

0:00:00 -> 0:00:01.96 Funding for Yale Cancer Answers
0:00:01.96 -> 0:00:03.92 is provided by Smilow Cancer
0:00:03.99 -> 0:00:05.69 Hospital and AstraZeneca.
0:00:07.76 -> 0:00:09.872 Welcome to Yale Cancer Answers with
0:00:09.872 -> 0:00:11.872 your host, doctor Anees Chagpar.
0:00:11.872 -> 0:00:13.487 Yale Cancer Answers features
0:00:13.487 -> 0:00:15.577 the latest information on cancer
0:00:15.577 -> 0:00:17.712 care by welcoming oncologists and
0:00:17.712 -> 0:00:19.667 specialists who are on the forefront of
0:00:19.667 -> 0:00:21.852 the battle to fight cancer. This week,
0:00:21.852 -> 0:00:23.632 it's a conversation about lung
0:00:23.632 -> 0:00:25.36 cancer with Doctor Anne Chiang.
0:00:25.36 -> 0:00:27.874 Doctor Chiang is an associate professor
0:00:27.874 -> 0:00:30.717 in medical oncology at the Yale School
0:00:30.717 -> 0:00:33.265 of Medicine where Doctor Chagpar is
0:00:33.34 -> 0:00:35.98 a professor of surgical oncology.
0:00:35.98 -> 0:00:38.2 Let's start at the beginning.
0:00:38.2 -> 0:00:40.594 I think a lot of
0:00:40.594 -> 0:00:42.639 people know about lung cancer,
0:00:42.64 -> 0:00:44.308 but this whole differentiation
0:00:44.308 -> 0:00:46.81 between small cell, non small cell
0:00:46.884 -> 0:00:49.3 tell us a little bit more about that.
0:00:49.3 -> 0:00:51.15 What exactly is the difference?
0:00:51.15 -> 0:00:53.74 How many people are affected by each?
0:00:53.74 -> 0:00:55.96 And why should we care?
0:00:55.96 -> 0:00:59.016 I think that the basics about
0:00:59.016 -> 0:01:01.879 lung cancer are that they form in the lung.
0:01:01.88 -> 0:01:03.73 There's mainly two different types,
0:01:03.73 -> 0:01:05.998 small cell, that underneath the microscope
0:01:06 -> 0:01:08.674 the pathologist looks at the cells and
0:01:08.674 -> 0:01:11.566 they're very small and round and blue,

0:01:11.566 -> 0:01:14.05 and everything else which is non small cell.
0:01:14.05 -> 0:01:16 The small cell kind is typically
0:01:16 -> 0:01:18.08 a little bit more aggressive.
0:01:18.08 -> 0:01:19.544 It grows more quickly.
0:01:19.544 -> 0:01:21.008 It tends to spread.
0:01:21.01 -> 0:01:23.488 There are different types that I typically
0:01:23.488 -> 0:01:25.758 tell my patients are like chocolate,
0:01:25.76 -> 0:01:26.858 vanilla and pistachio.
0:01:26.858 -> 0:01:28.688 There is adenocarcinoma,
0:01:28.69 -> 0:01:29.785 squamous cell carcinoma,
0:01:29.785 -> 0:01:31.245 and other types,
0:01:31.25 -> 0:01:33.578 and they really are simply
0:01:33.578 -> 0:01:36.12 different types that act a little bit differently.
0:01:36.572 -> 0:01:39.736 They look a little bit different
0:01:39.736 -> 0:01:41.51 underneath the microscope,
0:01:41.51 -> 0:01:43.91 and sometimes there are molecular
0:01:43.91 -> 0:01:47.425 markers that can help us to understand
0:01:47.425 -> 0:01:49.99 a particular subtype that might
0:01:49.99 -> 0:01:52.778 be responsive to taking a pill,
0:01:52.78 -> 0:01:56.21 for example, instead of IV medication.
0:01:57.19 -> 0:02:00.13 Of all of these types the first
0:02:00.13 -> 0:02:02.09 question is which type are
0:02:02.09 -> 0:02:03.59 the most common.
0:02:07.09 -> 0:02:09.862 You say the small cells are a little bit
0:02:09.862 -> 0:02:12.254 more aggressive than the non small
0:02:12.254 -> 0:02:14.498 cells and even within that there's
0:02:14.498 -> 0:02:17.27 a whole bunch of different types.
0:02:17.27 -> 0:02:18.488 What type is most common?
0:02:19.651 -> 0:02:20.812 What's the distribution
0:02:20.812 -> 0:02:22.96 in terms of these cancers?
0:02:22.96 -> 0:02:25.634 The most common type is

0:02:25.634 -> 0:02:28.211 non small cell and pretty much
0:02:28.211 -> 0:02:29.779 80-85% of lung cancer
0:02:29.779 -> 0:02:32.39 is non small cell and then
0:02:32.473 -> 0:02:35.17 15-20% is small cell
0:02:35.17 -> 0:02:37.61 and so we know that smoking
0:02:37.61 -> 0:02:40.208 is related to lung cancer,
0:02:40.21 -> 0:02:42.989 but are there specific risk factors for
0:02:42.989 -> 0:02:45.839 getting each of these different types,
0:02:45.84 -> 0:02:49.728 or is it kind of all just a mishmash
0:02:49.73 -> 0:02:54.06 and which type you get is luck of the draw?
0:02:54.06 -> 0:02:57.119 Smoking is definitely a risk factor for
0:02:57.119 -> 0:03:00.127 both non small cell and small cell.
0:03:00.13 -> 0:03:03.161 That being said, there are folks who
0:03:03.161 -> 0:03:05.336 are never smokers, a small population
0:03:05.336 -> 0:03:07.964 of never smokers or light smokers
0:03:07.97 -> 0:03:12.458 who may develop mutations in specific
0:03:12.458 -> 0:03:18.99 genes called EGFR or ALK ROS1.
0:03:18.99 -> 0:03:21.804 Some of these mutations are
0:03:21.804 -> 0:03:25.149 called oncogenes and these mutations
0:03:27.449 -> 0:03:30.167 tend to lead to lung cancer.
0:03:30.17 -> 0:03:33.194 A specific kind and because it's
0:03:33.194 -> 0:03:36.875 not sort of the same as the lung
0:03:36.875 -> 0:03:39.957 cancer that comes from smoking where
0:03:39.957 -> 0:03:43.442 repeated exposure and inflammation to
0:03:43.442 -> 0:03:47.52 carcinogens caused lung cancer,
0:03:47.52 -> 0:03:49.64 those patients with, for example,
0:03:49.64 -> 0:03:52.56 a mutation in EGFR can actually be treated
0:03:52.56 -> 0:03:55.979 with a targeted therapy that targets EGFR,
0:03:55.98 -> 0:03:58.518 and that, as I said before,
0:03:58.52 -> 0:04:01.648 is often in the shape of a
0:04:01.648 -> 0:04:04.438 pill that you can take daily.

0:04:04.44 -> 0:04:07.352 So it's really important when
0:04:07.352 -> 0:04:09.519 you're diagnosed with lung cancer
0:04:09.52 -> 0:04:11.63 to understand the pathology and
0:04:11.63 -> 0:04:13.318 specifically the molecular pathology.
0:04:13.32 -> 0:04:16.026 That means the kinds of mutations
0:04:16.026 -> 0:04:17.83 that might be available.
0:04:17.83 -> 0:04:19.48 Especially if
0:04:19.48 -> 0:04:20.612 you've never smoked,
0:04:20.612 -> 0:04:23.154 or if you have a very light history
0:04:23.154 -> 0:04:25.089 or remote history of smoking
0:04:26.41 -> 0:04:29.074 For the people who have never smoked or
0:04:29.074 -> 0:04:31.997 have a very light history of smoking,
0:04:32 -> 0:04:34.472 are they more likely to get one
0:04:34.472 -> 0:04:37.324 type of lung cancer in terms of small
0:04:37.324 -> 0:04:40.03 cell versus non small cell than others?
0:04:40.03 -> 0:04:41.422 And these mutations that
0:04:41.422 -> 0:04:42.466 you're talking about,
0:04:42.47 -> 0:04:44.498 are they more common in small
0:04:44.498 -> 0:04:47.009 cell or non small cell or does it
0:04:47.01 -> 0:04:48.75 make a difference at all?
0:04:48.75 -> 0:04:50.856 So these mutations that I spoke
0:04:50.856 -> 0:04:53.324 of are more common in non small
0:04:53.324 -> 0:04:55.634 cell and those folks who are light
0:04:55.707 -> 0:04:57.813 or never smokers are more likely
0:04:57.813 -> 0:05:00.522 to develop non small cell lung
0:05:00.522 -> 0:05:03.126 cancer than small cell lung cancer.
0:05:03.13 -> 0:05:05.506 Typically it has rarely happened
0:05:05.506 -> 0:05:07.906 that I've seen patients who never
0:05:07.906 -> 0:05:10.144 smoked develop small cell cancer,
0:05:10.15 -> 0:05:12.49 but typically there is a history
0:05:12.49 -> 0:05:13.66 of smoking.

0:05:13.66 -> 0:05:15.22 You mentioned earlier that
0:05:15.22 -> 0:05:17.17 small cell were more aggressive.
0:05:17.17 -> 0:05:19.12 Tell us about the prognosis.
0:05:19.12 -> 0:05:22.306 So it sounds to me like if you're going
0:05:22.306 -> 0:05:25.343 to have a choice you would prefer to
0:05:25.343 -> 0:05:28.477 have a non small cell lung cancer.
0:05:28.48 -> 0:05:31.6 But how bad is one versus the other?
0:05:32.5 -> 0:05:34.964 I think that the key thing to
0:05:34.964 -> 0:05:37.264 know for both is that there have
0:05:37.264 -> 0:05:39.937 really been a lot of advances such
0:05:39.937 -> 0:05:42.392 that we've actually seen improvements
0:05:42.392 -> 0:05:45.342 in the outcomes for both non small
0:05:45.342 -> 0:05:48.04 cell and small cell.
0:05:48.04 -> 0:05:50.483 And this was just published last year
0:05:50.483 -> 0:05:53.299 in the New England Journal of Medicine
0:05:53.299 -> 0:05:56.261 that the incidence of both
0:05:56.261 -> 0:05:58.704 these and the outcomes of both
0:05:58.704 -> 0:06:00.95 these types of cancers are improving.
0:06:00.95 -> 0:06:02.875 So I think that's a
0:06:02.88 -> 0:06:06.606 really important message to know.
0:06:06.61 -> 0:06:09.004 The other aspect of how
0:06:09.004 -> 0:06:11.28 you're going to do
0:06:11.28 -> 0:06:12.844 with this particular cancer
0:06:12.85 -> 0:06:15.046 has to do with staging,
0:06:15.05 -> 0:06:17.27 and that just means the geography
0:06:17.27 -> 0:06:20.249 of where the cancer is in your body
0:06:20.249 -> 0:06:22.385 when when you're diagnosed with it.
0:06:24.59 -> 0:06:26.872 If you have tumors that are just
0:06:26.872 -> 0:06:29.547 in the lung or have migrated
0:06:29.547 -> 0:06:31.567 into very nearby lymph nodes,
0:06:31.57 -> 0:06:34.153 then you maybe have a stage one

0:06:34.153 -> 0:06:36.518 or stage two cancer.
0:06:36.52 -> 0:06:39.054 You may be eligible for a local
0:06:39.054 -> 0:06:41.029 treatment like surgery or radiation
0:06:41.029 -> 0:06:43.483 in combination with chemotherapy to
0:06:43.483 -> 0:06:46.047 really try to remove that tumor,
0:06:46.05 -> 0:06:49.09 and that's when you have the best prognosis,
0:06:49.09 -> 0:06:51.334 regardless if it's non
0:06:51.334 -> 0:06:53.28 small cell or small cell.
0:06:53.28 -> 0:06:56.178 Overall, folks with non small cell
0:06:56.178 -> 0:06:59.234 do little bit better. But again,
0:06:59.234 -> 0:07:00.92 having lung cancer,
0:07:00.92 -> 0:07:03.158 it's definitely a treatable disease.
0:07:03.16 -> 0:07:05.398 If you have stage four cancer,
0:07:05.4 -> 0:07:08.028 which means that you've had disease
0:07:08.028 -> 0:07:10.492 that has traveled outside of the
0:07:10.492 -> 0:07:12.704 lung to a different organ such as
0:07:12.704 -> 0:07:15.469 the liver or the brain or your bones,
0:07:15.47 -> 0:07:18.074 then we take a different approach,
0:07:18.08 -> 0:07:20.684 which is then we need to use
0:07:20.684 -> 0:07:21.428 systemic therapy.
0:07:21.43 -> 0:07:23.525 That means something that gets
0:07:23.525 -> 0:07:25.62 into your bloodstream because every
0:07:25.693 -> 0:07:27.829 single cancer cell anywhere needs to
0:07:27.829 -> 0:07:30.209 have a blood supply and therefore
0:07:30.21 -> 0:07:31.43 administering chemotherapy,
0:07:31.43 -> 0:07:33.26 or more recently,
0:07:33.26 -> 0:07:36.61 all these advances in immunotherapy
0:07:36.61 -> 0:07:41.37 through the blood into the bloodstream,
0:07:41.37 -> 0:07:43.375 that way those therapeutic
0:07:43.375 -> 0:07:46.178 drugs can reach all of the cancer
0:07:46.178 -> 0:07:48.35 cells that are in your body,

0:07:48.35 -> 0:07:49.91 wherever they may be.
0:07:51.29 -> 0:07:52.845 Well, it's certainly good news
0:07:52.845 -> 0:07:54.4 that lung cancer,
0:07:54.4 -> 0:07:56.5 which is something that I think a
0:07:56.5 -> 0:07:58.795 lot of people fear, is becoming
0:07:58.795 -> 0:08:00.787 a treatable disease and that
0:08:00.854 -> 0:08:02.576 there are all of these advances
0:08:02.576 -> 0:08:04.885 and I want to get into that.
0:08:04.885 -> 0:08:07.58 But first something that you said really
0:08:07.658 -> 0:08:10.122 struck a chord with me and has been
0:08:10.122 -> 0:08:13.199 the case with a lot of cancers and that is
0:08:13.2 -> 0:08:15.05 the earlier you find it,
0:08:15.05 -> 0:08:16.522 the lower the stage,
0:08:16.522 -> 0:08:18.362 the more treatable it is.
0:08:18.37 -> 0:08:21.65 So if you have a stage one lung cancer that's
0:08:21.726 -> 0:08:25.006 more treatable than a stage four lung cancer,
0:08:25.01 -> 0:08:27.642 and I was wondering if you could talk a
0:08:27.642 -> 0:08:30.019 little bit about advances that have
0:08:30.019 -> 0:08:32.479 been made in terms of screening
0:08:32.553 -> 0:08:34.968 that have helped us to find these
0:08:34.97 -> 0:08:37.998 lung cancers earlier?
0:08:38 -> 0:08:40.499 Screening is a hot topic now because
0:08:40.499 -> 0:08:42.59 the US Preventive Services
0:08:42.59 -> 0:08:45.446 Task Force just issued a different
0:08:45.446 -> 0:08:47.81 recommendation or it altered their
0:08:47.81 -> 0:08:50.498 recommendation on screening for lung cancer.
0:08:50.5 -> 0:08:54.379 So previously, if you were aged 55 or older,
0:08:54.38 -> 0:08:57.566 or if you had a 30 pack year history
0:08:57.566 -> 0:09:00.795 of smoking and that means smoking one
0:09:00.795 -> 0:09:04.289 pack per day for roughly 30 years,
0:09:04.29 -> 0:09:09.339 then you would be eligible for a low dose

0:09:09.34 -> 0:09:12.46 CT scan because you had a higher
0:09:12.46 -> 0:09:15.571 risk of lung cancer
0:09:15.571 -> 0:09:18.747 and being able to have a screening CT
0:09:18.75 -> 0:09:21.446 scan allows us to pick up
0:09:21.446 -> 0:09:23.892 things when they're very small and
0:09:23.892 -> 0:09:26.911 you don't have any symptoms and often
0:09:26.911 -> 0:09:29.704 help us to detect lung cancers when
0:09:29.704 -> 0:09:32.47 they are in a very early stage.
0:09:32.47 -> 0:09:34.43 So recently in March
0:09:36 -> 0:09:38.13 the US Preventive Services Task
0:09:38.13 -> 0:09:39.834 Force changed that recommendation
0:09:39.84 -> 0:09:43.256 to drop the age to 50 and for
0:09:43.256 -> 0:09:45.678 the pack year history to 20.
0:09:45.68 -> 0:09:49.008 So the idea being, let's expand the
0:09:49.008 -> 0:09:52.406 population of people that are being screened.
0:09:53.553 -> 0:09:56.22 I think that our insurers
0:09:56.305 -> 0:10:00.218 are catching up with that but
0:10:00.218 -> 0:10:01.895 the recommendations
0:10:01.985 -> 0:10:04.708 have changed and I think that that's
0:10:04.708 -> 0:10:07.932 going to be very positive in terms
0:10:07.932 -> 0:10:11.01 of again being able to detect
0:10:11.01 -> 0:10:13.747 lung cancers in earlier stages where they
0:10:13.747 -> 0:10:16.531 might be able to undergo local therapy
0:10:16.531 -> 0:10:19.62 such as surgery or focused radiation.
0:10:20.66 -> 0:10:23.3 So important for people to
0:10:23.3 -> 0:10:25.942 get screened because there are so
0:10:25.942 -> 0:10:28.348 many advances in terms of treatment.
0:10:28.35 -> 0:10:30.48 Just one clarifying question though,
0:10:30.48 -> 0:10:33.224 and the other thing that
0:10:33.224 -> 0:10:36.458 a lot of people have now done,
0:10:36.46 -> 0:10:38.2 especially because we've seen

0:10:38.2 -> 0:10:40.81 advances in things like smoking
0:10:40.886 -> 0:10:42.856 cessation is to quit smoking.
0:10:42.86 -> 0:10:46.028 So let's suppose that you have a 20-25
0:10:46.028 -> 0:10:48.837 or thirty pack year history of smoking,
0:10:48.84 -> 0:10:50.268 but you just quit.
0:10:50.268 -> 0:10:53.686 You made it a New Year's
0:10:53.686 -> 0:10:56.88 resolution and you quit maybe a year ago,
0:10:56.88 -> 0:10:58.336 maybe six months ago.
0:10:58.336 -> 0:11:00.52 Are you still eligible for screening?
0:11:00.52 -> 0:11:02.944 Should you still be screened even
0:11:02.944 -> 0:11:04.922 though now you're officially a
0:11:04.922 -> 0:11:06.704 non smoker or a former smoker?
0:11:06.71 -> 0:11:09.139 Yes, if you have a history of
0:11:09.139 -> 0:11:11.069 smoking that's 25 pack years,
0:11:11.07 -> 0:11:13.618 even if it was ten years ago,
0:11:13.62 -> 0:11:15.44 you can still be eligible
0:11:15.44 -> 0:11:17.26 for this screening.
0:11:17.26 -> 0:11:20.044 I think it's a really important
0:11:20.044 -> 0:11:21.9 message to folks that
0:11:21.9 -> 0:11:26.968 wherever you are in your course of
0:11:26.97 -> 0:11:28.625 stopping smoking and it's certainly
0:11:28.625 -> 0:11:30.67 one of the hardest things to do,
0:11:30.67 -> 0:11:32.265 it's always important to realize that
0:11:34.221 -> 0:11:36.003 stopping or quitting smoking is going
0:11:36.003 -> 0:11:38.057 to help you and help your lungs.
0:11:38.06 -> 0:11:41.798 It's going to help your overall
0:11:41.8 -> 0:11:43.865 health and you're going to do
0:11:43.865 -> 0:11:46.075 better than if you continue to smoke.
0:11:50.808 -> 0:11:53.159 There is data that even for folks who
0:11:53.864 -> 0:11:56.328 have smoked a lot over the course
0:11:56.328 -> 0:11:58.785 and maybe even 2 packs per day.

0:11:58.79 -> 0:12:00.55 We certainly had
0:12:00.55 -> 0:12:03.231 in our society a number of years
0:12:03.231 -> 0:12:05.06 where everybody smoked and that
0:12:05.06 -> 0:12:06.884 was really sort of run of the mill,
0:12:08.298 -> 0:12:10.41 that was a very common thing,
0:12:10.41 -> 0:12:12.534 so I think that it's really
0:12:12.534 -> 0:12:14.28 important that wherever you are,
0:12:14.28 -> 0:12:15.708 if you're a
0:12:15.708 -> 0:12:20.015 one pack a day smoker, 2 pack a day
0:12:21.72 -> 0:12:25.059 or you smoke a couple of cigarettes a week,
0:12:25.06 -> 0:12:27.762 I think that stopping smoking
0:12:27.762 -> 0:12:31.139 can really help you and we do have a
0:12:31.139 -> 0:12:33.219 smoking cessation clinic here at Yale
0:12:33.22 -> 0:12:34.522 that's incredibly successful.
0:12:34.522 -> 0:12:37.56 There have been so many advances that
0:12:37.63 -> 0:12:39.894 I can't even keep track.
0:12:39.9 -> 0:12:43.239 It was just the patch and the lozenge.
0:12:43.24 -> 0:12:45.586 And now there's so many different
0:12:45.586 -> 0:12:47.812 options to help people stop and
0:12:47.812 -> 0:12:50.156 and being able to do some of this
0:12:50.232 -> 0:12:52.468 through Televisit consultation
0:12:52.47 -> 0:12:54.75 either through video or phone,
0:12:56.65 -> 0:12:59.405 can allow people to access this
0:12:59.405 -> 0:13:02.16 kind of help and support
0:13:02.16 -> 0:13:03.71 to really improve their health,
0:13:04.32 -> 0:13:06.348 It is important to quit smoking and talk
0:13:06.348 -> 0:13:08.587 to your doctor or call a quit
0:13:08.587 -> 0:13:10.498 line to get the help you need.
0:13:10.5 -> 0:13:12.24 We're going to take a short
0:13:12.24 -> 0:13:13.9 break for a medical minute.
0:13:13.9 -> 0:13:16.014 Please stay tuned to learn more about

0:13:16.014 -> 0:13:18.229 small cell lung cancer with my guest
0:13:18.23 -> 0:13:19.16 Doctor Anne Chiang.
0:13:19.89 -> 0:13:22.475 Funding for Yale Cancer Answers
0:13:22.475 -> 0:13:25.563 comes from AstraZeneca, working to
0:13:25.563 -> 0:13:28.44 eliminate cancer as a cause of death.
0:13:28.44 -> 0:13:32.308 Learn more at astrazeneca-us.com.
0:13:32.31 -> 0:13:33.94 It's estimated that over 240,000
0:13:33.94 -> 0:13:36.44 men in the US will be diagnosed
0:13:36.44 -> 0:13:38.45 with prostate cancer this year,
0:13:38.45 -> 0:13:40.616 with over 3000 new cases being
0:13:40.616 -> 0:13:42.06 identified here in Connecticut,
0:13:42.06 -> 0:13:44.232 one in eight American men will
0:13:44.232 -> 0:13:45.68 develop prostate cancer in
0:13:45.752 -> 0:13:47.467 the course of his lifetime.
0:13:47.47 -> 0:13:49.35 Major advances in the detection
0:13:49.35 -> 0:13:51.23 and treatment of prostate cancer
0:13:51.296 -> 0:13:52.66 have dramatically decreased the
0:13:52.66 -> 0:13:55.121 number of men who die from the
0:13:55.121 -> 0:13:56.886 disease. Screening can be performed
0:13:56.886 -> 0:13:59.08 quickly and easily in a physician's
0:13:59.08 -> 0:14:01.03 office using two simple tests.
0:14:01.03 -> 0:14:04.019 A physical exam and a blood test.
0:14:04.02 -> 0:14:06.535 Clinical trials are currently underway
0:14:06.535 -> 0:14:08.547 at federally designated Comprehensive
0:14:08.547 -> 0:14:10.746 cancer centers such as Yale Cancer
0:14:10.746 -> 0:14:12.99 Center and Smilow Cancer Hospital,
0:14:12.99 -> 0:14:15.12 where doctors are also using
0:14:15.12 -> 0:14:16.398 the Artemis machine,
0:14:16.4 -> 0:14:18.108 which enables targeted biopsies
0:14:18.108 -> 0:14:19.389 to be performed.
0:14:19.39 -> 0:14:22.065 More information is available at

0:14:22.065 -> 0:14:23.67 yalecancercenter.org. You're listening
0:14:23.67 -> 0:14:25.629 to Connecticut Public Radio.
0:14:25.63 -> 0:14:25.99 Welcome
0:14:25.99 -> 0:14:27.77 back to Yale Cancer Answers.
0:14:27.77 -> 0:14:30.641 This is doctor Anees Chagpar and I'm
0:14:30.641 -> 0:14:33.455 joined tonight by my guest Doctor Anne Chiang.
0:14:33.46 -> 0:14:35.072 We're discussing recent treatment
0:14:35.072 -> 0:14:37.49 advances in small cell lung cancer
0:14:37.554 -> 0:14:39.626 and right before the break you
0:14:39.626 -> 0:14:42.004 were telling us about the fact that
0:14:42.004 -> 0:14:43.784 there have been really exciting
0:14:43.784 -> 0:14:46.348 advances both in small cell as well
0:14:46.348 -> 0:14:49.408 as in non small cell lung cancer
0:14:49.41 -> 0:14:51.15 that have really affected outcomes
0:14:51.15 -> 0:14:52.89 for patients with these diseases.
0:14:52.89 -> 0:14:55.548 So tell us more about some
0:14:55.548 -> 0:14:57.32 of these exciting advances.
0:14:58.11 -> 0:15:00.48 I'd love to. This is a really exciting
0:15:00.48 -> 0:15:02.06 time for lung cancer.
0:15:02.06 -> 0:15:05.615 I remember back to when I started at Yale,
0:15:05.62 -> 0:15:07.99 which was almost 10 years ago,
0:15:07.99 -> 0:15:11.772 and I put my first patient or one of my first
0:15:11.772 -> 0:15:15.097 patients on a clinical trial and at that time
0:15:15.1 -> 0:15:17.858 the standard of care was chemotherapy,
0:15:17.86 -> 0:15:20.902 and in this case we were looking at treating
0:15:20.902 -> 0:15:23.114 this patient with immunotherapy
0:15:23.114 -> 0:15:26.16 and not doing chemotherapy first.
0:15:26.16 -> 0:15:28.22 And he did extremely well.
0:15:28.22 -> 0:15:31.172 And in fact, I saw him a couple of
0:15:31.172 -> 0:15:34.281 weeks ago and he has been off trial
0:15:34.281 -> 0:15:37.462 with no treatment for the past eight

0:15:37.462 -> 0:15:40.366 years and he is contemplating retirement
0:15:40.37 -> 0:15:42.8 and he's doing just incredibly well.
0:15:44.464 -> 0:15:47.829 And that still sends shivers down my spine and I
0:15:47.829 -> 0:15:50.58 know that it's not every single patient
0:15:50.58 -> 0:15:53.325 that has that kind of result.
0:15:53.33 -> 0:15:56.426 But I think the more that we can learn
0:15:56.426 -> 0:15:59.1 through studying and through biology,
0:15:59.1 -> 0:16:00.03 through clinical trials,
0:16:00.03 -> 0:16:02.825 our aim is really to do the best for
0:16:02.825 -> 0:16:05.065 our patients and push that edge as far
0:16:05.131 -> 0:16:07.331 as it can go in terms of how they do.
0:16:57.84 -> 0:17:02.952 One of the trials that I'm a national
0:17:02.96 -> 0:17:04.816 Investigator on spearheading
0:17:04.816 -> 0:17:08.14 is a trial called Insigna
0:17:08.14 -> 0:17:10.966 and it's run through our cooperative groups,
0:17:10.97 -> 0:17:14.458 that's groups that
0:17:14.46 -> 0:17:16.95 help to do research, clinical
0:17:16.95 -> 0:17:18.942 research in the communities.
0:17:18.95 -> 0:17:21.938 This trial is open at about
0:17:21.938 -> 0:17:23.432 850 different centers,
0:17:23.44 -> 0:17:26.896 we're looking for 850 patients to
0:17:26.896 -> 0:17:30.978 enroll on this trial and we're trying
0:17:30.978 -> 0:17:35.4 to understand for PD L1 positive or for
0:17:35.4 -> 0:17:38.202 patients who have this marker of
0:17:38.202 -> 0:17:42.393 PDL one if they are treated with
0:17:42.393 -> 0:17:45.353 either immunotherapy upfront or
0:17:45.353 -> 0:17:48.94 immunotherapy combined with chemotherapy,
0:17:48.94 -> 0:17:50.71 which group will do better
0:17:50.71 -> 0:17:52.699 and then with those patients
0:17:52.699 -> 0:17:54.559 who are treated with immunotherapy
0:17:54.559 -> 0:17:56.27 alone if they progress,

0:17:56.27 -> 0:17:58.95 can we then add chemo to the immunotherapy
0:17:58.95 -> 0:18:01.5 to sort of boost the immune system?
0:18:01.5 -> 0:18:03.593 And at the same time we're going
0:18:03.593 -> 0:18:05.863 to be using the tissue and the
0:18:05.863 -> 0:18:08.705 science that we can gather to try to
0:18:08.705 -> 0:18:11.147 understand if there are biomarkers or
0:18:11.147 -> 0:18:13.418 signatures that can help us understand
0:18:13.418 -> 0:18:15.59 which people will benefit and which
0:18:15.654 -> 0:18:17.556 people have less of a benefit.
0:18:17.56 -> 0:18:20.409 that's a really exciting trial that is ongoing,
0:18:20.744 -> 0:18:23.75 we're about 40% of the way through on that,
0:18:23.75 -> 0:18:26.414 and I think that you know there are
0:18:26.42 -> 0:18:28.814 thousands of
0:18:28.814 -> 0:18:30.429 immunotherapy trials in cancer right now,
0:18:30.43 -> 0:18:32.902 but I think this is one that
0:18:32.902 -> 0:18:34.998 will really help us to understand
0:18:34.998 -> 0:18:37.104 what's the right thing to do
0:18:37.11 -> 0:18:40.116 up front.
0:18:40.12 -> 0:18:42.24 We talk on this show
0:18:42.24 -> 0:18:44.458 all the time about immunotherapy.
0:18:44.46 -> 0:18:46.335 And it sounds like particularly
0:18:46.335 -> 0:18:48.598 giving your anecdotal case with your
0:18:48.598 -> 0:18:50.536 patient who's now nine years out,
0:18:50.54 -> 0:18:52.072 it sounds like immunotherapy
0:18:52.072 -> 0:18:54.819 really does have a role or a
0:18:54.819 -> 0:18:56.679 potential role in lung cancer.
0:18:56.68 -> 0:18:57.751 With your trial,
0:18:57.751 -> 0:19:01.29 is it open to non small cell lung cancer,
0:19:01.29 -> 0:19:04.354 small cell lung cancer, or any lung cancer?
0:19:05.2 -> 0:19:08.737 So that trial is open for non small cell
0:19:08.737 -> 0:19:12.643 lung cancer and it's for patients who have

0:19:12.643 -> 0:19:16.252 stage four disease and who have a tumor
0:19:16.252 -> 0:19:19.687 that has a positive marker for PDL 1,
0:19:19.687 -> 0:19:22.441 which is an important molecule
0:19:22.441 -> 0:19:26.13 in the signaling for immunotherapy
0:19:26.13 -> 0:19:29.567 in terms of small cell lung cancer,
0:19:29.57 -> 0:19:32.216 we have a number of clinical
0:19:32.216 -> 0:19:34.97 trials also that are available,
0:19:34.97 -> 0:19:39.425 and I think that the story for
0:19:39.425 -> 0:19:43.755 small cell is that chemo plus immunotherapy
0:19:43.755 -> 0:19:47.928 has been
0:19:47.93 -> 0:19:49.845 approved in
0:19:49.845 -> 0:19:51.76 the past couple of years.
0:19:51.76 -> 0:19:53.675 That's how the landscape
0:19:53.675 -> 0:19:55.59 of small cell has changed.
0:19:55.59 -> 0:19:58.062 It was just previously treated with
0:19:58.062 -> 0:20:00.79 chemotherapy and just in the past couple
0:20:00.79 -> 0:20:03.63 of years we now treat with chemo,
0:20:03.63 -> 0:20:04.396 plus immunotherapy.
0:20:04.396 -> 0:20:07.46 And then the question is what happens after?
0:20:07.46 -> 0:20:09.38 If that doesn't work anymore?
0:20:09.38 -> 0:20:12.584 And I think we have a number of different
0:20:12.584 -> 0:20:15.505 clinical trials that are available for that,
0:20:15.51 -> 0:20:17.845 and we're trying to really
0:20:17.845 -> 0:20:19.713 understand the biology behind
0:20:20.486 -> 0:20:23.167 why people respond or why they
0:20:23.167 -> 0:20:26.069 don't respond and in small cell it's
0:20:26.069 -> 0:20:28.247 typically a tumor where there's
0:20:28.247 -> 0:20:30.627 less tissue available to test,
0:20:30.63 -> 0:20:32.7 and so we've put together
0:20:32.7 -> 0:20:34.966 a really great team here for
0:20:34.966 -> 0:20:36.996 studying the science that includes

0:20:39.17 -> 0:20:41.095 PhD scientists working
0:20:41.095 -> 0:20:43.819 on lung cancer as well as myself.
0:20:43.82 -> 0:20:45.017 And, you know,
0:20:45.017 -> 0:20:49.054 I think it would be too hard to go into
0:20:49.054 -> 0:20:52.28 all of the details here,
0:20:52.28 -> 0:20:54.772 but I think we're going to learn
0:20:54.772 -> 0:20:57.825 a lot about how we can explore the
0:20:57.825 -> 0:21:00.274 biology of small cell in order
0:21:00.274 -> 0:21:02.579 to find out vulnerabilities in
0:21:02.579 -> 0:21:04.835 order to target this disease.
0:21:05.24 -> 0:21:07.265 It sounds like you
0:21:07.27 -> 0:21:10.098 know, across the board in lung cancer,
0:21:10.1 -> 0:21:12.494 whether you've got small cell or
0:21:12.494 -> 0:21:14.96 whether you've got non small cell.
0:21:14.96 -> 0:21:17.564 It sounds like immunotherapy is increasingly
0:21:17.564 -> 0:21:20.496 becoming part of the arsenal that your
0:21:20.496 -> 0:21:23.114 doctor may use to treat your disease.
0:21:23.12 -> 0:21:26.011 And that really has made a
0:21:26.011 -> 0:21:28.92 difference now, and is that the case
0:21:28.92 -> 0:21:31.789 only for people who express PDL one?
0:21:31.79 -> 0:21:35.006 We've talked on this show before
0:21:35.006 -> 0:21:37.577 about checkpoint inhibitors like PDL one.
0:21:37.58 -> 0:21:40.324 So is it the case that people who
0:21:40.324 -> 0:21:42.429 present with metastatic lung cancer,
0:21:42.429 -> 0:21:45.558 stage four, that they should be having
0:21:45.641 -> 0:21:48.233 their tumors checked for that marker
0:21:48.233 -> 0:21:50.465 and then treated with immunotherapy
0:21:50.465 -> 0:21:53.435 or is immunotherapy something that
0:21:53.44 -> 0:21:56.597 your doctor may use regardless?
0:21:56.6 -> 0:22:00.569 For non small cell lung cancer you
0:22:00.569 -> 0:22:03.808 definitely need to have your tumor checked.

0:22:03.81 -> 0:22:06.967 If you have high levels of PDL
0:22:06.967 -> 0:22:09.99 one so greater than 50% then you
0:22:09.99 -> 0:22:12.65 may be eligible to be treated
0:22:12.65 -> 0:22:15.09 with just immunotherapy alone.
0:22:15.09 -> 0:22:17.88 Otherwise you really need to be
0:22:17.88 -> 0:22:20.79 treated with a combination of chemo
0:22:20.79 -> 0:22:23.195 and immunotherapy. For small cell, it is different.
0:22:24.595 -> 0:22:26.455 There's very little PDL one
0:22:26.46 -> 0:22:29.226 expression to start with and
0:22:29.226 -> 0:22:32.5 for the trials that have been done,
0:22:32.5 -> 0:22:37.396 they've looked at all comers
0:22:37.4 -> 0:22:39.983 so it doesn't matter if you have PDL one
0:22:39.983 -> 0:22:42.244 expression or not because it's so low anyway,
0:22:42.25 -> 0:22:44.168 but all of the small cell patients
0:22:44.168 -> 0:22:45.634 that are diagnosed are treated
0:22:45.634 -> 0:22:46.806 with chemo plus immuno.
0:22:48.47 -> 0:22:51.302 It is interesting how that kind
0:22:51.302 -> 0:22:54 of plays out between the
0:22:54 -> 0:22:55.568 two disease types.
0:22:55.568 -> 0:22:59.623 So tell us a little bit more about other
0:22:59.623 -> 0:23:02.308 advances that have occurred?
0:23:02.308 -> 0:23:05.651 Before the break you were telling us
0:23:05.651 -> 0:23:08.291 about an alphabet soup of markers,
0:23:08.291 -> 0:23:11.057 things like EGFR and others.
0:23:11.06 -> 0:23:12.44 ALK, for example.
0:23:12.44 -> 0:23:15.67 How have these really changed the landscape?
0:23:15.67 -> 0:23:17.656 Are oncologists
0:23:17.656 -> 0:23:21.387 using them to kind of target their
0:23:21.387 -> 0:23:24.937 therapies to personalize things as it were?
0:23:26.77 -> 0:23:29.11 Great question. So as I was
0:23:29.11 -> 0:23:31.2 talking about before the break,

0:23:31.2 -> 0:23:33.573 if you for example have an EGFR
0:23:33.573 -> 0:23:36.112 mutation which EGFR stands for
0:23:36.112 -> 0:23:38.048 epidermal growth factor receptor,
0:23:38.05 -> 0:23:40.826 I think that the key is that
0:23:40.826 -> 0:23:43.441 what we found over the years is
0:23:43.441 -> 0:23:46.312 that if you have a mutation in
0:23:46.312 -> 0:23:49.18 that you really respond to
0:23:49.18 -> 0:23:53.008 taking that EGFR directed therapy.
0:23:53.01 -> 0:23:54.183 In this case,
0:23:54.183 -> 0:23:56.529 it's a drug called osimertinib
0:23:58.875 -> 0:24:01.55 and you should do that off the bat
0:24:01.55 -> 0:24:03.704 if you have stage four disease.
0:24:03.71 -> 0:24:06.279 If you have stage one disease or
0:24:06.279 -> 0:24:09.013 stage two disease or you've had or
0:24:09.013 -> 0:24:11.347 stage three that you've had surgery,
0:24:11.35 -> 0:24:14.254 there has been a very new advance in
0:24:14.254 -> 0:24:17.04 the past year and it was
0:24:17.04 -> 0:24:19.75 led by Doctor Roy Herbst of Yale,
0:24:19.75 -> 0:24:21.695 our team that basically
0:24:21.695 -> 0:24:23.64 says that after you
0:24:23.64 -> 0:24:25.46 have that surgery,
0:24:25.46 -> 0:24:28.008 you benefit from taking that oral therapy.
0:24:32.38 -> 0:24:34.462 And I think it's important also
0:24:34.462 -> 0:24:36.38 to mention that these trials,
0:24:36.38 -> 0:24:38.2 such as the ADURO trial,
0:24:38.2 -> 0:24:40.37 were offered not only in
0:24:40.37 -> 0:24:42.929 our main academic campus,
0:24:42.93 -> 0:24:43.881 in New Haven,
0:24:43.881 -> 0:24:46.1 but also in all of our Smilow
0:24:46.176 -> 0:24:48.386 care centers across the state.
0:24:48.39 -> 0:24:51.294 And we have 15 of them,

0:24:51.3 -> 0:24:53.826 so we've been able to
0:24:53.83 -> 0:24:57.365 allow patients who are in
0:24:57.37 -> 0:24:59.8 all parts of the state participate
0:24:59.8 -> 0:25:01.996 in these types of clinical
0:25:01.996 -> 0:25:03.988 trials that can really,
0:25:03.99 -> 0:25:06.03 really give access to cutting
0:25:06.03 -> 0:25:09.116 edge drugs or to help to advance
0:25:09.116 -> 0:25:11.036 science for all patients.
0:25:11.04 -> 0:25:14.127 And that's the case across the
0:25:14.127 -> 0:25:16.605 country, that many of these
0:25:16.605 -> 0:25:19.184 large trials are offered at
0:25:19.184 -> 0:25:21.992 academic centers that are offered at
0:25:21.992 -> 0:25:24.884 community centers and that really people
0:25:24.884 -> 0:25:27.698 should talk to their doctor because
0:25:27.7 -> 0:25:29.302 trials, whether they were led by
0:25:29.302 -> 0:25:31.587 Yale or led by investigators at
0:25:31.587 -> 0:25:33.507 other centers are often available
0:25:33.507 -> 0:25:35.38 for patients across the nation.
0:25:35.38 -> 0:25:36.382 Isn't that right?
0:25:36.382 -> 0:25:37.718 Absolutely, and I think
0:25:37.72 -> 0:25:39.953 that you know, in the past clinical
0:25:39.953 -> 0:25:42.066 trials you though, Gee,
0:25:42.066 -> 0:25:44.754 I will try a clinical trial if everything
0:25:44.754 -> 0:25:47.74 else has failed and it's not working for me,
0:25:47.74 -> 0:25:50.078 so I'm going to try something experimental.
0:25:50.08 -> 0:25:52.078 Now that paradigm is completely shifted,
0:25:52.08 -> 0:25:54.76 so it may be that you have your
0:25:54.76 -> 0:25:56.275 first treatment that you're
0:25:56.275 -> 0:25:58.21 going on a clinical trial.
0:25:58.21 -> 0:26:00.466 And it really is to try and
0:26:00.466 -> 0:26:02.714 better the outcomes for each of

0:26:02.714 -> 0:26:04.729 the recommended treatments
0:26:04.729 -> 0:26:07.019 that are recommended approaches,
0:26:07.02 -> 0:26:09.318 standard approaches so that we can
0:26:09.32 -> 0:26:11.516 push the envelope and
0:26:11.516 -> 0:26:14.3 really do the best for our patients.
0:26:15.6 -> 0:26:18.365 And in terms of these targeted therapies,
0:26:18.37 -> 0:26:20.71 whether it's a
0:26:20.71 -> 0:26:22.73 drug that's targeting an EGFR,
0:26:22.73 -> 0:26:25.502 whether it's a drug targeting ALK or
0:26:25.502 -> 0:26:27.88 whatever, this is across the board.
0:26:27.88 -> 0:26:29.86 Is that right between small
0:26:29.86 -> 0:26:31.84 cell and non small cell?
0:26:31.84 -> 0:26:34.828 And so the question that I have is if
0:26:34.828 -> 0:26:37.574 that is the case then for everyone
0:26:37.574 -> 0:26:40.559 who has lung cancer it sounds like
0:26:40.559 -> 0:26:43.265 they should have their tumor profiled
0:26:43.265 -> 0:26:45.76 with regards to all of these
0:26:45.76 -> 0:26:48.178 mutations so that their doctor can
0:26:48.178 -> 0:26:50.562 better inform what might be the
0:26:50.562 -> 0:26:52.65 therapy that works best for them.
0:26:52.65 -> 0:26:53.802 Is that right?
0:26:53.802 -> 0:26:55.72 So the the mutations that
0:26:55.72 -> 0:26:58.68 I talked about EGFR and so forth are
0:26:58.68 -> 0:27:01.85 really much more common in non small cells.
0:27:01.85 -> 0:27:04.86 So we do as a matter of fact test all
0:27:04.947 -> 0:27:07.509 of our non small cell samples
0:27:07.509 -> 0:27:10.551 and look for
0:27:10.551 -> 0:27:13.335 these mutations. For small
0:27:13.34 -> 0:27:15.626 cell it's a little bit different.
0:27:15.63 -> 0:27:19.76 We don't have typically
0:27:19.76 -> 0:27:22.09 mutations in EGFR or ALK,

0:27:22.09 -> 0:27:23.954 specifically for small cell.
0:27:23.954 -> 0:27:26.248 However, because we still think
0:27:26.248 -> 0:27:28.99 that it's important to test for
0:27:29.083 -> 0:27:31.879 those and typically not up front,
0:27:31.88 -> 0:27:35.135 in other words, when you're first diagnosed,
0:27:35.14 -> 0:27:37.93 but if you are treated with
0:27:37.93 -> 0:27:39.325 chemo and immunotherapy,
0:27:39.33 -> 0:27:42.264 and perhaps it typically works very
0:27:42.264 -> 0:27:46.492 well in 80 to 90% of the cases
0:27:46.492 -> 0:27:50.16 you have a very good response
0:27:50.16 -> 0:27:52.864 but that disease may come back when
0:27:52.864 -> 0:27:55.467 you have stage four disease,
0:27:55.47 -> 0:27:57.678 it's typically not something that you're
0:27:57.678 -> 0:28:00.085 going to cure because you
0:28:00.085 -> 0:28:02.122 don't have the option of cutting out
0:28:02.182 -> 0:28:04.317 or radiating every microscopic cell.
0:28:04.32 -> 0:28:06.09 So if the disease regrows,
0:28:06.09 -> 0:28:07.506 if and when,
0:28:07.506 -> 0:28:07.86 unfortunately,
0:28:07.86 -> 0:28:09.248 the disease regrows,
0:28:09.248 -> 0:28:11.733 we want to have options and
0:28:11.733 -> 0:28:13.393 really develop more tools is
0:28:13.393 -> 0:28:16.277 what I tell my patients to be
0:28:16.277 -> 0:28:18.122 able to manage their disease,
0:28:18.13 -> 0:28:20.32 and that's why we
0:28:20.32 -> 0:28:22.872 do work so much with clinical
0:28:22.872 -> 0:28:25.442 trials and feel that that's
0:28:25.442 -> 0:28:27.787 incredibly important to be able to
0:28:27.787 -> 0:28:29.837 advance outcomes for our patients.
0:28:29.84 -> 0:28:30.57 Doctor Ann Chiang
0:28:30.57 -> 0:28:33.083 is an associate professor and medical

0:28:33.083 -> 0:28:35.687 oncologist at the Yale School of Medicine.
0:28:35.69 -> 0:28:37.274 If you have questions,
0:28:37.274 -> 0:28:39.254 the address is cancer answers at
0:28:39.254 -> 0:28:41.44 yale.edu and past editions of the
0:28:41.44 -> 0:28:43.574 program are available in audio and
0:28:43.574 -> 0:28:45.94 written form at yalecancercenter.org.
0:28:45.94 -> 0:28:48.883 We hope you'll join us next week to learn
0:28:48.883 -> 0:28:51.5 more about the fight against cancer.
0:28:51.5 -> 0:28:53.48 Here on Connecticut public radio.
0:28:53.48 -> 0:28:55.75 Funding for Yale Cancer Answers
0:28:55.75 -> 0:28:58.02 is provided by Smilow Cancer
0:28:58.102 -> 0:29:00.07 Hospital and AstraZeneca.