

WEBVTT

00:00:00.000 --> 00:00:03.120 Funding for Yale Cancer Answers is

NOTE Confidence: 0.790414710909091

00:00:03.120 --> 00:00:06.070 provided by Smilow Cancer Hospital.

NOTE Confidence: 0.790414710909091

00:00:06.070 --> 00:00:07.990 Welcome to Yale Cancer Answers with

NOTE Confidence: 0.790414710909091

00:00:07.990 --> 00:00:09.911 your host, Doctor Anees Chagpar.

NOTE Confidence: 0.790414710909091

00:00:09.911 --> 00:00:12.046 Yale Cancer Answers features the

NOTE Confidence: 0.790414710909091

00:00:12.046 --> 00:00:14.440 latest information on cancer care by

NOTE Confidence: 0.790414710909091

00:00:14.440 --> 00:00:15.916 welcoming oncologists and specialists

NOTE Confidence: 0.790414710909091

00:00:15.916 --> 00:00:18.203 who are on the forefront of the

NOTE Confidence: 0.790414710909091

00:00:18.203 --> 00:00:19.973 battle to fight cancer. This week,

NOTE Confidence: 0.790414710909091

00:00:19.973 --> 00:00:21.611 it's a conversation about the cost

NOTE Confidence: 0.790414710909091

00:00:21.611 --> 00:00:23.529 of cancer care in the United States,

NOTE Confidence: 0.790414710909091

00:00:23.530 --> 00:00:25.366 with Doctor Cary Gross and MD

NOTE Confidence: 0.790414710909091

00:00:25.370 --> 00:00:26.770 PhD student Ryan Chow.

NOTE Confidence: 0.790414710909091

00:00:26.770 --> 00:00:28.870 Doctor Gross is a professor of

NOTE Confidence: 0.790414710909091

00:00:28.942 --> 00:00:30.526 medicine and of epidemiology

NOTE Confidence: 0.790414710909091

00:00:30.526 --> 00:00:32.902 at the Yale School of Medicine,  
NOTE Confidence: 0.790414710909091

00:00:32.910 --> 00:00:34.725 where Doctor Chagpar is a  
NOTE Confidence: 0.790414710909091

00:00:34.725 --> 00:00:36.177 professor of surgical oncology.  
NOTE Confidence: 0.810325841428571

00:00:37.270 --> 00:00:39.006 Cary, maybe we'll start off with you.  
NOTE Confidence: 0.810325841428571

00:00:39.010 --> 00:00:41.116 Why don't you tell us a little bit more  
NOTE Confidence: 0.810325841428571

00:00:41.116 --> 00:00:43.380 about yourself and what it is you do.  
NOTE Confidence: 0.832231949411765

00:00:43.390 --> 00:00:46.204 I am a primary care doctor and a researcher  
NOTE Confidence: 0.832231949411765

00:00:46.204 --> 00:00:49.322 in the area of cancer outcomes  
NOTE Confidence: 0.832231949411765

00:00:49.322 --> 00:00:51.758 and cancer effectiveness research.  
NOTE Confidence: 0.832231949411765

00:00:51.760 --> 00:00:54.802 So I was a chief resident at a major  
NOTE Confidence: 0.832231949411765

00:00:54.802 --> 00:00:57.970 Cancer Center many years ago and was always,  
NOTE Confidence: 0.832231949411765

00:00:57.970 --> 00:00:59.610 always interested in primary care,  
NOTE Confidence: 0.832231949411765

00:00:59.610 --> 00:01:02.148 not necessarily in being an oncologist.  
NOTE Confidence: 0.832231949411765

00:01:02.150 --> 00:01:05.282 But while I was there at the Cancer Center,  
NOTE Confidence: 0.832231949411765

00:01:05.290 --> 00:01:06.942 I noticed that obviously  
NOTE Confidence: 0.832231949411765

00:01:06.942 --> 00:01:09.420 all of the patients had cancer.

NOTE Confidence: 0.832231949411765  
00:01:09.420 --> 00:01:10.740 I knew where I was,  
NOTE Confidence: 0.832231949411765  
00:01:10.740 --> 00:01:13.964 but also many of the patients were being  
NOTE Confidence: 0.832231949411765  
00:01:13.970 --> 00:01:16.858 admitted in the context of a clinical trial,  
NOTE Confidence: 0.832231949411765  
00:01:16.860 --> 00:01:20.548 and I noticed that many of the patients  
NOTE Confidence: 0.832231949411765  
00:01:20.548 --> 00:01:24.218 did not have other health problems.  
NOTE Confidence: 0.832231949411765  
00:01:24.220 --> 00:01:25.576 Most of the patients had cancer,  
NOTE Confidence: 0.832231949411765  
00:01:25.580 --> 00:01:27.176 but as a primary care DOC,  
NOTE Confidence: 0.832231949411765  
00:01:27.180 --> 00:01:28.836 I was looking around and asking.  
NOTE Confidence: 0.832231949411765  
00:01:28.840 --> 00:01:30.875 Geez, where are the patients  
NOTE Confidence: 0.832231949411765  
00:01:30.875 --> 00:01:32.910 with diabetes and emphysema and?  
NOTE Confidence: 0.832231949411765  
00:01:32.910 --> 00:01:35.340 Other chronic health health issues.  
NOTE Confidence: 0.832231949411765  
00:01:35.340 --> 00:01:35.633 Similarly,  
NOTE Confidence: 0.832231949411765  
00:01:35.633 --> 00:01:37.391 it just seemed as though many  
NOTE Confidence: 0.832231949411765  
00:01:37.391 --> 00:01:39.261 of the patients who are aside  
NOTE Confidence: 0.832231949411765  
00:01:39.261 --> 00:01:40.826 from their cancer are relatively  
NOTE Confidence: 0.832231949411765

00:01:40.826 --> 00:01:42.558 healthier and on the younger side,  
NOTE Confidence: 0.832231949411765

00:01:42.560 --> 00:01:44.205 you know, many of our patients were,  
NOTE Confidence: 0.832231949411765

00:01:44.210 --> 00:01:45.166 you know,  
NOTE Confidence: 0.832231949411765

00:01:45.166 --> 00:01:48.034 5060 years old and bottom line  
NOTE Confidence: 0.832231949411765

00:01:48.034 --> 00:01:50.219 in the real world,  
NOTE Confidence: 0.832231949411765

00:01:50.220 --> 00:01:53.230 patients with cancer are are often older  
NOTE Confidence: 0.832231949411765

00:01:53.230 --> 00:01:56.633 and sicker than they are in in clinical  
NOTE Confidence: 0.832231949411765

00:01:56.633 --> 00:01:59.360 research studies and and that insight.  
NOTE Confidence: 0.832231949411765

00:01:59.360 --> 00:02:01.070 Which occurred to me over the  
NOTE Confidence: 0.832231949411765

00:02:01.070 --> 00:02:02.571 course of my clinical training  
NOTE Confidence: 0.832231949411765

00:02:02.571 --> 00:02:04.685 has really spurred the rest of my  
NOTE Confidence: 0.832231949411765

00:02:04.685 --> 00:02:06.529 research in the sense of trying  
NOTE Confidence: 0.832231949411765

00:02:06.529 --> 00:02:08.305 to understand what happens in the  
NOTE Confidence: 0.832231949411765

00:02:08.310 --> 00:02:11.958 real world when drugs or tests,  
NOTE Confidence: 0.832231949411765

00:02:11.960 --> 00:02:12.941 or, you know,  
NOTE Confidence: 0.832231949411765

00:02:12.941 --> 00:02:14.576 kind of imaging modalities such

NOTE Confidence: 0.832231949411765  
00:02:14.576 --> 00:02:16.810 as new mammograms or CAT scans,  
NOTE Confidence: 0.832231949411765  
00:02:16.810 --> 00:02:18.150 or what have you.  
NOTE Confidence: 0.832231949411765  
00:02:18.150 --> 00:02:20.160 What happens when things that look  
NOTE Confidence: 0.832231949411765  
00:02:20.227 --> 00:02:22.352 like they are really potentially  
NOTE Confidence: 0.832231949411765  
00:02:22.352 --> 00:02:24.052 groundbreaking and helpful in  
NOTE Confidence: 0.832231949411765  
00:02:24.052 --> 00:02:26.029 the clinical trial setting?  
NOTE Confidence: 0.832231949411765  
00:02:26.030 --> 00:02:27.375 What happens when they're actually  
NOTE Confidence: 0.832231949411765  
00:02:27.375 --> 00:02:28.720 used in the real world?  
NOTE Confidence: 0.871002256190476  
00:02:29.370 --> 00:02:31.470 Great and you know, Carrie and I  
NOTE Confidence: 0.871002256190476  
00:02:31.470 --> 00:02:33.245 have been working together for a  
NOTE Confidence: 0.871002256190476  
00:02:33.245 --> 00:02:35.560 number of years now and I know Kerry.  
NOTE Confidence: 0.871002256190476  
00:02:35.560 --> 00:02:38.300 One of your particular interests  
NOTE Confidence: 0.871002256190476  
00:02:38.300 --> 00:02:41.696 is in the value of cancer  
NOTE Confidence: 0.871002256190476  
00:02:41.696 --> 00:02:43.960 care and cost effectiveness.  
NOTE Confidence: 0.871002256190476  
00:02:43.960 --> 00:02:47.173 And are we really getting the bang  
NOTE Confidence: 0.871002256190476

00:02:47.173 --> 00:02:50.800 that we need for our buck and Ryan?  
NOTE Confidence: 0.871002256190476

00:02:50.800 --> 00:02:52.776 I guess this is where you come in.  
NOTE Confidence: 0.871002256190476

00:02:52.780 --> 00:02:55.020 Tell us a little bit more about yourself  
NOTE Confidence: 0.871002256190476

00:02:55.020 --> 00:02:56.844 and about how you met Carrie and  
NOTE Confidence: 0.871002256190476

00:02:56.844 --> 00:02:58.889 and a bit more about your research.  
NOTE Confidence: 0.735389667333333

00:03:00.180 --> 00:03:02.448 From MDP PhD student at Yale,  
NOTE Confidence: 0.735389667333333

00:03:02.450 --> 00:03:04.816 I actually did my PhD recently in  
NOTE Confidence: 0.735389667333333

00:03:04.816 --> 00:03:06.989 cancer genetics and tumor immunology,  
NOTE Confidence: 0.735389667333333

00:03:06.990 --> 00:03:09.078 but throughout the course of my  
NOTE Confidence: 0.735389667333333

00:03:09.078 --> 00:03:11.340 graduate education I kind of became  
NOTE Confidence: 0.735389667333333

00:03:11.340 --> 00:03:12.952 more interested in understanding  
NOTE Confidence: 0.735389667333333

00:03:12.952 --> 00:03:15.301 the economics of cancer care and  
NOTE Confidence: 0.735389667333333

00:03:15.301 --> 00:03:17.317 part of that stemmed from the  
NOTE Confidence: 0.735389667333333

00:03:17.317 --> 00:03:19.070 realization that a lot of these new  
NOTE Confidence: 0.735389667333333

00:03:19.070 --> 00:03:20.150 drugs that we're talking about,  
NOTE Confidence: 0.735389667333333

00:03:20.150 --> 00:03:21.116 like immunotherapies,

NOTE Confidence: 0.735389667333333  
00:03:21.116 --> 00:03:24.497 they have these incredibly large price tags,  
NOTE Confidence: 0.735389667333333  
00:03:24.500 --> 00:03:26.964 and so I just got interested in understanding  
NOTE Confidence: 0.735389667333333  
00:03:26.964 --> 00:03:28.910 we're paying so much for these drugs.  
NOTE Confidence: 0.735389667333333  
00:03:28.910 --> 00:03:30.474 But how much benefit?  
NOTE Confidence: 0.735389667333333  
00:03:30.474 --> 00:03:32.429 Patients actually getting from loan.  
NOTE Confidence: 0.735389667333333  
00:03:32.430 --> 00:03:34.453 So I reached out to doctor Gross  
NOTE Confidence: 0.735389667333333  
00:03:34.453 --> 00:03:36.128 because I knew of his work,  
NOTE Confidence: 0.735389667333333  
00:03:36.130 --> 00:03:37.978 particularly with cancer outcome  
NOTE Confidence: 0.735389667333333  
00:03:37.978 --> 00:03:40.750 research and economics of cancer care.  
NOTE Confidence: 0.735389667333333  
00:03:40.750 --> 00:03:41.094 So yeah,  
NOTE Confidence: 0.735389667333333  
00:03:41.094 --> 00:03:42.803 I just reached out to him and we started  
NOTE Confidence: 0.735389667333333  
00:03:42.803 --> 00:03:44.238 working together on this project.  
NOTE Confidence: 0.841920093571429  
00:03:44.330 --> 00:03:46.706 So Carrie, tell us a little bit more  
NOTE Confidence: 0.841920093571429  
00:03:46.706 --> 00:03:48.857 about this recent project that just  
NOTE Confidence: 0.841920093571429  
00:03:48.857 --> 00:03:51.095 got published and that really made  
NOTE Confidence: 0.841920093571429

00:03:51.160 --> 00:03:53.304 quite a quite a splash in terms of  
NOTE Confidence: 0.841920093571429

00:03:53.310 --> 00:03:55.644 raising awareness about the cost of  
NOTE Confidence: 0.841920093571429

00:03:55.644 --> 00:03:57.982 cancer care and and the relative  
NOTE Confidence: 0.841920093571429

00:03:57.982 --> 00:04:00.460 bang that you get for your buck.  
NOTE Confidence: 0.841920093571429

00:04:00.460 --> 00:04:02.448 Looks a bit more about the project,  
NOTE Confidence: 0.780897603125

00:04:02.640 --> 00:04:06.120 sure, so you know, as Warren Buffett says,  
NOTE Confidence: 0.780897603125

00:04:06.120 --> 00:04:07.900 Price is what you pay.  
NOTE Confidence: 0.780897603125

00:04:07.900 --> 00:04:11.635 The value is what you get and you know  
NOTE Confidence: 0.780897603125

00:04:11.635 --> 00:04:15.133 it's well known that the overall price  
NOTE Confidence: 0.780897603125

00:04:15.133 --> 00:04:17.371 that we're paying for healthcare in  
NOTE Confidence: 0.780897603125

00:04:17.371 --> 00:04:19.640 the United States is is exorbitant.  
NOTE Confidence: 0.780897603125

00:04:19.640 --> 00:04:21.878 We're spending this for all care,  
NOTE Confidence: 0.780897603125

00:04:21.880 --> 00:04:23.192 not just cancer care,  
NOTE Confidence: 0.780897603125

00:04:23.192 --> 00:04:25.944 but we're spending over \$4 trillion per year.  
NOTE Confidence: 0.780897603125

00:04:25.944 --> 00:04:28.752 And in fact, our health expenses  
NOTE Confidence: 0.780897603125

00:04:28.752 --> 00:04:31.552 are about 1/5 of our overall.



NOTE Confidence: 0.780897603125

00:04:31.552 --> 00:04:32.836 Gross domestic product.

NOTE Confidence: 0.780897603125

00:04:32.840 --> 00:04:35.222 So you know there's the old

NOTE Confidence: 0.780897603125

00:04:35.222 --> 00:04:37.644 saying that the what is it the

NOTE Confidence: 0.780897603125

00:04:37.644 --> 00:04:39.174 business of America is business.

NOTE Confidence: 0.780897603125

00:04:39.180 --> 00:04:40.890 You could almost say nowadays the

NOTE Confidence: 0.780897603125

00:04:40.890 --> 00:04:42.800 business of America is is healthcare.

NOTE Confidence: 0.780897603125

00:04:42.800 --> 00:04:45.096 I mean it's a it's our largest

NOTE Confidence: 0.780897603125

00:04:45.096 --> 00:04:47.320 industry and some by some measures.

NOTE Confidence: 0.780897603125

00:04:47.320 --> 00:04:49.687 So the question is when when we want to

NOTE Confidence: 0.780897603125

00:04:49.687 --> 00:04:52.119 focus on cancer for this particular study.

NOTE Confidence: 0.780897603125

00:04:52.120 --> 00:04:54.916 First we reached out to a

NOTE Confidence: 0.780897603125

00:04:54.916 --> 00:04:56.314 long term collaborator,

NOTE Confidence: 0.780897603125

00:04:56.320 --> 00:04:57.844 Doctor Elizabeth Bradley,

NOTE Confidence: 0.780897603125

00:04:57.844 --> 00:05:01.400 who is now actually President of Astra.

NOTE Confidence: 0.780897603125

00:05:01.400 --> 00:05:01.756 Knowledge,

NOTE Confidence: 0.780897603125

00:05:01.756 --> 00:05:04.248 but also as a health economist and  
NOTE Confidence: 0.780897603125

00:05:04.248 --> 00:05:07.621 has a long interest and expertise in  
NOTE Confidence: 0.780897603125

00:05:07.621 --> 00:05:10.206 international comparisons and and outcomes.  
NOTE Confidence: 0.780897603125

00:05:10.210 --> 00:05:13.048 But we wanted to really explore  
NOTE Confidence: 0.780897603125

00:05:13.050 --> 00:05:15.000 how much are we spending on  
NOTE Confidence: 0.780897603125

00:05:15.000 --> 00:05:17.369 cancer care in the United States?  
NOTE Confidence: 0.780897603125

00:05:17.370 --> 00:05:19.407 How does that compare to other countries?  
NOTE Confidence: 0.780897603125

00:05:19.410 --> 00:05:21.330 And then that's the first half  
NOTE Confidence: 0.780897603125

00:05:21.330 --> 00:05:22.980 of the Warren Buffett part.  
NOTE Confidence: 0.780897603125

00:05:22.980 --> 00:05:24.190 How much are we spending?  
NOTE Confidence: 0.780897603125

00:05:24.190 --> 00:05:27.305 But then more importantly, the value aspect.  
NOTE Confidence: 0.780897603125

00:05:27.310 --> 00:05:28.666 What are we getting in return?  
NOTE Confidence: 0.780897603125

00:05:28.670 --> 00:05:30.350 What were the?  
NOTE Confidence: 0.780897603125

00:05:30.350 --> 00:05:31.470 How does.  
NOTE Confidence: 0.780897603125

00:05:31.470 --> 00:05:34.038 Our cancer mortality and the population  
NOTE Confidence: 0.780897603125

00:05:34.038 --> 00:05:37.803 level in the US compare to the cancer

NOTE Confidence: 0.780897603125

00:05:37.803 --> 00:05:40.268 mortality rates in other countries,

NOTE Confidence: 0.8100677886

00:05:40.800 --> 00:05:43.410 and so Ryan tell us a little bit more

NOTE Confidence: 0.8100677886

00:05:43.410 --> 00:05:46.041 about the design of this study and and

NOTE Confidence: 0.8100677886

00:05:46.041 --> 00:05:48.569 the the sources of data that you used.

NOTE Confidence: 0.7372441451875

00:05:49.060 --> 00:05:49.952 Yeah, definitely.

NOTE Confidence: 0.7372441451875

00:05:49.952 --> 00:05:53.074 So we were primarily interested in comparing

NOTE Confidence: 0.7372441451875

00:05:53.074 --> 00:05:56.030 the US with other high income countries,

NOTE Confidence: 0.7372441451875

00:05:56.030 --> 00:05:58.660 so first talking about cost.

NOTE Confidence: 0.7372441451875

00:05:58.660 --> 00:06:00.757 So it turns out there are quite a few

NOTE Confidence: 0.7372441451875

00:06:00.757 --> 00:06:03.288 organizations out there, such as the OCD.

NOTE Confidence: 0.7372441451875

00:06:03.288 --> 00:06:05.523 Which stands for Organization for

NOTE Confidence: 0.7372441451875

00:06:05.523 --> 00:06:08.169 Economic Cooperation and development,

NOTE Confidence: 0.7372441451875

00:06:08.170 --> 00:06:10.330 and so there are these organizations

NOTE Confidence: 0.7372441451875

00:06:10.330 --> 00:06:11.770 that track total healthcare

NOTE Confidence: 0.7372441451875

00:06:11.831 --> 00:06:13.687 spending for different countries.

NOTE Confidence: 0.7372441451875

00:06:13.690 --> 00:06:15.346 But as Doctor Gross was mentioning,  
NOTE Confidence: 0.7372441451875

00:06:15.350 --> 00:06:17.786 a lot of this data oftentimes  
NOTE Confidence: 0.7372441451875

00:06:17.786 --> 00:06:19.004 isn't cancer specific.  
NOTE Confidence: 0.7372441451875

00:06:19.010 --> 00:06:21.350 So to get to that question  
NOTE Confidence: 0.7372441451875

00:06:21.350 --> 00:06:23.689 of how much cancer care is,  
NOTE Confidence: 0.7372441451875

00:06:23.690 --> 00:06:25.290 you know how much countries  
NOTE Confidence: 0.7372441451875

00:06:25.290 --> 00:06:26.890 are spending on cancer care.  
NOTE Confidence: 0.7372441451875

00:06:26.890 --> 00:06:28.810 And we took a look through the literature.  
NOTE Confidence: 0.7372441451875

00:06:28.810 --> 00:06:31.280 We tried to find out in a given country what  
NOTE Confidence: 0.7372441451875

00:06:31.344 --> 00:06:33.708 percentage of their total health spending.  
NOTE Confidence: 0.7372441451875

00:06:33.710 --> 00:06:35.042 Goes towards cancer care.  
NOTE Confidence: 0.7372441451875

00:06:35.042 --> 00:06:38.121 So in the US it turns out we spend  
NOTE Confidence: 0.7372441451875

00:06:38.121 --> 00:06:40.370 around 5.3% of our total healthcare  
NOTE Confidence: 0.7372441451875

00:06:40.370 --> 00:06:41.516 spending on cancer,  
NOTE Confidence: 0.7372441451875

00:06:41.520 --> 00:06:43.480 but that varies quite a bit across country.  
NOTE Confidence: 0.7372441451875

00:06:43.480 --> 00:06:45.970 So in Japan that's actually

NOTE Confidence: 0.7372441451875

00:06:45.970 --> 00:06:47.734 7.5% towards cancer care.

NOTE Confidence: 0.7372441451875

00:06:47.734 --> 00:06:49.939 So bringing those two numbers

NOTE Confidence: 0.7372441451875

00:06:49.939 --> 00:06:52.309 together that allows us to estimate,

NOTE Confidence: 0.7372441451875

00:06:52.310 --> 00:06:53.558 you know how many,

NOTE Confidence: 0.7372441451875

00:06:53.558 --> 00:06:56.196 how much of our healthcare spending in the

NOTE Confidence: 0.7372441451875

00:06:56.196 --> 00:06:58.320 given country is dedicated towards cancer.

NOTE Confidence: 0.7372441451875

00:06:58.320 --> 00:07:00.224 So that's the cost part of it.

NOTE Confidence: 0.7372441451875

00:07:00.230 --> 00:07:01.702 On the mortality side,

NOTE Confidence: 0.7372441451875

00:07:01.702 --> 00:07:03.910 it's a little bit more complicated,

NOTE Confidence: 0.7372441451875

00:07:03.910 --> 00:07:06.826 particularly because we're trying to compare

NOTE Confidence: 0.7372441451875

00:07:06.826 --> 00:07:09.470 cancer outcomes across different countries.

NOTE Confidence: 0.7372441451875

00:07:09.470 --> 00:07:10.989 So what I mean by that is,

NOTE Confidence: 0.7372441451875

00:07:10.990 --> 00:07:12.494 clinicians will commonly refer

NOTE Confidence: 0.7372441451875

00:07:12.494 --> 00:07:14.374 to five year survival rates

NOTE Confidence: 0.7372441451875

00:07:14.374 --> 00:07:16.370 when their counseling patients.

NOTE Confidence: 0.7372441451875

00:07:16.370 --> 00:07:17.895 That basically means the percentage  
NOTE Confidence: 0.7372441451875

00:07:17.895 --> 00:07:19.731 of patients that will still be  
NOTE Confidence: 0.7372441451875

00:07:19.731 --> 00:07:21.267 alive five years after an initial.  
NOTE Confidence: 0.7372441451875

00:07:21.270 --> 00:07:21.688 Diagnosis.  
NOTE Confidence: 0.7372441451875

00:07:21.688 --> 00:07:24.194 And so that's very useful, right?  
NOTE Confidence: 0.7372441451875

00:07:24.194 --> 00:07:25.850 It's great for informing  
NOTE Confidence: 0.7372441451875

00:07:25.850 --> 00:07:27.506 patients of their prognosis.  
NOTE Confidence: 0.7372441451875

00:07:27.510 --> 00:07:28.194 The problem,  
NOTE Confidence: 0.7372441451875

00:07:28.194 --> 00:07:28.536 though,  
NOTE Confidence: 0.7372441451875

00:07:28.536 --> 00:07:30.246 is that it's really difficult  
NOTE Confidence: 0.7372441451875

00:07:30.246 --> 00:07:32.148 to compare these five year  
NOTE Confidence: 0.7372441451875

00:07:32.148 --> 00:07:33.688 survival rates across countries,  
NOTE Confidence: 0.7372441451875

00:07:33.690 --> 00:07:35.990 and that's because different countries  
NOTE Confidence: 0.7372441451875

00:07:35.990 --> 00:07:38.769 have their own distinct approaches for  
NOTE Confidence: 0.7372441451875

00:07:38.769 --> 00:07:40.819 cancer detection and for screening.  
NOTE Confidence: 0.7372441451875

00:07:40.820 --> 00:07:42.900 So I guess it would be helpful to

NOTE Confidence: 0.7372441451875  
00:07:42.900 --> 00:07:44.400 give like an example for this,  
NOTE Confidence: 0.7372441451875  
00:07:44.400 --> 00:07:46.476 but what I mean by this?  
NOTE Confidence: 0.7372441451875  
00:07:46.480 --> 00:07:48.652 So let's say there's this rare  
NOTE Confidence: 0.7372441451875  
00:07:48.652 --> 00:07:50.531 hypothetical disease that is untreatable  
NOTE Confidence: 0.7372441451875  
00:07:50.531 --> 00:07:52.739 and all patients with this disease  
NOTE Confidence: 0.7372441451875  
00:07:52.739 --> 00:07:55.318 will die when they turn 50 years old.  
NOTE Confidence: 0.7372441451875  
00:07:55.320 --> 00:07:57.939 If a patient is diagnosed when they turn 40,  
NOTE Confidence: 0.7372441451875  
00:07:57.940 --> 00:07:59.220 then we would look at that and say,  
NOTE Confidence: 0.7372441451875  
00:07:59.220 --> 00:08:01.418 oh the survival time is 10 years.  
NOTE Confidence: 0.7372441451875  
00:08:01.420 --> 00:08:02.860 But let's say we diagnose  
NOTE Confidence: 0.7372441451875  
00:08:02.860 --> 00:08:04.300 this disease as a kid,  
NOTE Confidence: 0.7372441451875  
00:08:04.300 --> 00:08:06.010 then the survival might look  
NOTE Confidence: 0.7372441451875  
00:08:06.010 --> 00:08:07.720 something like 30 years instead.  
NOTE Confidence: 0.7372441451875  
00:08:07.720 --> 00:08:09.840 But the key here is that the underlying  
NOTE Confidence: 0.7372441451875  
00:08:09.840 --> 00:08:11.159 disease really hasn't changed.  
NOTE Confidence: 0.7372441451875

00:08:11.160 --> 00:08:12.928 All the only differences  
NOTE Confidence: 0.7372441451875

00:08:12.928 --> 00:08:14.696 when we diagnosed it.  
NOTE Confidence: 0.7372441451875

00:08:14.700 --> 00:08:16.612 So when we look at 5 year survival  
NOTE Confidence: 0.7372441451875

00:08:16.612 --> 00:08:18.160 rates across different countries,  
NOTE Confidence: 0.7372441451875

00:08:18.160 --> 00:08:19.925 a country that screens more  
NOTE Confidence: 0.7372441451875

00:08:19.925 --> 00:08:21.690 aggressively is going to detect  
NOTE Confidence: 0.7372441451875

00:08:21.752 --> 00:08:24.014 cancers earlier and that'll lead us  
NOTE Confidence: 0.7372441451875

00:08:24.014 --> 00:08:25.942 to artificially have higher five  
NOTE Confidence: 0.7372441451875

00:08:25.942 --> 00:08:28.253 year survival rates even though the  
NOTE Confidence: 0.7372441451875

00:08:28.253 --> 00:08:29.897 underlying disease is unchanged.  
NOTE Confidence: 0.7372441451875

00:08:29.900 --> 00:08:32.228 So instead of that in our study we  
NOTE Confidence: 0.7372441451875

00:08:32.228 --> 00:08:34.191 are looking at population level  
NOTE Confidence: 0.7372441451875

00:08:34.191 --> 00:08:36.376 cancer mortality rates and that  
NOTE Confidence: 0.7372441451875

00:08:36.376 --> 00:08:37.925 basically answers the question  
NOTE Confidence: 0.7372441451875

00:08:37.925 --> 00:08:40.053 in a given year how many people  
NOTE Confidence: 0.7372441451875

00:08:40.053 --> 00:08:41.734 are dying from cancer.



NOTE Confidence: 0.7372441451875  
00:08:41.734 --> 00:08:43.566 In a particular country,  
NOTE Confidence: 0.7372441451875  
00:08:43.570 --> 00:08:45.712 so doctor Gross and I discussed  
NOTE Confidence: 0.7372441451875  
00:08:45.712 --> 00:08:47.140 this quite extensively and  
NOTE Confidence: 0.866362996818182  
00:08:47.204 --> 00:08:49.269 we we came to the conclusion that  
NOTE Confidence: 0.866362996818182  
00:08:49.269 --> 00:08:51.269 this metric of population level,  
NOTE Confidence: 0.866362996818182  
00:08:51.270 --> 00:08:53.316 cancer mortality is much better at  
NOTE Confidence: 0.866362996818182  
00:08:53.316 --> 00:08:55.153 sort of encapsulating the effectiveness  
NOTE Confidence: 0.866362996818182  
00:08:55.153 --> 00:08:57.228 of all these different cancer  
NOTE Confidence: 0.866362996818182  
00:08:57.228 --> 00:08:59.230 related interventions that we have.  
NOTE Confidence: 0.866362996818182  
00:08:59.230 --> 00:09:01.267 So you know, that would include prevention,  
NOTE Confidence: 0.866362996818182  
00:09:01.270 --> 00:09:04.620 screening, and of course, treatment.  
NOTE Confidence: 0.866362996818182  
00:09:04.620 --> 00:09:08.742 And so setting up now we have the costs.  
NOTE Confidence: 0.866362996818182  
00:09:08.750 --> 00:09:10.710 How much do different countries spend on  
NOTE Confidence: 0.866362996818182  
00:09:10.710 --> 00:09:12.948 cancer Care now we're looking at mortality.  
NOTE Confidence: 0.866362996818182  
00:09:12.950 --> 00:09:14.430 What is the population level?  
NOTE Confidence: 0.866362996818182

00:09:14.430 --> 00:09:15.765 Cancer mortality rate that gave  
NOTE Confidence: 0.866362996818182

00:09:15.765 --> 00:09:17.976 us all the data that we needed to  
NOTE Confidence: 0.866362996818182

00:09:17.976 --> 00:09:19.336 start crunching the numbers and  
NOTE Confidence: 0.866362996818182

00:09:19.336 --> 00:09:21.277 taking a look at that relationship.  
NOTE Confidence: 0.866362996818182

00:09:21.280 --> 00:09:22.720 If there is any relationship  
NOTE Confidence: 0.866362996818182

00:09:22.720 --> 00:09:23.872 between those two numbers?  
NOTE Confidence: 0.810911815

00:09:25.200 --> 00:09:27.624 Very, you know, just digging into  
NOTE Confidence: 0.810911815

00:09:27.624 --> 00:09:30.269 that a little bit more deeply.  
NOTE Confidence: 0.810911815

00:09:30.270 --> 00:09:33.382 It's clear, right that the US spends more  
NOTE Confidence: 0.810911815

00:09:33.382 --> 00:09:35.857 on healthcare than any other country,  
NOTE Confidence: 0.810911815

00:09:35.860 --> 00:09:37.816 not only in the industrialized world,  
NOTE Confidence: 0.810911815

00:09:37.820 --> 00:09:42.436 but in the world period by by several.  
NOTE Confidence: 0.810911815

00:09:42.440 --> 00:09:44.072 By quite a magnitude.  
NOTE Confidence: 0.810911815

00:09:44.072 --> 00:09:47.006 And so it's not surprising to see  
NOTE Confidence: 0.810911815

00:09:47.006 --> 00:09:49.806 that they spend more on cancer care,  
NOTE Confidence: 0.810911815

00:09:49.810 --> 00:09:52.239 but the one thing that was interesting

NOTE Confidence: 0.810911815

00:09:52.239 --> 00:09:55.357 in what Ryan was saying is that the

NOTE Confidence: 0.810911815

00:09:55.357 --> 00:09:57.362 percentage of that total expenditure

NOTE Confidence: 0.810911815

00:09:57.439 --> 00:09:59.809 of on healthcare that given countries

NOTE Confidence: 0.810911815

00:09:59.809 --> 00:10:02.404 spend on cancer care may be different.

NOTE Confidence: 0.810911815

00:10:02.404 --> 00:10:04.770 Can you talk a little bit about

NOTE Confidence: 0.810911815

00:10:04.839 --> 00:10:06.783 how that fell when you compared

NOTE Confidence: 0.810911815

00:10:06.783 --> 00:10:08.840 the US to other countries?

NOTE Confidence: 0.862652956

00:10:10.250 --> 00:10:10.930 Interesting question,

NOTE Confidence: 0.862652956

00:10:10.930 --> 00:10:12.970 and certainly something we want to

NOTE Confidence: 0.862652956

00:10:12.970 --> 00:10:14.585 explore more and further research

NOTE Confidence: 0.862652956

00:10:14.585 --> 00:10:16.355 because there was some variation in

NOTE Confidence: 0.862652956

00:10:16.355 --> 00:10:18.463 how much of the overall health is being

NOTE Confidence: 0.862652956

00:10:18.463 --> 00:10:20.333 spent on cancer care across countries,

NOTE Confidence: 0.862652956

00:10:20.333 --> 00:10:22.559 but overall it was relatively stable

NOTE Confidence: 0.862652956

00:10:22.559 --> 00:10:24.893 so there was there was some variation

NOTE Confidence: 0.862652956

00:10:24.893 --> 00:10:27.360 and we expected to see some variation,  
NOTE Confidence: 0.862652956

00:10:27.360 --> 00:10:30.048 for instance because it's well known that  
NOTE Confidence: 0.862652956

00:10:30.048 --> 00:10:33.205 in the US we approve new cancer therapies  
NOTE Confidence: 0.862652956

00:10:33.205 --> 00:10:35.980 more quickly than in other countries.  
NOTE Confidence: 0.862652956

00:10:35.980 --> 00:10:37.738 Actually, there was just a study  
NOTE Confidence: 0.862652956

00:10:37.738 --> 00:10:39.825 published a couple of weeks ago comparing  
NOTE Confidence: 0.862652956

00:10:39.825 --> 00:10:41.834 the US and Europe and looking at.  
NOTE Confidence: 0.862652956

00:10:41.840 --> 00:10:44.108 How quickly a new drugs were approved  
NOTE Confidence: 0.862652956

00:10:44.108 --> 00:10:45.939 here as opposed to in Europe,  
NOTE Confidence: 0.862652956

00:10:45.940 --> 00:10:47.208 and there's actually about  
NOTE Confidence: 0.862652956

00:10:47.208 --> 00:10:48.476 a nine month delay,  
NOTE Confidence: 0.862652956

00:10:48.480 --> 00:10:51.120 so they're approved after FDA approval  
NOTE Confidence: 0.862652956

00:10:51.120 --> 00:10:54.438 of a new cancer therapy in the US,  
NOTE Confidence: 0.862652956

00:10:54.440 --> 00:10:58.507 average delay was about nine months before  
NOTE Confidence: 0.862652956

00:10:58.507 --> 00:11:01.730 typical European country had it approved.  
NOTE Confidence: 0.862652956

00:11:01.730 --> 00:11:04.160 But so they're so good,

NOTE Confidence: 0.862652956

00:11:04.160 --> 00:11:05.904 but at least you know me so well,

NOTE Confidence: 0.862652956

00:11:05.910 --> 00:11:07.314 but they're.

NOTE Confidence: 0.862652956

00:11:07.314 --> 00:11:12.930 Isn't necessarily A cause for a victory lap,

NOTE Confidence: 0.862652956

00:11:12.930 --> 00:11:15.086 but only if if the only evidence

NOTE Confidence: 0.862652956

00:11:15.086 --> 00:11:17.365 of our systems efficacy is that

NOTE Confidence: 0.862652956

00:11:17.365 --> 00:11:19.500 we're approving drugs more quickly.

NOTE Confidence: 0.862652956

00:11:19.500 --> 00:11:20.890 So the real question is,

NOTE Confidence: 0.862652956

00:11:20.890 --> 00:11:22.890 is whether patients are benefiting.

NOTE Confidence: 0.862652956

00:11:22.890 --> 00:11:27.018 So we we expected there would be some

NOTE Confidence: 0.862652956

00:11:27.018 --> 00:11:30.256 variation in the percent of overall

NOTE Confidence: 0.862652956

00:11:30.256 --> 00:11:32.646 healthcare being spent on cancer,

NOTE Confidence: 0.862652956

00:11:32.650 --> 00:11:34.864 primarily because we know that there's

NOTE Confidence: 0.862652956

00:11:34.864 --> 00:11:36.716 variation across countries and how

NOTE Confidence: 0.862652956

00:11:36.716 --> 00:11:38.600 quickly new drugs are being approved.

NOTE Confidence: 0.862652956

00:11:38.600 --> 00:11:40.625 There's also variation in how

NOTE Confidence: 0.862652956

00:11:40.625 --> 00:11:42.650 the different companies help us.  
NOTE Confidence: 0.862652956

00:11:42.650 --> 00:11:45.034 Sorry, different Freudian slip.  
NOTE Confidence: 0.862652956

00:11:45.034 --> 00:11:47.418 How different countries health  
NOTE Confidence: 0.862652956

00:11:47.418 --> 00:11:50.170 systems are established in the sense  
NOTE Confidence: 0.862652956

00:11:50.170 --> 00:11:52.510 of allowing them to negotiate with  
NOTE Confidence: 0.862652956

00:11:52.583 --> 00:11:54.568 pharmaceutical companies in the sense  
NOTE Confidence: 0.862652956

00:11:54.568 --> 00:11:57.403 that in the US there's not really  
NOTE Confidence: 0.862652956

00:11:57.403 --> 00:11:59.743 room for negotiation with with pharma  
NOTE Confidence: 0.862652956

00:11:59.743 --> 00:12:03.800 as opposed to in in other countries.  
NOTE Confidence: 0.862652956

00:12:03.800 --> 00:12:07.358 Coverage of new cancer therapies is  
NOTE Confidence: 0.862652956

00:12:07.358 --> 00:12:11.790 not necessarily mandated, for instance.  
NOTE Confidence: 0.862652956

00:12:11.790 --> 00:12:14.558 Certain National Health systems  
NOTE Confidence: 0.862652956

00:12:14.558 --> 00:12:16.374 could could just say no.  
NOTE Confidence: 0.862652956

00:12:16.374 --> 00:12:19.337 If a new therapy is not thought to be  
NOTE Confidence: 0.862652956

00:12:19.337 --> 00:12:21.749 producing high value for its population,  
NOTE Confidence: 0.862652956

00:12:21.750 --> 00:12:24.702 they may not cover it and that leverage

NOTE Confidence: 0.862652956

00:12:24.702 --> 00:12:26.989 which does not exist in the US.

NOTE Confidence: 0.862652956

00:12:26.990 --> 00:12:29.546 The leverage can allow for lower

NOTE Confidence: 0.862652956

00:12:29.546 --> 00:12:31.250 prices in other countries.

NOTE Confidence: 0.862652956

00:12:31.250 --> 00:12:32.114 So yeah,

NOTE Confidence: 0.862652956

00:12:32.114 --> 00:12:34.706 that there's plenty of reasons for

NOTE Confidence: 0.862652956

00:12:34.706 --> 00:12:37.143 variation in how much is being

NOTE Confidence: 0.862652956

00:12:37.143 --> 00:12:38.265 spent on cancer.

NOTE Confidence: 0.862652956

00:12:38.270 --> 00:12:41.530 But at the end of the day, we're actually.

NOTE Confidence: 0.862652956

00:12:41.530 --> 00:12:43.384 A little surprised that there wasn't

NOTE Confidence: 0.862652956

00:12:43.384 --> 00:12:45.561 as much variation in the percent of

NOTE Confidence: 0.862652956

00:12:45.561 --> 00:12:47.319 healthcare on cancer as we thought

NOTE Confidence: 0.862652956

00:12:47.319 --> 00:12:48.159 that we would,

NOTE Confidence: 0.862652956

00:12:48.160 --> 00:12:50.386 and I think most of the variation

NOTE Confidence: 0.862652956

00:12:50.386 --> 00:12:53.608 that we've seen in the overall cancer

NOTE Confidence: 0.862652956

00:12:53.608 --> 00:12:56.443 spending probably relates strongly to

NOTE Confidence: 0.862652956

00:12:56.443 --> 00:12:59.768 simply to the overall health spending.

NOTE Confidence: 0.392512453333333

00:13:00.380 --> 00:13:03.320 And did you control for Ryan?

NOTE Confidence: 0.392512453333333

00:13:03.320 --> 00:13:06.848 Did you control for the the fact

NOTE Confidence: 0.392512453333333

00:13:06.848 --> 00:13:08.969 that different countries may

NOTE Confidence: 0.392512453333333

00:13:08.969 --> 00:13:11.549 have a different cancer burden?

NOTE Confidence: 0.392512453333333

00:13:11.550 --> 00:13:14.370 In other words, you would expect

NOTE Confidence: 0.392512453333333

00:13:14.370 --> 00:13:17.079 that countries that have a higher.

NOTE Confidence: 0.392512453333333

00:13:17.080 --> 00:13:20.130 Cancer burden who are diagnosing

NOTE Confidence: 0.392512453333333

00:13:20.130 --> 00:13:21.886 patients more frequently with

NOTE Confidence: 0.392512453333333

00:13:21.886 --> 00:13:23.414 cancer for whatever reason?

NOTE Confidence: 0.392512453333333

00:13:23.420 --> 00:13:25.256 Whether it's you know.

NOTE Confidence: 0.392512453333333

00:13:25.256 --> 00:13:28.010 Levels of obesity or smoking or

NOTE Confidence: 0.392512453333333

00:13:28.098 --> 00:13:30.648 alcohol or other risk factors,

NOTE Confidence: 0.392512453333333

00:13:30.650 --> 00:13:33.032 or whether there are particular genetic

NOTE Confidence: 0.392512453333333

00:13:33.032 --> 00:13:35.350 predispositions in a given population.

NOTE Confidence: 0.392512453333333

00:13:35.350 --> 00:13:37.090 Did you control for the incidence



NOTE Confidence: 0.392512453333333

00:13:37.090 --> 00:13:38.820 of cancer across these countries?

NOTE Confidence: 0.904456768

00:13:39.500 --> 00:13:40.820 Yeah, that's a great question.

NOTE Confidence: 0.904456768

00:13:40.820 --> 00:13:42.518 Umm, that's also something Doctor Gross,

NOTE Confidence: 0.904456768

00:13:42.520 --> 00:13:43.972 and I debated quite a bit

NOTE Confidence: 0.904456768

00:13:43.972 --> 00:13:45.200 when we were starting out.

NOTE Confidence: 0.904456768

00:13:45.200 --> 00:13:47.986 So in short, we looked at population

NOTE Confidence: 0.904456768

00:13:47.986 --> 00:13:50.001 level cancer mortality rates rather

NOTE Confidence: 0.904456768

00:13:50.001 --> 00:13:51.886 than adjusting for the incidence

NOTE Confidence: 0.904456768

00:13:51.886 --> 00:13:54.709 of a given cancer because of that

NOTE Confidence: 0.904456768

00:13:54.709 --> 00:13:56.729 reason I was discussing earlier

NOTE Confidence: 0.904456768

00:13:56.729 --> 00:13:58.772 where countries that screen more

NOTE Confidence: 0.904456768

00:13:58.772 --> 00:14:00.812 aggressively may be detecting cancers

NOTE Confidence: 0.904456768

00:14:00.812 --> 00:14:03.296 that are indolent or not so aggressive.

NOTE Confidence: 0.904456768

00:14:03.300 --> 00:14:05.406 So purely taking or adjusting for

NOTE Confidence: 0.904456768

00:14:05.406 --> 00:14:07.264 the incidence of cancer across

NOTE Confidence: 0.904456768

00:14:07.264 --> 00:14:09.586 countries was something that we felt.  
NOTE Confidence: 0.904456768

00:14:09.590 --> 00:14:11.120 That would introduce more bias  
NOTE Confidence: 0.904456768

00:14:11.120 --> 00:14:12.038 than we wanted,  
NOTE Confidence: 0.904456768

00:14:12.040 --> 00:14:14.462 and so we ultimately decided to purely  
NOTE Confidence: 0.904456768

00:14:14.462 --> 00:14:16.619 look at cancer mortality rates.  
NOTE Confidence: 0.904456768

00:14:16.620 --> 00:14:17.672 I will say, though,  
NOTE Confidence: 0.904456768

00:14:17.672 --> 00:14:19.250 that we did adjust for smoking  
NOTE Confidence: 0.904456768

00:14:19.304 --> 00:14:21.040 rates across different countries,  
NOTE Confidence: 0.904456768

00:14:21.040 --> 00:14:23.532 so countries that smoke less will have  
NOTE Confidence: 0.904456768

00:14:23.532 --> 00:14:25.235 lower cancer incidence and mortality  
NOTE Confidence: 0.904456768

00:14:25.235 --> 00:14:27.523 and so that it is something that we  
NOTE Confidence: 0.904456768

00:14:27.585 --> 00:14:29.629 try to adjust for within our study.  
NOTE Confidence: 0.909672573571429

00:14:31.090 --> 00:14:33.141 The thing that I was getting at  
NOTE Confidence: 0.909672573571429

00:14:33.141 --> 00:14:35.270 was really in terms of the cost.  
NOTE Confidence: 0.909672573571429

00:14:35.270 --> 00:14:36.840 The higher the incidence you  
NOTE Confidence: 0.909672573571429

00:14:36.840 --> 00:14:38.811 would expect that the higher the

NOTE Confidence: 0.909672573571429

00:14:38.811 --> 00:14:40.521 proportion of the healthcare budget

NOTE Confidence: 0.909672573571429

00:14:40.521 --> 00:14:42.330 would be going towards cancer.

NOTE Confidence: 0.909672573571429

00:14:42.330 --> 00:14:44.458 We're going to have to pick up on

NOTE Confidence: 0.909672573571429

00:14:44.458 --> 00:14:46.022 this conversation right after we take

NOTE Confidence: 0.909672573571429

00:14:46.022 --> 00:14:47.910 a short break for a medical minute.

NOTE Confidence: 0.909672573571429

00:14:47.910 --> 00:14:49.618 Please stay tuned to learn more about

NOTE Confidence: 0.909672573571429

00:14:49.618 --> 00:14:51.696 the cost of cancer care and how that

NOTE Confidence: 0.909672573571429

00:14:51.696 --> 00:14:53.390 relates to outcomes with my guests.

NOTE Confidence: 0.909672573571429

00:14:53.390 --> 00:14:55.226 Doctor Terry Gross and Ryan Chow.

NOTE Confidence: 0.768329041272727

00:14:56.010 --> 00:14:58.176 Funding for Yale Cancer Answers is

NOTE Confidence: 0.768329041272727

00:14:58.176 --> 00:15:00.230 provided by Smilow Cancer Hospital,

NOTE Confidence: 0.768329041272727

00:15:00.230 --> 00:15:03.240 where you can view videos from their

NOTE Confidence: 0.768329041272727

00:15:03.240 --> 00:15:05.615 integrative medicine team by searching

NOTE Confidence: 0.768329041272727

00:15:05.615 --> 00:15:07.639 Yale Cancer Center Integrative

NOTE Confidence: 0.768329041272727

00:15:07.639 --> 00:15:09.663 Medicine playlist on YouTube.

NOTE Confidence: 0.768329041272727

00:15:09.670 --> 00:15:12.155 There are over 16.9 million  
NOTE Confidence: 0.768329041272727

00:15:12.155 --> 00:15:15.101 cancer survivors in the US and  
NOTE Confidence: 0.768329041272727

00:15:15.101 --> 00:15:17.022 over 240,000 here in Connecticut.  
NOTE Confidence: 0.768329041272727

00:15:17.022 --> 00:15:18.574 Completing treatment for cancer  
NOTE Confidence: 0.768329041272727

00:15:18.574 --> 00:15:20.849 is a very exciting milestone,  
NOTE Confidence: 0.768329041272727

00:15:20.850 --> 00:15:22.818 but cancer and its treatment can  
NOTE Confidence: 0.768329041272727

00:15:22.818 --> 00:15:24.910 be a life changing experience.  
NOTE Confidence: 0.768329041272727

00:15:24.910 --> 00:15:27.292 The return to normal activities and  
NOTE Confidence: 0.768329041272727

00:15:27.292 --> 00:15:29.299 relationships may be difficult and  
NOTE Confidence: 0.768329041272727

00:15:29.299 --> 00:15:31.044 cancer survivors may face other  
NOTE Confidence: 0.768329041272727

00:15:31.044 --> 00:15:33.109 long term side effects of cancer,  
NOTE Confidence: 0.768329041272727

00:15:33.110 --> 00:15:34.868 including heart problems,  
NOTE Confidence: 0.768329041272727

00:15:34.868 --> 00:15:35.454 osteoporosis,  
NOTE Confidence: 0.768329041272727

00:15:35.454 --> 00:15:38.384 fertility issues and an increased  
NOTE Confidence: 0.768329041272727

00:15:38.384 --> 00:15:40.400 risk of second cancers.  
NOTE Confidence: 0.768329041272727

00:15:40.400 --> 00:15:43.005 Resources for cancer survivors are

NOTE Confidence: 0.768329041272727

00:15:43.005 --> 00:15:45.089 available at federally designated

NOTE Confidence: 0.768329041272727

00:15:45.089 --> 00:15:46.346 Comprehensive cancer centers

NOTE Confidence: 0.768329041272727

00:15:46.346 --> 00:15:48.362 such as the Yale Cancer Center

NOTE Confidence: 0.768329041272727

00:15:48.362 --> 00:15:50.438 and Smilow Cancer Hospital

NOTE Confidence: 0.768329041272727

00:15:50.440 --> 00:15:52.440 to keep cancer survivors well

NOTE Confidence: 0.768329041272727

00:15:52.440 --> 00:15:54.440 and focused on healthy living,

NOTE Confidence: 0.768329041272727

00:15:54.440 --> 00:15:56.284 the Smilow Cancer Hospital

NOTE Confidence: 0.768329041272727

00:15:56.284 --> 00:15:58.128 Survivorship clinic focuses on

NOTE Confidence: 0.768329041272727

00:15:58.128 --> 00:15:59.839 providing guidance and direction

NOTE Confidence: 0.768329041272727

00:15:59.839 --> 00:16:01.659 to empower survivors to take

NOTE Confidence: 0.768329041272727

00:16:01.659 --> 00:16:03.599 steps to maximize their health,

NOTE Confidence: 0.768329041272727

00:16:03.600 --> 00:16:05.960 quality of life and longevity.

NOTE Confidence: 0.768329041272727

00:16:05.960 --> 00:16:08.296 More information is available

NOTE Confidence: 0.768329041272727

00:16:08.296 --> 00:16:09.748 at [yalecancercenter.org](http://yalecancercenter.org). You're

NOTE Confidence: 0.768329041272727

00:16:09.748 --> 00:16:11.050 listening to Connecticut.

NOTE Confidence: 0.768329041272727

00:16:11.050 --> 00:16:12.080 Public radio.  
NOTE Confidence: 0.794949426666667

00:16:12.650 --> 00:16:15.050 Welcome back to Yale Cancer Answers.  
NOTE Confidence: 0.794949426666667

00:16:15.050 --> 00:16:17.584 This is doctor Anees Chagpar and I'm  
NOTE Confidence: 0.794949426666667

00:16:17.584 --> 00:16:19.850 joined tonight by my guests doctor  
NOTE Confidence: 0.794949426666667

00:16:19.850 --> 00:16:22.433 Cary Gross and Ryan Chow. We're talking  
NOTE Confidence: 0.794949426666667

00:16:22.503 --> 00:16:25.095 about the cost of cancer care in the US  
NOTE Confidence: 0.794949426666667

00:16:25.095 --> 00:16:27.861 and so right before the break we were  
NOTE Confidence: 0.794949426666667

00:16:27.861 --> 00:16:30.318 talking about the study that Cary  
NOTE Confidence: 0.794949426666667

00:16:30.318 --> 00:16:32.523 and Ryan just published recently  
NOTE Confidence: 0.794949426666667

00:16:32.530 --> 00:16:35.188 looking at the US healthcare  
NOTE Confidence: 0.794949426666667

00:16:35.188 --> 00:16:38.072 system compared to other high income  
NOTE Confidence: 0.794949426666667

00:16:38.072 --> 00:16:40.450 countries and the cost of care,  
NOTE Confidence: 0.794949426666667

00:16:40.450 --> 00:16:42.390 particularly the cost of cancer  
NOTE Confidence: 0.794949426666667

00:16:42.390 --> 00:16:45.906 care and how that really relates  
NOTE Confidence: 0.794949426666667

00:16:45.906 --> 00:16:48.164 to mortality.  
NOTE Confidence: 0.794949426666667

00:16:48.164 --> 00:16:52.376 Cary, in terms of the cost of care you

NOTE Confidence: 0.794949426666667

00:16:52.376 --> 00:16:55.288 you're finding really was that the US

NOTE Confidence: 0.794949426666667

00:16:55.288 --> 00:16:58.089 spends more per capita than any other

NOTE Confidence: 0.794949426666667

00:16:58.089 --> 00:17:00.919 country on the face of the planet.

NOTE Confidence: 0.794949426666667

00:17:00.920 --> 00:17:03.836 And when you multiply the proportion

NOTE Confidence: 0.794949426666667

00:17:03.836 --> 00:17:06.302 of that overall healthcare budget

NOTE Confidence: 0.794949426666667

00:17:06.302 --> 00:17:08.942 at times the proportion spent on

NOTE Confidence: 0.794949426666667

00:17:08.942 --> 00:17:11.223 cancer care which was relatively

NOTE Confidence: 0.794949426666667

00:17:11.223 --> 00:17:13.428 equal amongst all of the

NOTE Confidence: 0.794949426666667

00:17:13.430 --> 00:17:16.466 countries that you compared the US

NOTE Confidence: 0.794949426666667

00:17:16.466 --> 00:17:18.620 still spends more. Is that right?

NOTE Confidence: 0.8200174525

00:17:18.970 --> 00:17:21.756 Yeah, and quite a bit more so

NOTE Confidence: 0.8200174525

00:17:21.756 --> 00:17:23.990 we're spending about \$200 billion

NOTE Confidence: 0.8200174525

00:17:23.990 --> 00:17:26.550 per year on cancer care in the US

NOTE Confidence: 0.8200174525

00:17:26.550 --> 00:17:29.120 and on the average per person.

NOTE Confidence: 0.8200174525

00:17:29.120 --> 00:17:30.548 That's not per person with cancer,

NOTE Confidence: 0.8200174525

00:17:30.550 --> 00:17:32.769 but just per person in the US.

NOTE Confidence: 0.8200174525

00:17:32.770 --> 00:17:35.332 You know that comes out to

NOTE Confidence: 0.8200174525

00:17:35.332 --> 00:17:36.990 around \$600.00 per person.

NOTE Confidence: 0.8200174525

00:17:36.990 --> 00:17:39.040 We're spending on cancer care

NOTE Confidence: 0.8200174525

00:17:39.040 --> 00:17:41.701 and this compares to the average

NOTE Confidence: 0.8200174525

00:17:41.701 --> 00:17:43.469 amongst the other wealthy.

NOTE Confidence: 0.8200174525

00:17:43.470 --> 00:17:45.294 These are all wealthy,

NOTE Confidence: 0.8200174525

00:17:45.294 --> 00:17:46.662 industrialized countries in

NOTE Confidence: 0.8200174525

00:17:46.662 --> 00:17:48.500 the global global north.

NOTE Confidence: 0.8200174525

00:17:48.500 --> 00:17:50.690 In our sample the average

NOTE Confidence: 0.8200174525

00:17:50.690 --> 00:17:52.473 was about \$300.00 per person

NOTE Confidence: 0.8200174525

00:17:52.473 --> 00:17:53.978 being spent on cancer care,

NOTE Confidence: 0.8200174525

00:17:53.980 --> 00:17:56.116 and some of these countries were

NOTE Confidence: 0.8200174525

00:17:56.116 --> 00:17:58.208 were down to 200 per person.

NOTE Confidence: 0.8200174525

00:17:58.208 --> 00:17:59.878 So when we're thinking about

NOTE Confidence: 0.8200174525

00:17:59.878 --> 00:18:02.218 the \$200 billion per year being



NOTE Confidence: 0.8200174525

00:18:02.218 --> 00:18:04.894 spent on cancer in the US,

NOTE Confidence: 0.8200174525

00:18:04.900 --> 00:18:07.068 and the fact that that's you know three

NOTE Confidence: 0.8200174525

00:18:07.068 --> 00:18:09.380 times per capita seen in other countries,

NOTE Confidence: 0.8200174525

00:18:09.380 --> 00:18:10.840 it's also really important to

NOTE Confidence: 0.8200174525

00:18:10.840 --> 00:18:12.300 think about the experience of

NOTE Confidence: 0.8200174525

00:18:12.353 --> 00:18:13.788 patients with cancer and how.

NOTE Confidence: 0.8200174525

00:18:13.790 --> 00:18:15.094 For many of them,

NOTE Confidence: 0.8200174525

00:18:15.094 --> 00:18:15.746 they're struggling,

NOTE Confidence: 0.8200174525

00:18:15.750 --> 00:18:17.815 struggling to pay for these new therapies.

NOTE Confidence: 0.8200174525

00:18:17.820 --> 00:18:18.728 You know,

NOTE Confidence: 0.8200174525

00:18:18.728 --> 00:18:22.004 in some studies you know up to 1/4 of

NOTE Confidence: 0.8200174525

00:18:22.004 --> 00:18:24.460 patients with cancer are going into debt,

NOTE Confidence: 0.772522478

00:18:24.530 --> 00:18:27.498 so but just to clarify that when

NOTE Confidence: 0.772522478

00:18:27.498 --> 00:18:31.026 you talk about \$600.00 per capita,

NOTE Confidence: 0.772522478

00:18:31.026 --> 00:18:33.610 2 questions, first of all,

NOTE Confidence: 0.772522478

00:18:33.610 --> 00:18:35.050 that's an annual expense.

NOTE Confidence: 0.772522478

00:18:35.050 --> 00:18:42.920 Correct? And 2nd, is that \$600?

NOTE Confidence: 0.772522478

00:18:42.920 --> 00:18:46.360 Borne by the healthcare system,

NOTE Confidence: 0.772522478

00:18:46.360 --> 00:18:47.215 in other words,

NOTE Confidence: 0.772522478

00:18:47.215 --> 00:18:49.210 is that the amount that the government

NOTE Confidence: 0.772522478

00:18:49.264 --> 00:18:51.056 is paying out as part of Medicare,

NOTE Confidence: 0.772522478

00:18:51.060 --> 00:18:53.520 or is that the total amount

NOTE Confidence: 0.772522478

00:18:53.520 --> 00:18:56.100 in terms of what industry,

NOTE Confidence: 0.772522478

00:18:56.100 --> 00:18:58.260 is paying what pharma is paying,

NOTE Confidence: 0.772522478

00:18:58.260 --> 00:19:00.328 what hospitals are paying?

NOTE Confidence: 0.772522478

00:19:00.328 --> 00:19:01.879 Or is it?

NOTE Confidence: 0.772522478

00:19:01.880 --> 00:19:03.728 What individuals are paying,

NOTE Confidence: 0.772522478

00:19:03.728 --> 00:19:06.500 and if it is the latter,

NOTE Confidence: 0.772522478

00:19:06.500 --> 00:19:08.288 does it include all of the

NOTE Confidence: 0.772522478

00:19:08.288 --> 00:19:10.289 ancillary costs so you know when

NOTE Confidence: 0.772522478

00:19:10.289 --> 00:19:12.154 you think about healthcare costs?

NOTE Confidence: 0.772522478

00:19:12.160 --> 00:19:14.488 Certainly there are the costs of your copays.

NOTE Confidence: 0.772522478

00:19:14.490 --> 00:19:15.354 When you're deductibles,

NOTE Confidence: 0.772522478

00:19:15.354 --> 00:19:17.700 but then there's also the other cost right?

NOTE Confidence: 0.772522478

00:19:17.700 --> 00:19:19.140 The time off of work,

NOTE Confidence: 0.772522478

00:19:19.140 --> 00:19:21.720 the childcare and and everything else.

NOTE Confidence: 0.772522478

00:19:21.720 --> 00:19:23.570 So what really were the

NOTE Confidence: 0.772522478

00:19:23.570 --> 00:19:25.420 costs that were looked at?

NOTE Confidence: 0.7398874708

00:19:25.860 --> 00:19:27.060 Yeah, that's a great question.

NOTE Confidence: 0.7398874708

00:19:27.060 --> 00:19:30.309 So for this study we focused on the big

NOTE Confidence: 0.7398874708

00:19:30.309 --> 00:19:33.708 picture of global cost of basically all

NOTE Confidence: 0.7398874708

00:19:33.708 --> 00:19:36.300 interactions with the healthcare system.

NOTE Confidence: 0.7398874708

00:19:36.300 --> 00:19:38.876 Whether somebody was Medicare,

NOTE Confidence: 0.7398874708

00:19:38.876 --> 00:19:40.318 Medicaid, private insurance.

NOTE Confidence: 0.7398874708

00:19:40.318 --> 00:19:43.111 But when somebody went and received some

NOTE Confidence: 0.7398874708

00:19:43.111 --> 00:19:45.508 form of care that relates to cancer.

NOTE Confidence: 0.7398874708

00:19:45.510 --> 00:19:46.987 What did the costs come out to?

NOTE Confidence: 0.7398874708

00:19:46.990 --> 00:19:48.250 And just to be clear,

NOTE Confidence: 0.7398874708

00:19:48.250 --> 00:19:50.680 that \$600.00 per person that's not

NOTE Confidence: 0.7398874708

00:19:50.680 --> 00:19:52.810 \$600.00 per patient with cancer.

NOTE Confidence: 0.7398874708

00:19:52.810 --> 00:19:54.987 That's \$600.00 for each and every one

NOTE Confidence: 0.7398874708

00:19:54.987 --> 00:19:57.608 of the 300 million people in the US.

NOTE Confidence: 0.7398874708

00:19:57.610 --> 00:20:00.146 So everyone if you if you were to

NOTE Confidence: 0.7398874708

00:20:00.146 --> 00:20:02.720 spread out the the investment in

NOTE Confidence: 0.7398874708

00:20:02.720 --> 00:20:05.045 cancer across the entire population,

NOTE Confidence: 0.7398874708

00:20:05.050 --> 00:20:06.850 that's what it comes out to.

NOTE Confidence: 0.7398874708

00:20:06.850 --> 00:20:08.446 And as far as the yeah,

NOTE Confidence: 0.7398874708

00:20:08.450 --> 00:20:10.970 the time costs the out of pocket costs.

NOTE Confidence: 0.7398874708

00:20:10.970 --> 00:20:12.620 Saw one study that just published

NOTE Confidence: 0.7398874708

00:20:12.620 --> 00:20:13.990 a couple of years ago.

NOTE Confidence: 0.7398874708

00:20:13.990 --> 00:20:15.934 They estimated that the.

NOTE Confidence: 0.7398874708

00:20:15.934 --> 00:20:17.878 Out of pocket costs.

NOTE Confidence: 0.7398874708

00:20:17.880 --> 00:20:20.724 After insurance and everything

NOTE Confidence: 0.7398874708

00:20:20.724 --> 00:20:23.840 was covering as much as it could,

NOTE Confidence: 0.7398874708

00:20:23.840 --> 00:20:26.570 or over \$16 billion per year for

NOTE Confidence: 0.7398874708

00:20:26.570 --> 00:20:29.443 patients with cancer and the same study

NOTE Confidence: 0.7398874708

00:20:29.443 --> 00:20:31.873 estimated the time cost with cancer,

NOTE Confidence: 0.7398874708

00:20:31.880 --> 00:20:33.720 meaning the cost of actually

NOTE Confidence: 0.7398874708

00:20:33.720 --> 00:20:35.560 going to and from treatments.

NOTE Confidence: 0.7398874708

00:20:35.560 --> 00:20:38.060 Cost of missed work, etcetera.

NOTE Confidence: 0.7398874708

00:20:38.060 --> 00:20:39.232 We're about 5 billion.

NOTE Confidence: 0.7398874708

00:20:39.232 --> 00:20:40.697 I think that's a gross

NOTE Confidence: 0.7398874708

00:20:40.697 --> 00:20:42.140 underestimate to be honest with you,

NOTE Confidence: 0.7398874708

00:20:42.140 --> 00:20:45.296 I think what we're not properly

NOTE Confidence: 0.7398874708

00:20:45.296 --> 00:20:46.874 understanding or measuring.

NOTE Confidence: 0.7398874708

00:20:46.880 --> 00:20:49.253 The the time cost that that that

NOTE Confidence: 0.7398874708

00:20:49.253 --> 00:20:51.668 takes to to deal with cancer.

NOTE Confidence: 0.566975974

00:20:52.420 --> 00:20:54.740 And so you know, Ryan,  
NOTE Confidence: 0.566975974

00:20:54.740 --> 00:20:56.399 when we think about cost and we'll,  
NOTE Confidence: 0.566975974

00:20:56.400 --> 00:20:57.856 we'll get to benefits in a minute.  
NOTE Confidence: 0.566975974

00:20:57.860 --> 00:21:00.065 But I, I really want to dig into the  
NOTE Confidence: 0.566975974

00:21:00.065 --> 00:21:02.220 the cost side of things because I,  
NOTE Confidence: 0.566975974

00:21:02.220 --> 00:21:04.230 you know, there's a difference  
NOTE Confidence: 0.566975974

00:21:04.230 --> 00:21:06.240 between Kerry when you quoted,  
NOTE Confidence: 0.566975974

00:21:06.240 --> 00:21:09.176 I think you quoted it was \$200 billion,  
NOTE Confidence: 0.566975974

00:21:09.180 --> 00:21:11.950 right? \$600.00 per person spread  
NOTE Confidence: 0.566975974

00:21:11.950 --> 00:21:13.980 out over the population so you can  
NOTE Confidence: 0.566975974

00:21:13.980 --> 00:21:15.718 imagine for each cancer patient,  
NOTE Confidence: 0.566975974

00:21:15.720 --> 00:21:18.372 given the fact that cancer doesn't  
NOTE Confidence: 0.566975974

00:21:18.372 --> 00:21:20.140 affect every single individual  
NOTE Confidence: 0.566975974

00:21:20.140 --> 00:21:22.380 for a given cancer patient.  
NOTE Confidence: 0.566975974

00:21:22.380 --> 00:21:24.880 That \$600.00 is probably  
NOTE Confidence: 0.566975974

00:21:24.880 --> 00:21:28.630 more like you know 2 grand.

NOTE Confidence: 0.566975974

00:21:28.630 --> 00:21:30.492 When we think about the number of

NOTE Confidence: 0.566975974

00:21:30.492 --> 00:21:32.628 people who get cancer in this country,

NOTE Confidence: 0.566975974

00:21:32.630 --> 00:21:35.110 uh, individually, but so.

NOTE Confidence: 0.566975974

00:21:35.110 --> 00:21:37.590 So the cost Ryan.

NOTE Confidence: 0.566975974

00:21:37.590 --> 00:21:40.848 Just to clarify that is not just the out

NOTE Confidence: 0.566975974

00:21:40.848 --> 00:21:44.167 of pocket cost for these individuals,

NOTE Confidence: 0.566975974

00:21:44.170 --> 00:21:46.864 but it also includes the costs

NOTE Confidence: 0.566975974

00:21:46.864 --> 00:21:49.974 that are borne by other sectors

NOTE Confidence: 0.566975974

00:21:49.974 --> 00:21:52.406 of the healthcare system.

NOTE Confidence: 0.566975974

00:21:52.410 --> 00:21:53.265 Is that right?

NOTE Confidence: 0.566975974

00:21:53.265 --> 00:21:55.260 Or is it only the out of

NOTE Confidence: 0.566975974

00:21:55.334 --> 00:21:57.378 pocket cost for individuals,

NOTE Confidence: 0.7944658226

00:21:58.110 --> 00:22:00.390 right? So it. It does reflect

NOTE Confidence: 0.7944658226

00:22:00.390 --> 00:22:01.910 the total healthcare spending,

NOTE Confidence: 0.7944658226

00:22:01.910 --> 00:22:04.226 not just out of pocket costs,

NOTE Confidence: 0.7944658226

00:22:04.230 --> 00:22:05.676 so that would include a lot  
NOTE Confidence: 0.7944658226

00:22:05.676 --> 00:22:07.394 of these drugs do have some  
NOTE Confidence: 0.7944658226

00:22:07.394 --> 00:22:08.786 degree of insurance coverage,  
NOTE Confidence: 0.7944658226

00:22:08.790 --> 00:22:11.490 and so the total cost of those drugs is  
NOTE Confidence: 0.7944658226

00:22:11.490 --> 00:22:13.607 factored into our our cost estimates,  
NOTE Confidence: 0.7944658226

00:22:13.610 --> 00:22:14.885 not just what the patient  
NOTE Confidence: 0.7944658226

00:22:14.885 --> 00:22:16.360 pays out of pocket. Yeah,  
NOTE Confidence: 0.762933818695652

00:22:16.450 --> 00:22:18.365 because certainly you know the  
NOTE Confidence: 0.762933818695652

00:22:18.365 --> 00:22:20.660 the insurance company has a cost  
NOTE Confidence: 0.762933818695652

00:22:20.660 --> 00:22:22.520 and and the patient not only  
NOTE Confidence: 0.762933818695652

00:22:22.520 --> 00:22:24.578 has their out of pocket costs,  
NOTE Confidence: 0.762933818695652

00:22:24.580 --> 00:22:26.098 but they also have their deductibles.  
NOTE Confidence: 0.762933818695652

00:22:26.100 --> 00:22:28.428 And so on and so forth, and so Carrie  
NOTE Confidence: 0.762933818695652

00:22:28.428 --> 00:22:30.144 before we transition back to Ryan.  
NOTE Confidence: 0.762933818695652

00:22:30.150 --> 00:22:31.830 Talk more about the benefits,  
NOTE Confidence: 0.762933818695652

00:22:31.830 --> 00:22:33.590 just to clarify as well,



NOTE Confidence: 0.762933818695652

00:22:33.590 --> 00:22:35.540 this was not just about medications.

NOTE Confidence: 0.762933818695652

00:22:35.540 --> 00:22:37.950 This was about hospital stays.

NOTE Confidence: 0.762933818695652

00:22:37.950 --> 00:22:40.054 It was about surgeries.

NOTE Confidence: 0.762933818695652

00:22:40.054 --> 00:22:42.684 It was about radiation treatments.

NOTE Confidence: 0.762933818695652

00:22:42.690 --> 00:22:45.366 It was about was it about

NOTE Confidence: 0.762933818695652

00:22:45.366 --> 00:22:47.150 things like physical therapy,

NOTE Confidence: 0.762933818695652

00:22:47.150 --> 00:22:48.114 occupational therapy,

NOTE Confidence: 0.762933818695652

00:22:48.114 --> 00:22:51.488 which are also often part of that

NOTE Confidence: 0.762933818695652

00:22:51.488 --> 00:22:52.829 multidisciplinary cancer care.

NOTE Confidence: 0.91194515

00:22:54.040 --> 00:22:56.330 Yeah, that's the key question

NOTE Confidence: 0.91194515

00:22:56.330 --> 00:22:58.612 is what is the what are the

NOTE Confidence: 0.91194515

00:22:58.612 --> 00:23:00.617 contributors to the overall cost

NOTE Confidence: 0.91194515

00:23:00.617 --> 00:23:02.997 and the variation across countries?

NOTE Confidence: 0.91194515

00:23:03.000 --> 00:23:04.666 And we're not able to answer that

NOTE Confidence: 0.91194515

00:23:04.666 --> 00:23:06.468 in this study because we we focused

NOTE Confidence: 0.91194515

00:23:06.468 --> 00:23:07.956 on the big picture. Overall,  
NOTE Confidence: 0.91194515

00:23:07.956 --> 00:23:11.524 how much is being spent on cancer care?  
NOTE Confidence: 0.91194515

00:23:11.530 --> 00:23:13.654 And one thing I've noticed over  
NOTE Confidence: 0.91194515

00:23:13.654 --> 00:23:15.670 the course of my career.  
NOTE Confidence: 0.91194515

00:23:15.670 --> 00:23:17.455 Well, a lot of finger pointing happens.  
NOTE Confidence: 0.91194515

00:23:17.460 --> 00:23:19.145 I've noticed that the Pharmaceutical  
NOTE Confidence: 0.91194515

00:23:19.145 --> 00:23:21.199 industry loves to point out that  
NOTE Confidence: 0.91194515

00:23:21.199 --> 00:23:22.779 how expensive hospitals are and  
NOTE Confidence: 0.91194515

00:23:22.779 --> 00:23:24.779 hospitals love to point out how much,  
NOTE Confidence: 0.91194515

00:23:24.780 --> 00:23:26.690 how expensive the drugs are  
NOTE Confidence: 0.91194515

00:23:26.690 --> 00:23:28.218 and then radiation oncologists.  
NOTE Confidence: 0.91194515

00:23:28.220 --> 00:23:30.894 They they compare their their cost to.  
NOTE Confidence: 0.91194515

00:23:30.900 --> 00:23:32.760 You know other non radiation treatments.  
NOTE Confidence: 0.91194515

00:23:32.760 --> 00:23:35.994 So I mean all of these different  
NOTE Confidence: 0.91194515

00:23:35.994 --> 00:23:38.420 components add up substantially and  
NOTE Confidence: 0.91194515

00:23:38.420 --> 00:23:40.380 they're each important contributors.

NOTE Confidence: 0.91194515

00:23:40.380 --> 00:23:43.572 One thing I'm hoping is to a further

NOTE Confidence: 0.91194515

00:23:43.572 --> 00:23:46.644 clarify how these vary across countries.

NOTE Confidence: 0.91194515

00:23:46.650 --> 00:23:49.410 The different contributors to cancer costs,

NOTE Confidence: 0.91194515

00:23:49.410 --> 00:23:50.042 but B.

NOTE Confidence: 0.91194515

00:23:50.042 --> 00:23:51.938 Hopefully we'll one day be able

NOTE Confidence: 0.91194515

00:23:51.938 --> 00:23:54.245 to get away from their finger

NOTE Confidence: 0.91194515

00:23:54.245 --> 00:23:56.645 pointing idea because I think it's

NOTE Confidence: 0.91194515

00:23:56.723 --> 00:23:58.586 very easy to point out how,

NOTE Confidence: 0.91194515

00:23:58.586 --> 00:24:00.482 how important it is to look

NOTE Confidence: 0.91194515

00:24:00.482 --> 00:24:02.150 for cost savings elsewhere,

NOTE Confidence: 0.91194515

00:24:02.150 --> 00:24:04.064 and we could encourage more of

NOTE Confidence: 0.91194515

00:24:04.064 --> 00:24:05.964 the different sectors to roll up

NOTE Confidence: 0.91194515

00:24:05.964 --> 00:24:07.638 their sleeves and try to dial

NOTE Confidence: 0.91194515

00:24:07.638 --> 00:24:09.359 down costs in their own areas.

NOTE Confidence: 0.721321204

00:24:10.010 --> 00:24:12.150 And so Ryan, you know.

NOTE Confidence: 0.721321204

00:24:12.150 --> 00:24:13.710 Transitioning now to really  
NOTE Confidence: 0.721321204

00:24:13.710 --> 00:24:15.270 thinking about the benefits,  
NOTE Confidence: 0.721321204

00:24:15.270 --> 00:24:17.400 we know that the US spends.  
NOTE Confidence: 0.721321204

00:24:17.400 --> 00:24:19.344 An inordinate amount of money on  
NOTE Confidence: 0.721321204

00:24:19.344 --> 00:24:21.175 health care and and proportionately  
NOTE Confidence: 0.721321204

00:24:21.175 --> 00:24:23.959 an inordinate amount on cancer care.  
NOTE Confidence: 0.721321204

00:24:23.960 --> 00:24:26.571 So what did you find in terms  
NOTE Confidence: 0.721321204

00:24:26.571 --> 00:24:28.819 of the actual benefit our,  
NOTE Confidence: 0.721321204

00:24:28.820 --> 00:24:31.418 our, our outcomes in the US,  
NOTE Confidence: 0.721321204

00:24:31.420 --> 00:24:33.421 substantially better than  
NOTE Confidence: 0.721321204

00:24:33.421 --> 00:24:36.089 other high income countries?  
NOTE Confidence: 0.732441406666667

00:24:36.500 --> 00:24:38.780 So the short answer is no,  
NOTE Confidence: 0.732441406666667

00:24:38.780 --> 00:24:41.332 the US is not necessarily doing that much  
NOTE Confidence: 0.732441406666667

00:24:41.332 --> 00:24:43.717 better than other high income countries.  
NOTE Confidence: 0.732441406666667

00:24:43.720 --> 00:24:45.616 So to give you more of the the  
NOTE Confidence: 0.732441406666667

00:24:45.616 --> 00:24:47.276 data behind that, so across these.

NOTE Confidence: 0.732441406666667  
00:24:47.276 --> 00:24:48.968 Income countries that we looked at,  
NOTE Confidence: 0.732441406666667  
00:24:48.970 --> 00:24:52.370 the median mortality rate is about 91 deaths  
NOTE Confidence: 0.732441406666667  
00:24:52.370 --> 00:24:55.250 from cancer per 100,000 people in a year,  
NOTE Confidence: 0.732441406666667  
00:24:55.250 --> 00:24:56.610 and so in the US,  
NOTE Confidence: 0.732441406666667  
00:24:56.610 --> 00:25:00.370 that was 86 deaths from cancer per 100,000,  
NOTE Confidence: 0.732441406666667  
00:25:00.370 --> 00:25:02.850 and so that put the US at about  
NOTE Confidence: 0.732441406666667  
00:25:02.850 --> 00:25:04.966 seventh lowest out of 22 countries.  
NOTE Confidence: 0.732441406666667  
00:25:04.970 --> 00:25:08.466 So it's doing better than the median country.  
NOTE Confidence: 0.732441406666667  
00:25:08.470 --> 00:25:10.199 But there is a caveat here and  
NOTE Confidence: 0.732441406666667  
00:25:10.199 --> 00:25:11.948 that has to do with smoking.  
NOTE Confidence: 0.732441406666667  
00:25:11.950 --> 00:25:13.086 So as I mentioned,  
NOTE Confidence: 0.732441406666667  
00:25:13.086 --> 00:25:14.506 smoking is a major risk  
NOTE Confidence: 0.732441406666667  
00:25:14.506 --> 00:25:16.069 factor for cancer mortality,  
NOTE Confidence: 0.732441406666667  
00:25:16.070 --> 00:25:17.735 and this is an area that the US has  
NOTE Confidence: 0.732441406666667  
00:25:17.735 --> 00:25:18.928 actually done a really good job.  
NOTE Confidence: 0.732441406666667

00:25:18.930 --> 00:25:19.608 And historically,  
NOTE Confidence: 0.732441406666667

00:25:19.608 --> 00:25:22.320 where the US smoking rate is much lower  
NOTE Confidence: 0.732441406666667

00:25:22.387 --> 00:25:24.949 than a lot of other industrialized nations,  
NOTE Confidence: 0.732441406666667

00:25:24.950 --> 00:25:26.902 and so if we account for that variation  
NOTE Confidence: 0.732441406666667

00:25:26.902 --> 00:25:28.570 in smoking rates across countries,  
NOTE Confidence: 0.732441406666667

00:25:28.570 --> 00:25:30.649 we actually find that the US cancer  
NOTE Confidence: 0.732441406666667

00:25:30.649 --> 00:25:32.888 mortality rate is then only tenth lowest,  
NOTE Confidence: 0.732441406666667

00:25:32.890 --> 00:25:35.038 and it's actually pretty much comparable  
NOTE Confidence: 0.732441406666667

00:25:35.038 --> 00:25:37.750 to the median high high income country.  
NOTE Confidence: 0.732441406666667

00:25:37.750 --> 00:25:39.670 So bringing together what we are  
NOTE Confidence: 0.732441406666667

00:25:39.670 --> 00:25:41.377 talking about with costs and  
NOTE Confidence: 0.732441406666667

00:25:41.377 --> 00:25:42.857 now thinking about mortality.  
NOTE Confidence: 0.732441406666667

00:25:42.860 --> 00:25:45.023 US spending twice as much on cancer  
NOTE Confidence: 0.732441406666667

00:25:45.023 --> 00:25:47.858 care as the average high income country.  
NOTE Confidence: 0.732441406666667

00:25:47.860 --> 00:25:48.748 But you know,  
NOTE Confidence: 0.732441406666667

00:25:48.748 --> 00:25:50.820 cancer mortality rates in the US are

NOTE Confidence: 0.732441406666667  
00:25:50.887 --> 00:25:53.437 pretty basically comparable to the average,  
NOTE Confidence: 0.732441406666667  
00:25:53.440 --> 00:25:55.416 so that tells us that you know there  
NOTE Confidence: 0.732441406666667  
00:25:55.416 --> 00:25:57.372 are still a lot of opportunities in  
NOTE Confidence: 0.732441406666667  
00:25:57.372 --> 00:25:59.166 areas for improving the US cancer  
NOTE Confidence: 0.732441406666667  
00:25:59.166 --> 00:26:01.200 care ecosystem that can really help  
NOTE Confidence: 0.732441406666667  
00:26:01.200 --> 00:26:02.890 patients live longer and better,  
NOTE Confidence: 0.732441406666667  
00:26:02.890 --> 00:26:04.900 and ideally at a more affordable  
NOTE Confidence: 0.732441406666667  
00:26:04.900 --> 00:26:05.950 price as well.  
NOTE Confidence: 0.727194586666667  
00:26:06.820 --> 00:26:09.118 Cary, then the obvious question,  
NOTE Confidence: 0.727194586666667  
00:26:09.120 --> 00:26:13.314 right is who was the winner in terms of  
NOTE Confidence: 0.727194586666667  
00:26:13.320 --> 00:26:14.370 outcomes versus cost?  
NOTE Confidence: 0.727194586666667  
00:26:16.270 --> 00:26:19.966 So yeah, there are several in that domain.  
NOTE Confidence: 0.620602892857143  
00:26:19.966 --> 00:26:22.414 Korea, Finland, Iceland,  
NOTE Confidence: 0.620602892857143  
00:26:22.414 --> 00:26:24.610 Spain, Sweden. You know,  
NOTE Confidence: 0.620602892857143  
00:26:24.610 --> 00:26:26.910 countries with National Health systems,  
NOTE Confidence: 0.620602892857143

00:26:26.910 --> 00:26:29.406 countries that have good,  
NOTE Confidence: 0.620602892857143

00:26:29.406 --> 00:26:33.150 you know prevention and screening efforts,  
NOTE Confidence: 0.620602892857143

00:26:33.150 --> 00:26:34.520 but also some of these countries  
NOTE Confidence: 0.620602892857143

00:26:34.520 --> 00:26:36.590 that they might have had.  
NOTE Confidence: 0.620602892857143

00:26:36.590 --> 00:26:38.090 Some of them have higher smoking  
NOTE Confidence: 0.620602892857143

00:26:38.090 --> 00:26:40.110 rates than the US, and you know,  
NOTE Confidence: 0.620602892857143

00:26:40.110 --> 00:26:42.150 many of these countries benefited from  
NOTE Confidence: 0.620602892857143

00:26:42.150 --> 00:26:44.688 the fact that the US has such a robust.  
NOTE Confidence: 0.620602892857143

00:26:44.690 --> 00:26:47.810 Research, infrastructure and and many of  
NOTE Confidence: 0.620602892857143

00:26:47.810 --> 00:26:50.779 the new cancer treatments used across  
NOTE Confidence: 0.620602892857143

00:26:50.779 --> 00:26:53.600 the world are generated in the US.  
NOTE Confidence: 0.620602892857143

00:26:53.600 --> 00:26:56.134 So you know by these important metrics.  
NOTE Confidence: 0.620602892857143

00:26:56.140 --> 00:26:58.020 Looking at cost and survival,  
NOTE Confidence: 0.620602892857143

00:26:58.020 --> 00:26:59.248 there are several countries  
NOTE Confidence: 0.620602892857143

00:26:59.248 --> 00:27:00.476 that are doing better,  
NOTE Confidence: 0.620602892857143

00:27:00.480 --> 00:27:01.665 but also it's important to



NOTE Confidence: 0.620602892857143  
00:27:01.665 --> 00:27:03.100 understand what we're doing so well.  
NOTE Confidence: 0.620602892857143  
00:27:03.100 --> 00:27:04.618 Here you know what we are.  
NOTE Confidence: 0.620602892857143  
00:27:04.620 --> 00:27:06.678 We have a low smoking rates.  
NOTE Confidence: 0.620602892857143  
00:27:06.680 --> 00:27:08.510 We have excellent Cancer Research.  
NOTE Confidence: 0.620602892857143  
00:27:08.510 --> 00:27:12.236 We have good cancer screening rates,  
NOTE Confidence: 0.620602892857143  
00:27:12.240 --> 00:27:15.664 so I think we can all learn from.  
NOTE Confidence: 0.620602892857143  
00:27:15.670 --> 00:27:16.041 Well,  
NOTE Confidence: 0.620602892857143  
00:27:16.041 --> 00:27:18.638 each other countries are doing and you  
NOTE Confidence: 0.620602892857143  
00:27:18.638 --> 00:27:21.387 know I'm just concerned that some to  
NOTE Confidence: 0.620602892857143  
00:27:21.387 --> 00:27:23.443 be honest and I haven't said this yet.  
NOTE Confidence: 0.620602892857143  
00:27:23.450 --> 00:27:26.192 The the origin of this particular  
NOTE Confidence: 0.620602892857143  
00:27:26.192 --> 00:27:28.878 study is from dates back to a  
NOTE Confidence: 0.620602892857143  
00:27:28.878 --> 00:27:30.513 different study that was roughly  
NOTE Confidence: 0.620602892857143  
00:27:30.513 --> 00:27:33.542 10 years ago that was just a very  
NOTE Confidence: 0.620602892857143  
00:27:33.542 --> 00:27:35.707 Pollyannaish study that looked at  
NOTE Confidence: 0.620602892857143

00:27:35.707 --> 00:27:37.866 survival after a cancer diagnosis  
NOTE Confidence: 0.620602892857143

00:27:37.866 --> 00:27:39.806 and Ryan described earlier why that  
NOTE Confidence: 0.620602892857143

00:27:39.806 --> 00:27:41.480 can be problematic that you know,  
NOTE Confidence: 0.620602892857143

00:27:41.480 --> 00:27:43.965 some countries have higher cancer  
NOTE Confidence: 0.620602892857143

00:27:43.965 --> 00:27:45.953 screening rates than others.  
NOTE Confidence: 0.620602892857143

00:27:45.960 --> 00:27:47.640 That, uh, it could be deceptive.  
NOTE Confidence: 0.620602892857143

00:27:47.640 --> 00:27:49.299 It could make it look like maybe  
NOTE Confidence: 0.620602892857143

00:27:49.299 --> 00:27:50.859 you have better cancer outcomes,  
NOTE Confidence: 0.620602892857143

00:27:50.860 --> 00:27:53.247 but this old study looked at cancer  
NOTE Confidence: 0.620602892857143

00:27:53.247 --> 00:27:55.975 survival rates and and said that the US  
NOTE Confidence: 0.620602892857143

00:27:55.975 --> 00:27:58.000 was doing better than everybody else.  
NOTE Confidence: 0.620602892857143

00:27:58.000 --> 00:28:00.338 So the higher costs are worth it.  
NOTE Confidence: 0.620602892857143

00:28:00.340 --> 00:28:01.376 And as you know,  
NOTE Confidence: 0.620602892857143

00:28:01.376 --> 00:28:03.356 they all this data kept coming in  
NOTE Confidence: 0.620602892857143

00:28:03.356 --> 00:28:05.211 about financial toxicity and concerns  
NOTE Confidence: 0.620602892857143

00:28:05.211 --> 00:28:07.384 about whether drugs are effective in

NOTE Confidence: 0.620602892857143

00:28:07.384 --> 00:28:10.358 the real world as they were in the

NOTE Confidence: 0.620602892857143

00:28:10.358 --> 00:28:12.792 initial studies and other studies coming in,

NOTE Confidence: 0.620602892857143

00:28:12.792 --> 00:28:14.008 showing that maybe other

NOTE Confidence: 0.620602892857143

00:28:14.008 --> 00:28:15.310 countries are doing better.

NOTE Confidence: 0.620602892857143

00:28:15.310 --> 00:28:17.118 With their population level,

NOTE Confidence: 0.620602892857143

00:28:17.118 --> 00:28:19.378 mortality really just kept driving

NOTE Confidence: 0.620602892857143

00:28:19.378 --> 00:28:21.943 home this question that we have to

NOTE Confidence: 0.620602892857143

00:28:21.943 --> 00:28:24.450 really learn from from different

NOTE Confidence: 0.620602892857143

00:28:24.450 --> 00:28:27.150 national approaches to to healthcare,

NOTE Confidence: 0.620602892857143

00:28:27.150 --> 00:28:29.070 to Wellness and to, you know,

NOTE Confidence: 0.620602892857143

00:28:29.070 --> 00:28:29.790 payment reform.

NOTE Confidence: 0.869464982727273

00:28:30.640 --> 00:28:32.524 Doctor Cary Gross is a professor

NOTE Confidence: 0.869464982727273

00:28:32.524 --> 00:28:34.610 of medicine and of epidemiology,

NOTE Confidence: 0.869464982727273

00:28:34.610 --> 00:28:36.954 and Ryan Chow is an MD PhD student

NOTE Confidence: 0.869464982727273

00:28:36.954 --> 00:28:39.330 at the Yale School of Medicine.

NOTE Confidence: 0.869464982727273

00:28:39.330 --> 00:28:41.318 If you have questions,  
NOTE Confidence: 0.869464982727273

00:28:41.318 --> 00:28:43.261 the address is canceranswers@yale.edu  
NOTE Confidence: 0.869464982727273

00:28:43.261 --> 00:28:45.967 and past editions of the program  
NOTE Confidence: 0.869464982727273

00:28:45.967 --> 00:28:48.323 are available in audio and written  
NOTE Confidence: 0.869464982727273

00:28:48.323 --> 00:28:49.265 form at yalecancercenter.org.  
NOTE Confidence: 0.869464982727273

00:28:49.265 --> 00:28:51.785 We hope you'll join us next week to  
NOTE Confidence: 0.869464982727273

00:28:51.785 --> 00:28:53.707 learn more about the fight against  
NOTE Confidence: 0.869464982727273

00:28:53.707 --> 00:28:55.257 cancer here on Connecticut Public  
NOTE Confidence: 0.869464982727273

00:28:55.314 --> 00:28:57.084 radio. Funding for Yale Cancer Answers  
NOTE Confidence: 0.869464982727273

00:28:57.084 --> 00:29:00.000 is provided by Smilow Cancer Hospital.