hand,  
NOTE Confidence: 0.96688151

00:04:36.806 --> 00:04:39.350 you may consider that this is  
NOTE Confidence: 0.96688151

00:04:39.443 --> 00:04:41.789 the unfortunate situation,  
NOTE Confidence: 0.96688151

00:04:41.790 --> 00:04:42.100 however,  
NOTE Confidence: 0.96688151

00:04:42.100 --> 00:04:43.030 on the other hand,  
NOTE Confidence: 0.96688151

00:04:43.030 --> 00:04:44.580 we have a treatment available.  
00:04:46.270 --> 00:04:48.069 Let's pick up on that.  
NOTE Confidence: 0.985879344285714  
00:04:48.070 --> 00:04:50.758 I mean the one thing that you mentioned  
NOTE Confidence: 0.985879344285714  
00:04:50.758 --> 00:04:52.870 which was interesting is that  
NOTE Confidence: 0.985879344285714  
00:04:52.870 --> 00:04:55.422 if you do have a BRCA mutation that  
NOTE Confidence: 0.985879344285714  
00:04:55.422 --> 00:04:58.257 tells you that you're at increased risk,  
NOTE Confidence: 0.985879344285714  
00:04:58.260 --> 00:05:00.780 that study that you quoted found  
NOTE Confidence: 0.985879344285714  
00:05:00.780 --> 00:05:03.060 that CA 125 vaginal ultrasounds,  
NOTE Confidence: 0.985879344285714  
00:05:03.060 --> 00:05:05.385 they really don't reduce mortality,  
NOTE Confidence: 0.985879344285714  
00:05:05.390 --> 00:05:06.770 but you mentioned that there  
NOTE Confidence: 0.985879344285714  
00:05:06.770 --> 00:05:08.875 are some drugs that may help in  
NOTE Confidence: 0.985879344285714  
00:05:08.875 --> 00:05:10.219 patients with these mutations.  
NOTE Confidence: 0.985879344285714  
00:05:10.220 --> 00:05:11.240 So tell us more.  
NOTE Confidence: 0.93075316  
00:05:11.670 --> 00:05:15.198 Of course, within the last five to ten years  
NOTE Confidence: 0.93075316  
00:05:15.198 --> 00:05:18.179 we discovered a new group of drugs,  
NOTE Confidence: 0.93075316  
00:05:18.180 --> 00:05:20.470 we call them PARP inhibitors.  
NOTE Confidence: 0.93075316



00:05:20.470 --> 00:05:22.494 We learned more about the  
NOTE Confidence: 0.93075316  
00:05:22.494 --> 00:05:24.518 biology of ovarian cancer.  
NOTE Confidence: 0.93075316  
00:05:24.520 --> 00:05:27.460 And we realized that  
NOTE Confidence: 0.93075316  
00:05:27.460 --> 00:05:30.994 when  
NOTE Confidence: 0.93075316  
00:05:30.994 --> 00:05:33.982 our body repair double strand DNA  
NOTE Confidence: 0.93075316  
00:05:33.982 --> 00:05:37.021 breaks tumors that are  
NOTE Confidence: 0.93075316  
00:05:37.021 --> 00:05:39.582 deficient in those pathways have  
NOTE Confidence: 0.93075316  
00:05:39.582 --> 00:05:42.360 a harder time to repair themselves.  
NOTE Confidence: 0.93075316  
00:05:42.360 --> 00:05:45.230 So we're using tumor weaknesses  
NOTE Confidence: 0.93075316  
00:05:45.230 --> 00:05:49.237 and making it even worse by adding  
NOTE Confidence: 0.93075316  
00:05:49.237 --> 00:05:51.802 this enzyme blockers to help  
NOTE Confidence: 0.93075316  
00:05:51.802 --> 00:05:54.780 us to fight cancer cells.  
NOTE Confidence: 0.93075316  
00:05:54.780 --> 00:05:57.240 Several of the new drugs are available  
NOTE Confidence: 0.93075316  
00:05:57.240 --> 00:06:00.076 and approved by FDA to use in patients  
NOTE Confidence: 0.93075316  
00:06:00.076 --> 00:06:02.240 with ovarian cancer as a first line  
NOTE Confidence: 0.93075316  
00:06:02.240 --> 00:06:06.400 maintenance therapy and we use it

NOTE Confidence: 0.93075316

00:06:06.400 --> 00:06:09.949 as their therapy for later state disease.

NOTE Confidence: 0.93075316

00:06:09.949 --> 00:06:12.770 We use in combination with

NOTE Confidence: 0.93075316

00:06:12.851 --> 00:06:14.498 systemic cytotoxic chemotherapy

NOTE Confidence: 0.93075316

00:06:14.498 --> 00:06:17.792 there because as I mentioned,

NOTE Confidence: 0.93075316

00:06:17.800 --> 00:06:20.110 PARP inhibitors and there are several

NOTE Confidence: 0.93075316

00:06:20.110 --> 00:06:22.400 approved on the market,

NOTE Confidence: 0.93075316

00:06:22.400 --> 00:06:24.668 a new study has been done

NOTE Confidence: 0.93075316

00:06:24.670 --> 00:06:27.184 to discover in which sequence we

NOTE Confidence: 0.93075316

00:06:27.184 --> 00:06:30.402 should use them as a frontline or

NOTE Confidence: 0.93075316

00:06:30.402 --> 00:06:32.827 as a maintenance therapy versus

NOTE Confidence: 0.93075316

00:06:32.827 --> 00:06:34.870 reserved for recurrences.

NOTE Confidence: 0.93075316

00:06:34.870 --> 00:06:36.994 A lot to be discovered within

NOTE Confidence: 0.93075316

00:06:36.994 --> 00:06:38.410 the next 5-10 years,

NOTE Confidence: 0.93075316

00:06:38.410 --> 00:06:39.820 but we are on the right track.

NOTE Confidence: 0.984494816666667

00:06:40.030 --> 00:06:42.580 Just to be clear,

NOTE Confidence: 0.984494816666667

00:06:42.580 --> 00:06:45.046 the PARP inhibitors are really for  
NOTE Confidence: 0.984494816666667

00:06:45.046 --> 00:06:47.584 treatment of people who have an  
NOTE Confidence: 0.984494816666667

00:06:47.584 --> 00:06:49.262 ovarian cancer, particularly if  
NOTE Confidence: 0.984494816666667

00:06:49.262 --> 00:06:51.848 they are also carriers of BRCA 1 or 2?  
00:06:54.405 --> 00:06:57.310 If you've been diagnosed with a BRCA 1 or 2  
NOTE Confidence: 0.984494816666667

00:06:57.310 --> 00:06:58.720 gene mutation,  
NOTE Confidence: 0.984494816666667

00:06:58.720 --> 00:07:01.296 let's suppose somebody in your family was  
NOTE Confidence: 0.984494816666667

00:07:01.296 --> 00:07:03.494 diagnosed with breast cancer and they  
NOTE Confidence: 0.984494816666667

00:07:03.494 --> 00:07:05.558 were discovered to have the mutation,  
NOTE Confidence: 0.984494816666667

00:07:05.560 --> 00:07:07.056 you were then tested,  
NOTE Confidence: 0.984494816666667

00:07:07.056 --> 00:07:08.926 you now have a mutation,  
NOTE Confidence: 0.984494816666667

00:07:08.930 --> 00:07:11.555 but you don't have ovarian cancer yet.  
NOTE Confidence: 0.984494816666667

00:07:11.560 --> 00:07:13.576 At least you're aware of that.  
NOTE Confidence: 0.984494816666667

00:07:13.580 --> 00:07:15.740 Are there any things that you  
NOTE Confidence: 0.984494816666667

00:07:15.740 --> 00:07:18.054 could do to prevent ovarian cancer  
NOTE Confidence: 0.984494816666667

00:07:18.054 --> 00:07:20.049 or to reduce your risk?  
00:07:25.300 --> 00:07:28.180 We don't have medication that can

NOTE Confidence: 0.7851302438

00:07:28.180 --> 00:07:30.589 potentially reverse the risks and

NOTE Confidence: 0.7851302438

00:07:30.589 --> 00:07:33.013 we don't administer this PARP

NOTE Confidence: 0.7851302438

00:07:33.013 --> 00:07:35.909 inhibition as a prophylactic therapy.

NOTE Confidence: 0.7851302438

00:07:35.910 --> 00:07:37.860 The only approach we

NOTE Confidence: 0.7851302438

00:07:37.860 --> 00:07:40.679 use is risk reducing surgeries.

NOTE Confidence: 0.7851302438

00:07:40.680 --> 00:07:45.384 That entails a patient after completion

NOTE Confidence: 0.7851302438

00:07:45.384 --> 00:07:49.858 of childbearing or after age of 35 to 40,

NOTE Confidence: 0.7851302438

00:07:49.860 --> 00:07:52.912 we recommend to proceed with risk reducing

NOTE Confidence: 0.7851302438

00:07:52.912 --> 00:07:55.590 surgery that includes the removal of the

NOTE Confidence: 0.7851302438

00:07:55.590 --> 00:07:58.852 tubes and ovaries that will essentially

NOTE Confidence: 0.7851302438

00:07:58.852 --> 00:08:01.690 eliminate the risk of ovarian cancer.

NOTE Confidence: 0.7851302438

00:08:01.690 --> 00:08:04.510 It's not going to completely decrease

NOTE Confidence: 0.7851302438

00:08:04.510 --> 00:08:06.880 the risk to zero because there's

NOTE Confidence: 0.7851302438

00:08:06.880 --> 00:08:09.013 still a residual peritonei primary

NOTE Confidence: 0.7851302438

00:08:09.013 --> 00:08:10.865 cancer, however,

NOTE Confidence: 0.7851302438

00:08:10.865 --> 00:08:13.235 it will decrease the risk of  
NOTE Confidence: 0.7851302438

00:08:13.235 --> 00:08:15.040 ovarian cancer close to zero.  
NOTE Confidence: 0.7851302438

00:08:15.040 --> 00:08:17.908 That is the best strategy for  
NOTE Confidence: 0.7851302438

00:08:17.908 --> 00:08:19.820 patients with ovarian cancer  
NOTE Confidence: 0.985916367692308

00:08:20.140 --> 00:08:22.702 and if you were to  
NOTE Confidence: 0.985916367692308

00:08:22.702 --> 00:08:25.349 opt for that and say  
NOTE Confidence: 0.985916367692308

00:08:25.350 --> 00:08:26.980 you've just been  
NOTE Confidence: 0.985916367692308

00:08:26.980 --> 00:08:28.284 diagnosed with this mutation,  
NOTE Confidence: 0.985916367692308

00:08:28.290 --> 00:08:31.130 you're worried about ovarian cancer,  
NOTE Confidence: 0.985916367692308

00:08:31.130 --> 00:08:35.420 so you undergo a prophylactic bilateral mastec-  
tomy.  
NOTE Confidence: 0.985916367692308

00:08:36.788 --> 00:08:38.498 They remove your tubes and  
NOTE Confidence: 0.985916367692308

00:08:38.498 --> 00:08:40.309 your ovaries on both sides.  
NOTE Confidence: 0.985916367692308

00:08:40.310 --> 00:08:42.655 What are the side effects of that  
NOTE Confidence: 0.985916367692308

00:08:42.655 --> 00:08:45.449 surgery and how can you circumvent those?  
NOTE Confidence: 0.979839946

00:08:45.820 --> 00:08:47.708 That's a great question,  
NOTE Confidence: 0.979839946

00:08:47.708 --> 00:08:50.052 it depends on age.  
NOTE Confidence: 0.979839946

00:08:50.052 --> 00:08:52.320 Obviously, the younger the patients are,  
NOTE Confidence: 0.979839946

00:08:52.320 --> 00:08:54.895 they still have good performance  
NOTE Confidence: 0.979839946

00:08:54.895 --> 00:08:58.158 and ovarian function and the  
NOTE Confidence: 0.979839946

00:08:58.158 --> 00:09:01.128 unfortunate thing is this procedure will  
NOTE Confidence: 0.979839946

00:09:01.128 --> 00:09:04.120 place a patient in a menopausal state.  
NOTE Confidence: 0.979839946

00:09:04.120 --> 00:09:07.039 With side effects such as hot flashes,  
NOTE Confidence: 0.979839946

00:09:07.040 --> 00:09:10.118 bone density problems,  
NOTE Confidence: 0.979839946

00:09:10.118 --> 00:09:14.456 potentially cardiovascular disease, however,  
NOTE Confidence: 0.979839946

00:09:14.456 --> 00:09:17.596 there have been studies demonstrating  
NOTE Confidence: 0.979839946

00:09:17.600 --> 00:09:20.570 that risk reducing surgery actually  
NOTE Confidence: 0.979839946

00:09:20.570 --> 00:09:23.246 helps patients live longer despite  
NOTE Confidence: 0.979839946

00:09:23.246 --> 00:09:26.948 those side effects that may potentially  
NOTE Confidence: 0.979839946

00:09:26.948 --> 00:09:28.799 compromise cardiovascular health,  
NOTE Confidence: 0.979839946

00:09:28.800 --> 00:09:30.955 patients who undergo risk reducing  
NOTE Confidence: 0.979839946

00:09:30.955 --> 00:09:33.110 surgery by eliminating risk of

NOTE Confidence: 0.979839946

00:09:33.175 --> 00:09:35.330 ovarian cancer and breast cancer,

NOTE Confidence: 0.979839946

00:09:35.330 --> 00:09:39.058 they can live potentially longer.

NOTE Confidence: 0.979839946

00:09:39.058 --> 00:09:41.948 To alleviate the symptoms of menopause

NOTE Confidence: 0.979839946

00:09:41.950 --> 00:09:43.850 we use a hormonal therapy.

NOTE Confidence: 0.979839946

00:09:43.850 --> 00:09:46.136 Now we use non hormonal approaches

NOTE Confidence: 0.979839946

00:09:46.136 --> 00:09:50.670 as well and the therapy is meant to

NOTE Confidence: 0.979839946

00:09:50.670 --> 00:09:53.150 alleviate symptoms without interfering

NOTE Confidence: 0.979839946

00:09:53.150 --> 00:09:56.250 with other hormonally active tumor

NOTE Confidence: 0.979839946

00:09:56.250 --> 00:09:59.727 and without affect on the breast as such,

NOTE Confidence: 0.979839946

00:09:59.730 --> 00:10:02.859 because the hormonal effect on

NOTE Confidence: 0.979839946

00:10:02.859 --> 00:10:06.359 uterus and breast may be somewhat different,

NOTE Confidence: 0.979839946

00:10:06.360 --> 00:10:08.537 we have to bear in mind we

NOTE Confidence: 0.979839946

00:10:08.537 --> 00:10:10.470 potentially can help with symptoms,

NOTE Confidence: 0.979839946

00:10:10.470 --> 00:10:12.549 but we also do not want to

NOTE Confidence: 0.979839946

00:10:12.549 --> 00:10:14.339 hurt with breast cancer risk,

NOTE Confidence: 0.979839946

00:10:14.340 --> 00:10:16.979 which as you mentioned,  
NOTE Confidence: 0.979839946

00:10:16.980 --> 00:10:20.748 is higher in BRCA mutation patients.  
00:10:21.320 --> 00:10:24.106 That's kind of a  
NOTE Confidence: 0.886865278

00:10:24.106 --> 00:10:26.391 tight rope to walk, to eliminate  
NOTE Confidence: 0.886865278

00:10:26.391 --> 00:10:28.778 symptoms as best you can while not  
NOTE Confidence: 0.886865278

00:10:28.778 --> 00:10:30.798 increasing the risk of other cancers.  
NOTE Confidence: 0.964852371818182

00:10:31.210 --> 00:10:33.490 That's correct when we do  
NOTE Confidence: 0.964852371818182

00:10:33.490 --> 00:10:36.130 this surgery after age of 50, the  
NOTE Confidence: 0.964852371818182

00:10:36.130 --> 00:10:39.084 average age of menopause in North America,  
NOTE Confidence: 0.964852371818182

00:10:39.090 --> 00:10:41.286 it's about 52.  
NOTE Confidence: 0.964852371818182

00:10:41.290 --> 00:10:44.946 When we do surgery at later age  
NOTE Confidence: 0.964852371818182

00:10:44.946 --> 00:10:48.646 those issues automatically are not there.  
NOTE Confidence: 0.964852371818182

00:10:48.646 --> 00:10:51.936 However, when patient has an  
NOTE Confidence: 0.964852371818182

00:10:51.940 --> 00:10:53.980 early onset of ovarian  
NOTE Confidence: 0.964852371818182

00:10:53.980 --> 00:10:57.040 cancer and before age of 50,  
NOTE Confidence: 0.964852371818182

00:10:57.040 --> 00:10:59.560 then we try to do this surgery early.  
NOTE Confidence: 0.964852371818182



00:10:59.560 --> 00:11:02.260 In that circumstance, we  
NOTE Confidence: 0.964852371818182

00:11:02.260 --> 00:11:05.332 do work with a patient without addressing  
NOTE Confidence: 0.964852371818182

00:11:05.332 --> 00:11:07.690 her symptoms of surgical menopause.  
NOTE Confidence: 0.954331217866667

00:11:08.140 --> 00:11:10.276 And I suppose in a BRCA patient  
NOTE Confidence: 0.954331217866667

00:11:10.276 --> 00:11:12.510 the other way to reduce your risk of  
NOTE Confidence: 0.954331217866667

00:11:12.510 --> 00:11:14.841 breast cancer even if you were going to  
NOTE Confidence: 0.954331217866667

00:11:14.841 --> 00:11:17.264 take some sort of hormonal therapy to  
NOTE Confidence: 0.954331217866667

00:11:17.264 --> 00:11:19.840 offset surgically induced menopause,  
NOTE Confidence: 0.954331217866667

00:11:19.840 --> 00:11:22.005 is to have bilateral prophylactic  
NOTE Confidence: 0.954331217866667

00:11:22.005 --> 00:11:23.737 mastectomies and reduce your  
NOTE Confidence: 0.954331217866667

00:11:23.737 --> 00:11:25.849 risk of breast cancer as well.  
NOTE Confidence: 0.954331217866667

00:11:25.850 --> 00:11:28.280 But that is another show,  
NOTE Confidence: 0.954331217866667

00:11:28.280 --> 00:11:31.778 so getting back to ovarian cancer,  
NOTE Confidence: 0.954331217866667

00:11:31.780 --> 00:11:35.518 you know you mentioned that this is  
NOTE Confidence: 0.954331217866667

00:11:35.518 --> 00:11:38.869 often especially in the early stages,  
NOTE Confidence: 0.954331217866667

00:11:38.870 --> 00:11:41.318 something that is not easily diagnosed.

NOTE Confidence: 0.954331217866667  
00:11:41.320 --> 00:11:44.834 It's usually presenting late so  
NOTE Confidence: 0.954331217866667  
00:11:44.834 --> 00:11:47.312 what can women do if  
NOTE Confidence: 0.954331217866667  
00:11:47.312 --> 00:11:49.799 they want to catch this early?  
NOTE Confidence: 0.954331217866667  
00:11:49.800 --> 00:11:53.100 I mean should they be getting annual vaginal  
NOTE Confidence: 0.954331217866667  
00:11:53.100 --> 00:11:55.080 ultrasounds?  
NOTE Confidence: 0.954331217866667  
00:11:55.080 --> 00:11:57.204 But the study showed that that  
NOTE Confidence: 0.954331217866667  
00:11:57.204 --> 00:11:58.620 really didn't improve survival.  
NOTE Confidence: 0.954331217866667  
00:11:58.620 --> 00:12:00.436 Or is it just a matter of being  
NOTE Confidence: 0.954331217866667  
00:12:00.436 --> 00:12:02.486 aware of your body and seeking  
NOTE Confidence: 0.954331217866667  
00:12:02.486 --> 00:12:04.590 medical advice when you have symptoms?  
NOTE Confidence: 0.7413321214375  
00:12:05.510 --> 00:12:06.632 Great question.  
NOTE Confidence: 0.7413321214375  
00:12:06.632 --> 00:12:10.988 I think the body sends us signals.  
NOTE Confidence: 0.7413321214375  
00:12:10.988 --> 00:12:14.940 So when we start connecting to our body,  
NOTE Confidence: 0.7413321214375  
00:12:14.940 --> 00:12:17.190 body and mind are interconnected  
NOTE Confidence: 0.7413321214375  
00:12:17.190 --> 00:12:19.565 and when you develop something new  
NOTE Confidence: 0.7413321214375

00:12:19.565 --> 00:12:21.575 something changed over the course  
NOTE Confidence: 0.7413321214375

00:12:21.575 --> 00:12:23.990 of the last couple of months,  
NOTE Confidence: 0.7413321214375

00:12:23.990 --> 00:12:26.330 bring that to the attention of  
NOTE Confidence: 0.7413321214375

00:12:26.330 --> 00:12:28.870 your physician and if you are not  
NOTE Confidence: 0.7413321214375

00:12:28.870 --> 00:12:30.470 satisfied with the response,  
00:12:32.130 --> 00:12:35.354 seek a second opinion and it is very  
NOTE Confidence: 0.7413321214375

00:12:35.354 --> 00:12:38.219 important to know your family history.  
NOTE Confidence: 0.7413321214375

00:12:38.220 --> 00:12:40.446 What did your aunt die from?  
NOTE Confidence: 0.7413321214375

00:12:40.450 --> 00:12:43.789 What did your cousin die from.  
00:12:45.890 --> 00:12:48.446 Find out whether it was genetically  
NOTE Confidence: 0.7413321214375

00:12:48.446 --> 00:12:50.150 related and you potentially  
NOTE Confidence: 0.7413321214375

00:12:50.222 --> 00:12:52.050 can get genetically tested.  
NOTE Confidence: 0.7413321214375

00:12:52.050 --> 00:12:54.696 I think those two things, bringing attention  
NOTE Confidence: 0.7413321214375

00:12:54.700 --> 00:12:56.690 to symptoms and finding your  
NOTE Confidence: 0.7413321214375

00:12:56.690 --> 00:12:58.680 genetic background will help us  
NOTE Confidence: 0.7413321214375

00:12:58.755 --> 00:13:00.747 to prevent some of the cancer,  
NOTE Confidence: 0.7413321214375

00:13:00.750 --> 00:13:02.250 or at least diagnose early.

NOTE Confidence: 0.983123865263158

00:13:03.070 --> 00:13:05.416 That's so important and we are

NOTE Confidence: 0.983123865263158

00:13:05.416 --> 00:13:08.322 going to learn more about how to

NOTE Confidence: 0.983123865263158

00:13:08.322 --> 00:13:10.830 make a diagnosis of ovarian cancer,

NOTE Confidence: 0.983123865263158

00:13:10.830 --> 00:13:13.574 how to treat this, and what are the

NOTE Confidence: 0.983123865263158

00:13:13.574 --> 00:13:15.778 important advances that are going on

NOTE Confidence: 0.983123865263158

00:13:15.778 --> 00:13:17.950 in terms of clinical research regarding

NOTE Confidence: 0.983123865263158

00:13:18.021 --> 00:13:20.001 ovarian cancer right after we take

NOTE Confidence: 0.983123865263158

00:13:20.001 --> 00:13:22.068 a short break for medical minute.

NOTE Confidence: 0.983123865263158

00:13:22.068 --> 00:13:24.282 Please stay tuned to learn more

NOTE Confidence: 0.983123865263158

00:13:24.282 --> 00:13:26.158 about ovarian cancer with my

NOTE Confidence: 0.983123865263158

00:13:26.158 --> 00:13:27.938 guest Doctor Vaagn Andikyan.

NOTE Confidence: 0.922628669

00:13:28.310 --> 00:13:30.260 Support for Yale Cancer Answers

NOTE Confidence: 0.922628669

00:13:30.260 --> 00:13:32.210 comes from Smilow Cancer Hospital,

NOTE Confidence: 0.922628669

00:13:32.210 --> 00:13:33.950 where an individualized approach

NOTE Confidence: 0.922628669

00:13:33.950 --> 00:13:35.255 to prostate cancer

NOTE Confidence: 0.922628669

00:13:35.260 --> 00:13:37.796 screening is used to determine which men are  
NOTE Confidence: 0.922628669

00:13:37.796 --> 00:13:40.099 eligible and would benefit from screening.  
NOTE Confidence: 0.922628669

00:13:40.100 --> 00:13:43.562 To learn more, visit Yale Cancer  
NOTE Confidence: 0.922628669

00:13:43.562 --> 00:13:45.870 Center dot org slash screening.  
NOTE Confidence: 0.922628669

00:13:45.870 --> 00:13:48.182 Breast cancer is one of the most common  
NOTE Confidence: 0.922628669

00:13:48.182 --> 00:13:50.389 cancers in women. In Connecticut alone,  
NOTE Confidence: 0.922628669

00:13:50.390 --> 00:13:52.590 approximately 3500 women will be  
NOTE Confidence: 0.922628669

00:13:52.590 --> 00:13:55.190 diagnosed with breast cancer this year,  
NOTE Confidence: 0.922628669

00:13:55.190 --> 00:13:56.558 but there is hope,  
NOTE Confidence: 0.922628669

00:13:56.558 --> 00:13:57.926 thanks to earlier detection,  
NOTE Confidence: 0.922628669

00:13:57.930 --> 00:13:59.935 noninvasive treatments and the development  
NOTE Confidence: 0.922628669

00:13:59.935 --> 00:14:02.810 of novel therapies to fight breast cancer.  
NOTE Confidence: 0.922628669

00:14:02.810 --> 00:14:04.640 Women should schedule a baseline  
NOTE Confidence: 0.922628669

00:14:04.640 --> 00:14:06.861 mammogram beginning at age 40 or  
NOTE Confidence: 0.922628669

00:14:06.861 --> 00:14:08.841 earlier if they have risk factors  
NOTE Confidence: 0.922628669

00:14:08.841 --> 00:14:10.370 associated with the disease.

NOTE Confidence: 0.922628669

00:14:10.370 --> 00:14:12.118 With screening, early detection,

NOTE Confidence: 0.922628669

00:14:12.118 --> 00:14:13.866 and a healthy lifestyle,

NOTE Confidence: 0.922628669

00:14:13.870 --> 00:14:16.020 breast cancer can be defeated.

NOTE Confidence: 0.922628669

00:14:16.020 --> 00:14:17.988 Clinical trials are currently

NOTE Confidence: 0.922628669

00:14:17.988 --> 00:14:19.956 underway at federally designated

NOTE Confidence: 0.922628669

00:14:19.956 --> 00:14:21.642 Comprehensive cancer centers such

NOTE Confidence: 0.922628669

00:14:21.642 --> 00:14:23.882 as Yale Cancer Center and Smilow

NOTE Confidence: 0.922628669

00:14:23.882 --> 00:14:25.977 Cancer Hospital to make innovative

NOTE Confidence: 0.922628669

00:14:25.977 --> 00:14:28.117 new treatments available to patients.

NOTE Confidence: 0.922628669

00:14:28.120 --> 00:14:30.590 Digital breast tomosynthesis or 3D

NOTE Confidence: 0.922628669

00:14:30.590 --> 00:14:33.060 mammography is also transforming breast

NOTE Confidence: 0.922628669

00:14:33.129 --> 00:14:35.317 cancer screening by significantly

NOTE Confidence: 0.922628669

00:14:35.317 --> 00:14:36.958 reducing unnecessary procedures

NOTE Confidence: 0.922628669

00:14:36.958 --> 00:14:39.540 while picking up more cancers.

NOTE Confidence: 0.922628669

00:14:39.540 --> 00:14:42.560 More information is available at

NOTE Confidence: 0.922628669

00:14:42.560 --> 00:14:43.856 yalecancercenter.org. You're listening  
NOTE Confidence: 0.922628669

00:14:43.856 --> 00:14:45.584 to Connecticut Public Radio.  
NOTE Confidence: 0.89218291

00:14:46.500 --> 00:14:48.600 Welcome back to Yale Cancer Answers.  
NOTE Confidence: 0.89218291

00:14:48.600 --> 00:14:51.174 This is doctor Anees Chagpar and I'm joined  
NOTE Confidence: 0.89218291

00:14:51.174 --> 00:14:53.435 tonight by my guest Doctor Vaagn Andikyan.  
NOTE Confidence: 0.89218291

00:14:53.440 --> 00:14:56.296 We're discussing the care of women with  
NOTE Confidence: 0.89218291

00:14:56.296 --> 00:14:58.736 ovarian cancer and right before the break  
NOTE Confidence: 0.89218291

00:14:58.740 --> 00:15:01.146 you were talking about how  
NOTE Confidence: 0.89218291

00:15:01.146 --> 00:15:03.708 you know it's really important for  
NOTE Confidence: 0.89218291

00:15:03.708 --> 00:15:06.716 women to know their family history and  
NOTE Confidence: 0.89218291

00:15:06.716 --> 00:15:08.596 to really advocate for themselves.  
NOTE Confidence: 0.89218291

00:15:08.600 --> 00:15:10.120 So if they have symptoms,  
NOTE Confidence: 0.89218291

00:15:10.120 --> 00:15:11.740 even if they're non specific,  
NOTE Confidence: 0.89218291

00:15:11.740 --> 00:15:13.917 a little bit of bloating, change in  
NOTE Confidence: 0.89218291

00:15:13.917 --> 00:15:15.366 bowel habit, difficulty urinating,  
NOTE Confidence: 0.89218291

00:15:15.366 --> 00:15:17.018 whatever it might be.

NOTE Confidence: 0.89218291

00:15:17.020 --> 00:15:19.486 A little bit of abdominal discomfort.

NOTE Confidence: 0.89218291

00:15:19.490 --> 00:15:21.385 Sometimes those might be the

NOTE Confidence: 0.89218291

00:15:21.385 --> 00:15:23.280 first signs of ovarian cancer,

NOTE Confidence: 0.89218291

00:15:23.280 --> 00:15:26.862 and it's so important to get it checked out

NOTE Confidence: 0.89218291

00:15:26.862 --> 00:15:30.973 so that we can find cancer at an early stage.

NOTE Confidence: 0.89218291

00:15:30.980 --> 00:15:33.692 I want to kind of pick

NOTE Confidence: 0.89218291

00:15:33.692 --> 00:15:37.057 up there and talk a little bit about

NOTE Confidence: 0.89218291

00:15:37.057 --> 00:15:39.190 diagnosis of ovarian cancer.

NOTE Confidence: 0.89218291

00:15:39.190 --> 00:15:42.406 How is it that people actually get diagnosed?

NOTE Confidence: 0.89218291

00:15:42.410 --> 00:15:44.853 So either they're going to come and

NOTE Confidence: 0.89218291

00:15:44.853 --> 00:15:47.717 present to you with some vague symptoms,

00:15:48.278 --> 00:15:52.184 and hopefully we find things early.

NOTE Confidence: 0.89218291

00:15:52.190 --> 00:15:54.890 But how is a diagnosis made?

00:15:58.710 --> 00:16:01.657 We grade ovarian cancer into two

NOTE Confidence: 0.9598225625

00:16:01.657 --> 00:16:04.378 groups, early stage versus late stage,

NOTE Confidence: 0.9598225625

00:16:04.380 --> 00:16:05.826 usually early stage it's

NOTE Confidence: 0.9598225625



00:16:05.826 --> 00:16:09.200 an incidental finding of a cyst in the patient.  
NOTE Confidence: 0.9598225625

00:16:09.200 --> 00:16:12.231 They went to the emergency room for let's say  
NOTE Confidence: 0.9598225625

00:16:12.231 --> 00:16:14.804 gallbladder problem or pneumonia  
NOTE Confidence: 0.9598225625

00:16:14.804 --> 00:16:18.109 and they incidentally find a lesion  
NOTE Confidence: 0.9598225625

00:16:18.109 --> 00:16:20.815 that triggered additional work up.  
00:16:29.671 --> 00:16:32.150 For patients who started experiencing symptoms  
NOTE Confidence: 0.9598225625

00:16:32.150 --> 00:16:34.465 they probably already have stage three  
NOTE Confidence: 0.9598225625

00:16:34.465 --> 00:16:35.854 and four disease.  
NOTE Confidence: 0.9598225625

00:16:35.860 --> 00:16:38.518 Unfortunately there is not a good  
NOTE Confidence: 0.9598225625

00:16:38.518 --> 00:16:41.238 symptom that can pick up  
NOTE Confidence: 0.9598225625

00:16:41.238 --> 00:16:43.388 an early stage ovarian cancer,  
NOTE Confidence: 0.9598225625

00:16:43.390 --> 00:16:46.449 unless the mass is so large and  
NOTE Confidence: 0.9598225625

00:16:46.449 --> 00:16:48.370 compressing on neighboring organs.  
NOTE Confidence: 0.9598225625

00:16:48.370 --> 00:16:50.820 We've seen often and not unusual to  
NOTE Confidence: 0.9598225625

00:16:50.820 --> 00:16:53.738 have a many centimeter mass in ovary  
NOTE Confidence: 0.9598225625

00:16:53.740 --> 00:16:56.560 and still have stage one disease.  
NOTE Confidence: 0.9598225625

00:16:56.560 --> 00:16:58.015 In those patients  
NOTE Confidence: 0.9598225625

00:16:58.015 --> 00:17:00.440 with early stage disease,  
NOTE Confidence: 0.9598225625

00:17:00.440 --> 00:17:02.830 we triage according their age.  
NOTE Confidence: 0.9598225625

00:17:02.830 --> 00:17:05.375 We often offer even fertility  
NOTE Confidence: 0.9598225625

00:17:05.375 --> 00:17:07.920 preservation for patients at younger  
NOTE Confidence: 0.9598225625

00:17:08.002 --> 00:17:10.162 age who desire future fertility  
NOTE Confidence: 0.9598225625

00:17:10.162 --> 00:17:13.020 and they have stage one disease.  
NOTE Confidence: 0.9598225625

00:17:13.020 --> 00:17:16.051 We can potentially save ovary and  
NOTE Confidence: 0.9598225625

00:17:16.051 --> 00:17:18.640 give them opportunity to become mothers.  
NOTE Confidence: 0.9598225625

00:17:18.640 --> 00:17:21.220 For those patients who are diagnosed late  
NOTE Confidence: 0.9598225625

00:17:21.220 --> 00:17:21.638 unfortunately,  
NOTE Confidence: 0.9598225625

00:17:21.638 --> 00:17:24.146 organ preservation is not an option.  
00:17:24.543 --> 00:17:27.687 In that case we do a thorough work  
NOTE Confidence: 0.9598225625

00:17:27.687 --> 00:17:31.046 up to figure out whether patient is  
NOTE Confidence: 0.9598225625

00:17:31.046 --> 00:17:33.989 a candidate for surgery versus neoadjuvant  
NOTE Confidence: 0.9598225625

00:17:33.990 --> 00:17:35.862 chemotherapy.  
NOTE Confidence: 0.9598225625

00:17:35.862 --> 00:17:39.606 One approach focuses on upfront surgery.  
NOTE Confidence: 0.9598225625

00:17:39.610 --> 00:17:42.105 If patient comorbidity allows in  
NOTE Confidence: 0.9598225625

00:17:42.105 --> 00:17:46.247 cases when that type of surgery is not  
NOTE Confidence: 0.9598225625

00:17:46.247 --> 00:17:48.832 feasible due to disease distribution  
NOTE Confidence: 0.9598225625

00:17:48.832 --> 00:17:52.370 and or patient performance status,  
NOTE Confidence: 0.9598225625

00:17:52.370 --> 00:17:55.886 we proceed with neoadjuvant chemotherapy.  
00:17:56.790 --> 00:17:59.040 Our organization historically  
NOTE Confidence: 0.9598225625

00:17:59.040 --> 00:18:01.698 had the focus on this approach,  
NOTE Confidence: 0.9598225625

00:18:01.700 --> 00:18:04.370 and we've demonstrated good  
NOTE Confidence: 0.9598225625

00:18:04.370 --> 00:18:07.892 results with that approach and  
NOTE Confidence: 0.9598225625

00:18:07.892 --> 00:18:10.936 national and International Studies  
NOTE Confidence: 0.9598225625

00:18:10.936 --> 00:18:13.299 demonstrated similarly good results  
NOTE Confidence: 0.9598225625

00:18:13.299 --> 00:18:15.431 with neoadjuvant chemotherapy in  
NOTE Confidence: 0.9598225625

00:18:15.431 --> 00:18:18.513 patients who are not a candidate  
NOTE Confidence: 0.9598225625

00:18:18.513 --> 00:18:19.920 for upfront debulking.  
NOTE Confidence: 0.9598225625

00:18:19.920 --> 00:18:22.155 The whole philosophy of surgical  
NOTE Confidence: 0.9598225625

00:18:22.155 --> 00:18:23.943 treatment of ovarian cancer  
NOTE Confidence: 0.9598225625

00:18:23.950 --> 00:18:24.714 to obtain,  
NOTE Confidence: 0.9598225625

00:18:24.714 --> 00:18:27.388 we call it no residual disease  
NOTE Confidence: 0.9598225625

00:18:27.388 --> 00:18:29.599 or optimal cytoreduction.  
NOTE Confidence: 0.9598225625

00:18:29.600 --> 00:18:32.015 When the volume of tumor is minimal,  
NOTE Confidence: 0.9598225625

00:18:32.020 --> 00:18:34.258 at least less than one centimeter,  
NOTE Confidence: 0.9598225625

00:18:34.260 --> 00:18:36.135 ideally no growth,  
NOTE Confidence: 0.9598225625

00:18:36.135 --> 00:18:39.954 or residual tumor following that surgery,  
NOTE Confidence: 0.9598225625

00:18:39.954 --> 00:18:43.842 we proceed with the systemic chemotherapy  
NOTE Confidence: 0.9598225625

00:18:43.842 --> 00:18:46.048 that includes administration  
NOTE Confidence: 0.9598225625

00:18:46.048 --> 00:18:49.688 of the cytotoxic drug, commonly  
NOTE Confidence: 0.9598225625

00:18:49.690 --> 00:18:52.370 we use carboplatin and paclitaxel  
NOTE Confidence: 0.9598225625

00:18:52.370 --> 00:18:55.750 with biologic agents such as Bevacizumab.  
NOTE Confidence: 0.9598225625

00:18:55.750 --> 00:18:59.308 New data came up actually  
NOTE Confidence: 0.9598225625

00:18:59.308 --> 00:19:01.087 two years ago, a  
NOTE Confidence: 0.9598225625

00:19:01.090 --> 00:19:04.306 large study in Europe demonstrated the

NOTE Confidence: 0.9598225625

00:19:04.306 --> 00:19:07.018 benefit of heated chemotherapy that

NOTE Confidence: 0.9598225625

00:19:07.018 --> 00:19:09.946 can be administered during the surgery.

NOTE Confidence: 0.9598225625

00:19:09.950 --> 00:19:13.200 That whole approach, called HIPC,

NOTE Confidence: 0.9598225625

00:19:13.200 --> 00:19:14.865 heated intraperitoneal chemotherapy

NOTE Confidence: 0.9598225625

00:19:14.865 --> 00:19:17.640 is done during surgery for

NOTE Confidence: 0.9598225625

00:19:17.640 --> 00:19:19.275 patients who

NOTE Confidence: 0.9598225625

00:19:19.275 --> 00:19:22.545 received neo adjuvant chemotherapy and

NOTE Confidence: 0.9598225625

00:19:22.545 --> 00:19:25.578 underwent successful debulking surgery,

NOTE Confidence: 0.9598225625

00:19:25.580 --> 00:19:28.164 receive heated chemotherapy during

NOTE Confidence: 0.9598225625

00:19:28.164 --> 00:19:31.394 their procedure and they follow

NOTE Confidence: 0.9598225625

00:19:31.394 --> 00:19:34.498 on their regular therapy after

NOTE Confidence: 0.9598225625

00:19:34.498 --> 00:19:38.038 surgery and recovery from HIPC.

NOTE Confidence: 0.9598225625

00:19:38.040 --> 00:19:40.776 This approach is slowly picking up

NOTE Confidence: 0.9598225625

00:19:40.776 --> 00:19:43.656 the pace and the study

NOTE Confidence: 0.9598225625

00:19:43.656 --> 00:19:46.584 in Europe demonstrated one year

NOTE Confidence: 0.9598225625

00:19:46.584 --> 00:19:49.053 survival benefit in those patients

NOTE Confidence: 0.9598225625

00:19:49.053 --> 00:19:51.879 who underwent this type of therapy.

NOTE Confidence: 0.9598225625

00:19:51.880 --> 00:19:55.580 Another approach is organ

NOTE Confidence: 0.9598225625

00:19:55.580 --> 00:19:58.685 preservation and we work closely

NOTE Confidence: 0.9598225625

00:19:58.685 --> 00:20:01.790 with our colleagues in reproductive

NOTE Confidence: 0.9598225625

00:20:01.884 --> 00:20:04.292 endocrinology ovacyt preservation

NOTE Confidence: 0.9598225625

00:20:04.292 --> 00:20:09.077 and the patient even may opt for her

NOTE Confidence: 0.9598225625

00:20:09.077 --> 00:20:11.762 ovacyt to be collected prior

NOTE Confidence: 0.9598225625

00:20:11.762 --> 00:20:13.373 to proceeding with surgery.

NOTE Confidence: 0.9622365333333333

00:20:23.260 --> 00:20:27.990 Just to back up,

NOTE Confidence: 0.9622365333333333

00:20:27.990 --> 00:20:30.318 you know when you talk about

NOTE Confidence: 0.9622365333333333

00:20:30.318 --> 00:20:32.446 ovarian cancer as either being

NOTE Confidence: 0.9622365333333333

00:20:32.446 --> 00:20:34.438 early stage versus advanced,

NOTE Confidence: 0.9622365333333333

00:20:34.440 --> 00:20:36.678 how exactly do you determine that?

NOTE Confidence: 0.9622365333333333

00:20:36.680 --> 00:20:38.190 So say somebody presents to

NOTE Confidence: 0.9622365333333333

00:20:38.190 --> 00:20:39.700 you and they've got some,

NOTE Confidence: 0.9622365333333333

00:20:39.700 --> 00:20:41.248 you know, vague symptoms.

NOTE Confidence: 0.9622365333333333

00:20:41.248 --> 00:20:43.570 What are the tests that you

NOTE Confidence: 0.9622365333333333

00:20:43.646 --> 00:20:45.398 will do to first of all,

NOTE Confidence: 0.9622365333333333

00:20:45.400 --> 00:20:49.477 find out if this is in fact ovarian cancer,

NOTE Confidence: 0.9622365333333333

00:20:49.480 --> 00:20:50.480 and second,

NOTE Confidence: 0.9622365333333333

00:20:50.480 --> 00:20:53.980 whether this falls into the early stage

NOTE Confidence: 0.9622365333333333

00:20:53.980 --> 00:20:56.18 bucket or the late stage bucket.

NOTE Confidence: 0.7966067714

00:20:57.120 --> 00:20:58.296 Great question.

NOTE Confidence: 0.7966067714

00:20:58.296 --> 00:21:00.060 And honestly, unfortunately

NOTE Confidence: 0.7966067714

00:21:00.060 --> 00:21:03.028 as of today we do not have any

NOTE Confidence: 0.7966067714

00:21:03.028 --> 00:21:05.584 definitive tool to know for sure

NOTE Confidence: 0.7966067714

00:21:05.584 --> 00:21:07.739 whether this is ovarian cancer.

NOTE Confidence: 0.7966067714

00:21:07.740 --> 00:21:12.546 So diagnostic imaging is broadly used today

NOTE Confidence: 0.7966067714

00:21:12.550 --> 00:21:16.260 CT, PET scans, MRI.

NOTE Confidence: 0.7966067714

00:21:16.260 --> 00:21:19.960 They are not very specific

NOTE Confidence: 0.7966067714

00:21:19.960 --> 00:21:22.920 in the ovary.  
NOTE Confidence: 0.7966067714

00:21:22.920 --> 00:21:25.280 Ovarian surface itself may attract  
NOTE Confidence: 0.7966067714

00:21:25.280 --> 00:21:26.696 tumor from other areas.  
NOTE Confidence: 0.7966067714

00:21:26.700 --> 00:21:29.670 For example, stomach cancer may travel  
NOTE Confidence: 0.7966067714

00:21:29.670 --> 00:21:33.824 to ovary and when you see ovarian mass  
NOTE Confidence: 0.7966067714

00:21:33.824 --> 00:21:36.950 but that initial cancer was originated  
NOTE Confidence: 0.7966067714

00:21:37.046 --> 00:21:41.210 from a GI tract from colon cancer,  
NOTE Confidence: 0.7966067714

00:21:41.210 --> 00:21:43.570 it's very important to do a thorough work up,  
NOTE Confidence: 0.7966067714

00:21:43.570 --> 00:21:46.276 and the imaging is number one.  
NOTE Confidence: 0.7966067714

00:21:46.280 --> 00:21:49.880 We use oncomarkers to tailor  
NOTE Confidence: 0.7966067714

00:21:49.880 --> 00:21:51.680 other possible diagnosis,  
NOTE Confidence: 0.7966067714

00:21:51.680 --> 00:21:53.440 such as colon cancer,  
NOTE Confidence: 0.7966067714

00:21:53.440 --> 00:21:54.320 pancreatic cancer,  
NOTE Confidence: 0.7966067714

00:21:54.320 --> 00:21:57.096 breast cancer.  
NOTE Confidence: 0.7966067714

00:21:57.096 --> 00:22:02.212 The markers  
NOTE Confidence: 0.7966067714

00:22:02.212 --> 00:22:05.550 depend on the patient age.



NOTE Confidence: 0.7966067714

00:22:05.550 --> 00:22:09.126 We may include additional oncomarkers.

NOTE Confidence: 0.7966067714

00:22:09.130 --> 00:22:12.030 Very interesting that ovarian cancer

NOTE Confidence: 0.7966067714

00:22:12.030 --> 00:22:15.669 has family of three cancer in one.

NOTE Confidence: 0.7966067714

00:22:15.670 --> 00:22:18.202 One derives from lining of the

NOTE Confidence: 0.7966067714

00:22:18.202 --> 00:22:21.073 ovary and those give rise to

NOTE Confidence: 0.7966067714

00:22:21.073 --> 00:22:22.726 epithelial ovarian cancer.

NOTE Confidence: 0.7966067714

00:22:22.730 --> 00:22:25.860 The second family derives from

NOTE Confidence: 0.7966067714

00:22:25.860 --> 00:22:27.738 hormonally active tumors.

NOTE Confidence: 0.7966067714

00:22:27.740 --> 00:22:29.790 And those tumors may secrete

NOTE Confidence: 0.7966067714

00:22:29.790 --> 00:22:31.840 certain chemicals that we can

NOTE Confidence: 0.7966067714

00:22:31.917 --> 00:22:34.150 pick up on a blood test.

NOTE Confidence: 0.7966067714

00:22:36.082 --> 00:22:39.549 And the third group of tumors

NOTE Confidence: 0.7966067714

00:22:39.549 --> 00:22:41.999 derived from germ cells.

00:22:44.760 --> 00:22:46.338 And those three cancers

NOTE Confidence: 0.7966067714

00:22:46.340 --> 00:22:48.024 may have different

NOTE Confidence: 0.7966067714

00:22:48.024 --> 00:22:50.129 biology and different tests we

NOTE Confidence: 0.7966067714

00:22:50.129 --> 00:22:52.520 use to diagnose before surgery,

NOTE Confidence: 0.7966067714

00:22:52.520 --> 00:22:56.492 but ultimately our diagnosis heavily

NOTE Confidence: 0.7966067714

00:22:56.492 --> 00:22:59.140 relies on histologic evaluation.

NOTE Confidence: 0.7966067714

00:22:59.140 --> 00:23:00.688 What that means

NOTE Confidence: 0.7966067714

00:23:00.688 --> 00:23:03.790 is we perform some kind of a

NOTE Confidence: 0.7966067714

00:23:03.790 --> 00:23:06.558 biopsy or surgery to take a sample to

NOTE Confidence: 0.7966067714

00:23:06.644 --> 00:23:09.524 find out what type of cancer it is.

00:23:15.930 --> 00:23:18.639 It sounds like the therapies

NOTE Confidence: 0.936645796

00:23:18.639 --> 00:23:21.055 for advanced cancers are very different

NOTE Confidence: 0.936645796

00:23:21.055 --> 00:23:23.413 from the surgery for local cancer,

NOTE Confidence: 0.936645796

00:23:23.420 --> 00:23:25.330 whereas local cancers you might

NOTE Confidence: 0.936645796

00:23:25.330 --> 00:23:28.240 even get to spare part of the ovary.

NOTE Confidence: 0.936645796

00:23:28.240 --> 00:23:30.838 In advanced cancers we're talking about,

NOTE Confidence: 0.936645796

00:23:30.840 --> 00:23:33.505 you know, big surgeries taking

NOTE Confidence: 0.936645796

00:23:33.505 --> 00:23:35.898 out multiple organs,

NOTE Confidence: 0.936645796

00:23:35.898 --> 00:23:38.656 potentially adding in hipec and so on.

NOTE Confidence: 0.936645796

00:23:38.660 --> 00:23:40.276 So in other cancers

NOTE Confidence: 0.936645796

00:23:40.276 --> 00:23:42.700 that we talked about doing

NOTE Confidence: 0.936645796

00:23:42.784 --> 00:23:45.640 a core needle biopsy to get

NOTE Confidence: 0.936645796

00:23:45.640 --> 00:23:47.068 a preoperative diagnosis.

NOTE Confidence: 0.936645796

00:23:47.070 --> 00:23:48.238 But in ovarian cancer,

NOTE Confidence: 0.936645796

00:23:48.238 --> 00:23:50.781 is that the case or is that something

NOTE Confidence: 0.936645796

00:23:50.781 --> 00:23:53.685 that is diagnosed at the time of surgery?

NOTE Confidence: 0.918123592368421

00:23:55.280 --> 00:23:58.696 If the imaging demonstrate advanced

NOTE Confidence: 0.918123592368421

00:23:58.696 --> 00:24:01.962 disease and patient performance status does not

NOTE Confidence: 0.918123592368421

00:24:01.962 --> 00:24:05.382 allow us to perform debulking surgery,

NOTE Confidence: 0.918123592368421

00:24:05.390 --> 00:24:08.444 in that case we proceed

NOTE Confidence: 0.918123592368421

00:24:08.444 --> 00:24:10.480 with neoadjuvant chemotherapy.

NOTE Confidence: 0.918123592368421

00:24:10.480 --> 00:24:12.778 In that case scenario we

NOTE Confidence: 0.918123592368421

00:24:12.778 --> 00:24:14.900 proceed with core needle biopsy.

NOTE Confidence: 0.918123592368421

00:24:14.900 --> 00:24:17.660 But if the imaging shows us

00:24:19.880 --> 00:24:22.100 high suspicion

NOTE Confidence: 0.918123592368421  
00:24:22.100 --> 00:24:23.830 for ovarian cancer  
NOTE Confidence: 0.918123592368421  
00:24:23.830 --> 00:24:25.366 in that case, we do not  
NOTE Confidence: 0.918123592368421  
00:24:25.370 --> 00:24:27.800 obtain preoperative core biopsy with  
NOTE Confidence: 0.918123592368421  
00:24:27.800 --> 00:24:30.230 concern of potential side effects,  
NOTE Confidence: 0.918123592368421  
00:24:30.230 --> 00:24:34.298 infection and in anticipation of major  
NOTE Confidence: 0.918123592368421  
00:24:34.298 --> 00:24:37.740 surgery in patients with what  
NOTE Confidence: 0.918123592368421  
00:24:37.740 --> 00:24:40.739 looks like ovarian cyst and we are not  
NOTE Confidence: 0.918123592368421  
00:24:40.739 --> 00:24:43.130 sure 100% whether it's cancerous or not,  
NOTE Confidence: 0.918123592368421  
00:24:43.130 --> 00:24:46.210 we proceed with laparoscopic surgery.  
NOTE Confidence: 0.918123592368421  
00:24:46.210 --> 00:24:49.036 Remove that cyst in the obtained  
NOTE Confidence: 0.918123592368421  
00:24:49.036 --> 00:24:51.627 frozen section and for our  
NOTE Confidence: 0.918123592368421  
00:24:51.627 --> 00:24:53.490 listeners, frozen section  
NOTE Confidence: 0.918123592368421  
00:24:53.490 --> 00:24:55.510 is a tool when patients  
NOTE Confidence: 0.918123592368421  
00:24:55.510 --> 00:24:56.942 sleep under anesthesia.  
NOTE Confidence: 0.918123592368421  
00:24:56.942 --> 00:24:59.523 We perform surgery and we ask our  
NOTE Confidence: 0.918123592368421

00:24:59.523 --> 00:25:01.743 pathological colleagues within 20 minutes to give

NOTE Confidence: 0.918123592368421

00:25:01.743 --> 00:25:04.676 us an answer whether it's cancer or not,

NOTE Confidence: 0.918123592368421

00:25:04.680 --> 00:25:07.110 and according to that diagnosis,

NOTE Confidence: 0.918123592368421

00:25:07.110 --> 00:25:09.372 we decide whether the removal of

NOTE Confidence: 0.918123592368421

00:25:09.372 --> 00:25:12.151 cyst is enough or we should proceed

NOTE Confidence: 0.918123592368421

00:25:12.151 --> 00:25:14.646 with more staging type of surgery

NOTE Confidence: 0.918123592368421

00:25:14.646 --> 00:25:17.190 that includes removal of lymph nodes.

00:25:20.660 --> 00:25:23.292 And so as we talk about the different

NOTE Confidence: 0.975967446428571

00:25:23.292 --> 00:25:26.100 kinds of therapies for ovarian cancer,

NOTE Confidence: 0.975967446428571

00:25:26.100 --> 00:25:27.664 depending on the stage,

NOTE Confidence: 0.975967446428571

00:25:27.664 --> 00:25:29.228 we've talked about surgery,

NOTE Confidence: 0.975967446428571

00:25:29.230 --> 00:25:32.010 we've talked about systemic chemotherapy,

NOTE Confidence: 0.975967446428571

00:25:32.010 --> 00:25:33.410 the two modalities that

NOTE Confidence: 0.975967446428571

00:25:33.410 --> 00:25:34.810 we haven't talked about,

NOTE Confidence: 0.975967446428571

00:25:34.810 --> 00:25:37.168 that we do talk about a lot on this show,

NOTE Confidence: 0.975967446428571

00:25:37.170 --> 00:25:39.622 one is radiation therapy,

NOTE Confidence: 0.975967446428571

00:25:39.622 --> 00:25:42.687 and the other is immunotherapy.  
NOTE Confidence: 0.975967446428571

00:25:42.690 --> 00:25:44.334 Is there a role for either  
NOTE Confidence: 0.975967446428571

00:25:44.334 --> 00:25:45.847 of these modalities in the  
NOTE Confidence: 0.975967446428571

00:25:45.847 --> 00:25:47.279 treatment of ovarian cancer?  
00:25:54.065 --> 00:26:00.192 In the US we performed a study in the 80s  
NOTE Confidence: 0.774491183333333

00:26:00.192 --> 00:26:02.597 and we compared the whole abdominal  
NOTE Confidence: 0.774491183333333

00:26:02.597 --> 00:26:04.713 radiation versus systemic chemotherapy  
NOTE Confidence: 0.774491183333333

00:26:04.713 --> 00:26:07.673 and we demonstrated that systemic  
NOTE Confidence: 0.774491183333333

00:26:07.673 --> 00:26:10.462 chemotherapy works better. Less toxicity,  
NOTE Confidence: 0.774491183333333

00:26:10.462 --> 00:26:13.498 less concern for bowel side effects,  
NOTE Confidence: 0.774491183333333

00:26:13.500 --> 00:26:15.666 and we stay away from radiation  
NOTE Confidence: 0.774491183333333

00:26:15.670 --> 00:26:18.210 in ovarian cancer.  
NOTE Confidence: 0.774491183333333

00:26:18.210 --> 00:26:19.809 Select patients may  
NOTE Confidence: 0.774491183333333

00:26:19.809 --> 00:26:21.941 benefit from radiation therapy  
NOTE Confidence: 0.774491183333333

00:26:21.941 --> 00:26:23.540 for palliative purposes.  
NOTE Confidence: 0.774491183333333

00:26:23.540 --> 00:26:26.156 If there is a small recurrence in a  
NOTE Confidence: 0.774491183333333

00:26:26.156 --> 00:26:28.978 bone or small pelvic recurrence and  
NOTE Confidence: 0.7744911833333333

00:26:28.978 --> 00:26:31.593 patient is not surgical candidate,  
NOTE Confidence: 0.7744911833333333

00:26:31.600 --> 00:26:34.180 we may contemplate radiation therapy,  
NOTE Confidence: 0.7744911833333333

00:26:34.180 --> 00:26:36.875 but it's esoteric use.  
NOTE Confidence: 0.7744911833333333

00:26:36.880 --> 00:26:39.628 We don't use a radiation therapy  
NOTE Confidence: 0.7744911833333333

00:26:39.628 --> 00:26:41.460 to treat ovarian cancer.  
NOTE Confidence: 0.7744911833333333

00:26:41.460 --> 00:26:44.340 What about immunotherapy?  
NOTE Confidence: 0.7744911833333333

00:26:44.340 --> 00:26:47.524 It's a great question.  
NOTE Confidence: 0.7744911833333333

00:26:47.524 --> 00:26:49.905 Unfortunately, it is not really primetime  
NOTE Confidence: 0.7744911833333333

00:26:49.905 --> 00:26:52.709 yet for ovarian cancer.  
NOTE Confidence: 0.7744911833333333

00:26:52.710 --> 00:26:56.640 Current therapies demonstrated modest effect.  
NOTE Confidence: 0.7744911833333333

00:26:56.640 --> 00:27:00.162 We are still working on a biomarker  
NOTE Confidence: 0.7744911833333333

00:27:00.162 --> 00:27:01.923 for ovarian cancer.  
NOTE Confidence: 0.7744911833333333

00:27:01.930 --> 00:27:03.690 As I mentioned,  
NOTE Confidence: 0.7744911833333333

00:27:03.690 --> 00:27:06.330 there are three large families  
NOTE Confidence: 0.7744911833333333

00:27:06.411 --> 00:27:08.726 of ovarian cancer, epithelial, germ

NOTE Confidence: 0.7744911833333333  
00:27:08.726 --> 00:27:11.600 cell and sex cord stromal tumor.  
NOTE Confidence: 0.7744911833333333  
00:27:11.600 --> 00:27:13.615 But within those groups there  
NOTE Confidence: 0.7744911833333333  
00:27:13.615 --> 00:27:15.630 is also subdivision into high  
NOTE Confidence: 0.7744911833333333  
00:27:15.706 --> 00:27:17.686 grade serous, low grade serous,  
NOTE Confidence: 0.7744911833333333  
00:27:17.690 --> 00:27:20.390 clear cell, endometrial, etc.  
NOTE Confidence: 0.7744911833333333  
00:27:20.390 --> 00:27:23.430 so there are some groups of ovarian cancer  
NOTE Confidence: 0.7744911833333333  
00:27:23.430 --> 00:27:25.140 they may potentially  
NOTE Confidence: 0.7744911833333333  
00:27:25.140 --> 00:27:26.850 benefit from immunotherapy,  
NOTE Confidence: 0.7744911833333333  
00:27:26.850 --> 00:27:28.740 but that research is still ongoing.  
NOTE Confidence: 0.9851531125  
00:27:29.420 --> 00:27:32.059 Which brings me to probably my last  
NOTE Confidence: 0.9851531125  
00:27:32.059 --> 00:27:34.110 question, which is what are the  
NOTE Confidence: 0.9851531125  
00:27:34.110 --> 00:27:36.258 most exciting advances in terms of  
NOTE Confidence: 0.9851531125  
00:27:36.258 --> 00:27:38.308 clinical research in ovarian cancer?  
NOTE Confidence: 0.9851531125  
00:27:38.310 --> 00:27:39.998 What do we have to look forward to?  
NOTE Confidence: 0.845482713  
00:27:41.510 --> 00:27:45.758 So the large ones are using PARP  
NOTE Confidence: 0.845482713



00:27:45.758 --> 00:27:49.116 inhibition and in a large number of patients

NOTE Confidence: 0.845482713

00:27:49.120 --> 00:27:51.844 with this mutation we discovered several

NOTE Confidence: 0.845482713

00:27:51.844 --> 00:27:55.589 other new genes that may be also affected

NOTE Confidence: 0.845482713

00:27:55.589 --> 00:27:57.894 in patients with ovarian cancer.

NOTE Confidence: 0.845482713

00:27:57.900 --> 00:28:01.170 We're trying to understand which group

NOTE Confidence: 0.845482713

00:28:01.170 --> 00:28:04.515 of patients should receive this

NOTE Confidence: 0.845482713

00:28:04.515 --> 00:28:07.731 therapy upfront versus a recurrence.

NOTE Confidence: 0.845482713

00:28:07.731 --> 00:28:11.489 So the other group of the new drugs

NOTE Confidence: 0.845482713

00:28:11.490 --> 00:28:15.510 are used for molecular targeted therapy.

NOTE Confidence: 0.845482713

00:28:15.510 --> 00:28:18.996 We use molecular studies to demonstrate

NOTE Confidence: 0.845482713

00:28:18.996 --> 00:28:22.143 sudden receptors and we can potentially

NOTE Confidence: 0.845482713

00:28:22.143 --> 00:28:25.275 attach cytotoxic agents or use those

NOTE Confidence: 0.845482713

00:28:25.275 --> 00:28:28.455 molecular targets to a new group of drugs.

NOTE Confidence: 0.968226304

00:28:29.040 --> 00:28:31.230 Doctor Vaagn Andikyan is an

NOTE Confidence: 0.968226304

00:28:31.230 --> 00:28:32.690 assistant professor of obstetrics,

NOTE Confidence: 0.968226304

00:28:32.690 --> 00:28:34.386 gynecology and reproductive sciences

NOTE Confidence: 0.968226304  
00:28:34.386 --> 00:28:36.930 at the Yale School of Medicine.  
NOTE Confidence: 0.968226304  
00:28:36.930 --> 00:28:38.430 If you have questions,  
NOTE Confidence: 0.968226304  
00:28:38.430 --> 00:28:40.680 the address is cancer answers at  
NOTE Confidence: 0.968226304  
00:28:40.680 --> 00:28:42.990 yale.edu and past editions of the  
NOTE Confidence: 0.968226304  
00:28:42.990 --> 00:28:45.319 program are available in audio and  
NOTE Confidence: 0.968226304  
00:28:45.319 --> 00:28:47.846 written form at Yale Cancer Center dot Org.  
NOTE Confidence: 0.968226304  
00:28:47.850 --> 00:28:49.898 We hope you'll join us next week to  
NOTE Confidence: 0.968226304  
00:28:49.898 --> 00:28:51.876 learn more about the fight against  
NOTE Confidence: 0.968226304  
00:28:51.876 --> 00:28:53.631 cancer here on Connecticut Public  
NOTE Confidence: 0.968226304  
00:28:53.631 --> 00:28:55.379 radio funding for Yale Cancer  
NOTE Confidence: 0.968226304  
00:28:55.379 --> 00:28:57.049 Answers is provided by Smilow  
NOTE Confidence: 0.968226304  
00:28:57.049 --> 00:28:59.998 Cancer Hospital and AstraZeneca.