

0:00:00 -> 0:00:01.786 Funding for Yale Cancer Answers
0:00:01.786 -> 0:00:03.932 is provided by Smilow Cancer
0:00:03.932 -> 0:00:05.704 Hospital and AstraZeneca.
0:00:07.99 -> 0:00:09.868 Welcome to Yale Cancer Answers with
0:00:09.868 -> 0:00:12.396 your host doctor Anees Chagpar.
0:00:12.396 -> 0:00:14.342 Yale Cancer Answers features the
0:00:14.342 -> 0:00:16.52 latest information on cancer care by
0:00:16.581 -> 0:00:18.013 welcoming oncologists and specialists
0:00:18.013 -> 0:00:20.504 who are on the forefront of the
0:00:20.504 -> 0:00:22.388 battle to fight cancer. This week
0:00:22.388 -> 0:00:24.233 it's a conversation about multiple
0:00:24.233 -> 0:00:25.873 myeloma and other hematologic
0:00:25.873 -> 0:00:28.218 conditions with Doctor Terri Parker.
0:00:28.22 -> 0:00:30.278 Dr Parker is an assistant professor
0:00:30.278 -> 0:00:31.997 of medicine in hematology at
0:00:31.997 -> 0:00:33.447 the Yale School of Medicine,
0:00:33.45 -> 0:00:36.11 where Doctor Chagpar is a
0:00:36.11 -> 0:00:38.238 professor of surgical oncology.
0:00:38.62 -> 0:00:39.943 Terri, maybe we can start off by you
0:00:39.943 -> 0:00:41.282 telling us a little bit about
0:00:41.282 -> 0:00:42.722 yourself and about what you do.
0:00:43.47 -> 0:00:45.99 My specialty focuses on plasma cell
0:00:45.99 -> 0:00:48.44 neoplasms or plasma cell disorders.
0:00:48.44 -> 0:00:50.722 The most common of which is multiple
0:00:50.722 -> 0:00:52.414 myeloma, which is considered to
0:00:52.414 -> 0:00:53.778 be a haematological malignancy.
0:00:54.09 -> 0:00:56.589 So let's back up a little bit.
0:00:56.59 -> 0:00:58.966 What exactly is a plasma cell?
0:00:59.21 -> 0:01:01.03 A plasma cell is a
0:01:01.03 -> 0:01:02.814 type of white blood cell that
0:01:02.814 -> 0:01:04.68 is found in the bone marrow.

0:01:04.68 -> 0:01:06.96 It's derived from a B lymphocyte,
0:01:06.96 -> 0:01:08.496 which is another type of white
0:01:08.5 -> 0:01:10.548 blood cell again found in the bone marrow.
0:01:11.08 -> 0:01:13.798 Tell us about multiple
0:01:13.798 -> 0:01:16.2 myeloma and what exactly it is.
0:01:16.2 -> 0:01:17.982 I mean when we think about
0:01:17.982 -> 0:01:19.6 cancers of white blood cells,
0:01:19.6 -> 0:01:22.4 oftentimes we're thinking about leukemias
0:01:22.4 -> 0:01:24.388 lymphomas, is multiple myeloma
0:01:24.388 -> 0:01:26.376 a type of that,
0:01:26.38 -> 0:01:28.708 is it different? Tell us more.
0:01:28.99 -> 0:01:30.745 As stated, a multiple
0:01:30.745 -> 0:01:33.048 myeloma is considered to be a
0:01:33.048 -> 0:01:34.98 hematological malignancy and so
0:01:34.98 -> 0:01:36.912 that term encompasses leukemias,
0:01:36.92 -> 0:01:39.75 lymphomas, and plasma cell neoplasms,
0:01:39.75 -> 0:01:42.198 of which multiple myeloma is one.
0:01:42.2 -> 0:01:44.165 So in multiple myeloma the
0:01:44.165 -> 0:01:46.13 abnormal cell is a plasma cell
0:01:46.13 -> 0:01:48.944 and these plasma cells proliferate or
0:01:48.944 -> 0:01:52.178 increase in number in the bone marrow.
0:01:52.18 -> 0:01:54.286 It's really not known what causes
0:01:54.286 -> 0:01:56.76 the plasma cells to proliferate in
0:01:56.76 -> 0:01:58.384 the majority of individuals,
0:01:58.384 -> 0:02:00.414 and it's this proliferation that
0:02:00.414 -> 0:02:02.66 is defined as multiple myeloma.
0:02:07.936 -> 0:02:10.786 In general, blood cancers
0:02:10.786 -> 0:02:13.159 are pretty rare, right?
0:02:13.17 -> 0:02:15.046 If you look at multiple myeloma,
0:02:15.05 -> 0:02:16.83 it's currently the 14th most
0:02:16.83 -> 0:02:19.082 common cancer in the United States

0:02:19.082 -> 0:02:21.067 and it represents roughly 1.8%
0:02:21.067 -> 0:02:23.209 of all new cancers diagnosed
0:02:23.21 -> 0:02:24.694 so not as common as some of
0:02:24.694 -> 0:02:25.96 our solid tumors that we see.
0:02:26.31 -> 0:02:28.728 And where does it rank relative
0:02:28.728 -> 0:02:30.703 to leukemia and lymphoma?
0:02:30.703 -> 0:02:33.678 There's some leukemias
0:02:33.69 -> 0:02:36.003 that are more common and some that are rare,
0:02:36.01 -> 0:02:38.236 so probably somewhere in
0:02:38.236 -> 0:02:41.057 the middle, not to be too specific.
0:02:41.44 -> 0:02:44.715 And who gets
0:02:44.715 -> 0:02:47.335 these blood cell cancers?
0:02:47.34 -> 0:02:48.522 These hematologic malignancies.
0:02:48.522 -> 0:02:51.28 Are there certain risk factors that put
0:02:51.335 -> 0:02:53.249 people at risk for developing them?
0:02:53.89 -> 0:02:56.752 As I stated previously
0:02:56.752 -> 0:02:58.183 for multiple myeloma,
0:02:58.19 -> 0:03:00.286 for most people we don't really know
0:03:00.286 -> 0:03:01.726 why they developed the disease.
0:03:01.73 -> 0:03:04.145 However, there are some factors that may
0:03:04.145 -> 0:03:06.73 increase the risk of developing myeloma.
0:03:06.73 -> 0:03:09.75 One is age, so the majority of people
0:03:09.75 -> 0:03:12.854 are over the age of 50 at diagnosis.
0:03:12.86 -> 0:03:15.009 With the current median age of diagnosis
0:03:15.009 -> 0:03:17.539 here in the United States being 69,
0:03:17.539 -> 0:03:20.682 another risk factor is a precursor condition
0:03:20.682 -> 0:03:24.417 known as Monoclonal gammopathy of undetermined
significance
0:03:24.42 -> 0:03:26.356 also known as MGUS.
0:03:29.74 -> 0:03:31.99 Tell us more about that.
0:03:32.02 -> 0:03:35.296 MGUS is considered to be a precursor condition

0:03:35.296 -> 0:03:38.252 and the individuals are asymptomatic and
0:03:38.252 -> 0:03:41.198 it's usually discovered when blood
0:03:41.198 -> 0:03:44.067 work is done for another complaint,
0:03:44.07 -> 0:03:46.926 sometimes it can be that a primary care
0:03:46.926 -> 0:03:49.058 physician notices that there's an increase
0:03:49.058 -> 0:03:51.78 in protein in a simple serum chemistry.
0:03:51.78 -> 0:03:53.694 So that's a blood test that's
0:03:53.694 -> 0:03:54.97 done for another reason.
0:03:54.97 -> 0:03:57.11 Sometimes this laboratory work is
0:03:57.11 -> 0:03:59.851 done for evaluation of other problems
0:03:59.851 -> 0:04:02.496 such as osteoporosis or neuropathies
0:04:03.43 -> 0:04:05.6 and then they get referred to a
0:04:05.664 -> 0:04:07.839 hematologist and have further evaluation
0:04:07.839 -> 0:04:10.44 that then reveals this precursor state.
0:04:11.1 -> 0:04:15.249 Those are pretty
0:04:15.249 -> 0:04:17.72 general risk factors in terms of age
0:04:17.72 -> 0:04:20.41 and MGUS for multiple myeloma.
0:04:20.41 -> 0:04:22.558 Are there risk factors for lymphoma
0:04:22.558 -> 0:04:24.7 and leukemia as well?
0:04:29.04 -> 0:04:31.203 In general, age again plays a
0:04:31.203 -> 0:04:34.215 factor as we do tend to see certain
0:04:34.215 -> 0:04:35.827 leukemias in older individuals.
0:04:35.83 -> 0:04:38.15 It again depends on the type of leukemia,
0:04:38.15 -> 0:04:39.15 as there are different types.
0:04:39.15 -> 0:04:42.18 Acute and chronic lymphoid versus
0:04:42.18 -> 0:04:45.658 myeloid. And other potential risks
0:04:45.658 -> 0:04:48.526 can include environmental exposures,
0:04:48.53 -> 0:04:50.42 so there have been studies looking
0:04:50.42 -> 0:04:52.57 at the link between radiation in
0:04:52.57 -> 0:04:54.64 addition to certain chemical exposures
0:04:54.64 -> 0:04:56.879 such as pesticides or Agent Orange.

0:04:58.26 -> 0:05:01.76 And so those increase your risk of
0:05:01.76 -> 0:05:04.028 leukemias and lymphomas, but not
0:05:04.028 -> 0:05:05.75 of multiple myeloma. Is that right?
0:05:06.22 -> 0:05:07.627 Multiple Myeloma as well,
0:05:07.63 -> 0:05:09.46 there have been studies
0:05:09.46 -> 0:05:11.29 specifically looking at Agent Orange
0:05:11.354 -> 0:05:13.388 and pesticides as well as radiation
0:05:14.01 -> 0:05:16.354 so you know pesticides is something that I
0:05:16.354 -> 0:05:18.999 think a lot of people kind of worry about.
0:05:19 -> 0:05:21.502 And you know, as we're heading into the fall,
0:05:21.51 -> 0:05:23.412 people are still using
0:05:23.412 -> 0:05:25.42 pesticides as they're trying to
0:05:25.42 -> 0:05:27.24 tend their lawn and do their gardening,
0:05:27.24 -> 0:05:29.048 get everything ready
0:05:29.048 -> 0:05:30.418 for the winter.
0:05:30.418 -> 0:05:33.172 Should people really be concerned about
0:05:33.172 -> 0:05:35.481 pesticides or are there particular
0:05:35.481 -> 0:05:38.109 pesticides that they should watch out
0:05:38.109 -> 0:05:40.73 for and others that might be safer?
0:05:40.74 -> 0:05:42.756 That's a good question and I don't
0:05:42.756 -> 0:05:44.414 have a specific answer for you
0:05:44.414 -> 0:05:46.644 and a lot of these are
0:05:46.644 -> 0:05:49.304 looked at and some of the common
0:05:49.304 -> 0:05:51.124 pesticides that people may use
0:05:51.124 -> 0:05:53.633 may have warnings on them most of
0:05:53.633 -> 0:05:55.595 the time people are usually safe
0:05:55.595 -> 0:05:57.647 because they're using the regular
0:05:57.647 -> 0:05:59.307 household pesticides or chemicals
0:05:59.307 -> 0:06:01.764 if you will and ventilated
0:06:01.764 -> 0:06:03.388 outdoor space and really
0:06:03.388 -> 0:06:04.86 have minimal exposure.

0:06:05.4 -> 0:06:07.112 I think that that's
0:06:07.112 -> 0:06:09.008 kind of good information to get across.
0:06:09.01 -> 0:06:10.134 Just because
0:06:10.134 -> 0:06:11.539 people can sometimes worry about
0:06:11.539 -> 0:06:13.117 these things, but
0:06:13.117 -> 0:06:15.698 it may be that it's really not as
0:06:15.698 -> 0:06:17.744 toxic as some people may think,
0:06:17.75 -> 0:06:20.711 unless you're in contact
0:06:20.711 -> 0:06:23.689 with them in large quantities.
0:06:23.69 -> 0:06:25.958 So now that we've talked
0:06:25.958 -> 0:06:27.47 about the risk factors,
0:06:27.47 -> 0:06:30.695 how do people present with
0:06:30.695 -> 0:06:32.63 these hematologic malignancies?
0:06:32.63 -> 0:06:36.62 For a solid tumor,
0:06:36.62 -> 0:06:39.3 tumors we often can find a lump,
0:06:39.3 -> 0:06:42.045 or we'll have some bleeding
0:06:42.045 -> 0:06:44.79 or will have some pain.
0:06:44.79 -> 0:06:46.366 Blood cells don't generally
0:06:46.366 -> 0:06:48.35 cause those things, do they?
0:06:51.19 -> 0:06:53.255 If we walk
0:06:53.255 -> 0:06:55.09 through each thing individually,
0:06:55.09 -> 0:06:57.52 for patients who have leukemia
0:06:57.52 -> 0:06:59.97 a lot of times they will present
0:06:59.97 -> 0:07:01.56 with abnormal blood counts.
0:07:01.56 -> 0:07:03.246 By that I mean an abnormal
0:07:03.246 -> 0:07:04.37 white blood cell count,
0:07:04.37 -> 0:07:07.406 hemoglobin or red cells or platelets,
0:07:07.41 -> 0:07:09.853 which are the cell that helps prevent
0:07:09.853 -> 0:07:11.918 you from bleeding or blood clots.
0:07:11.92 -> 0:07:15.217 Sometimes an individual will be diagnosed
0:07:15.22 -> 0:07:17.334 when they have a blood count done

0:07:17.334 -> 0:07:19.391 for another reason and it's picked
0:07:19.391 -> 0:07:21.206 up because there's an abnormality.
0:07:21.21 -> 0:07:23.575 Sometimes people present because these
0:07:23.575 -> 0:07:25.94 abnormalities lead to other symptoms.
0:07:25.94 -> 0:07:27.215 For example, if there's an
0:07:27.215 -> 0:07:28.78 alteration in a white blood cell
0:07:28.78 -> 0:07:30.78 count is specifically a lower
0:07:30.78 -> 0:07:32.38 white blood cell count,
0:07:32.38 -> 0:07:35.542 someone may develop more frequent or
0:07:35.542 -> 0:07:37.7 recurrent infections if the red cells or
0:07:37.7 -> 0:07:38.861 hemoglobin is low.
0:07:38.861 -> 0:07:40.796 That's also known as anemia,
0:07:40.8 -> 0:07:42.735 and patients can
0:07:42.735 -> 0:07:44.67 become more tired or fatigued,
0:07:44.67 -> 0:07:45.86 and if their platelet count
0:07:45.86 -> 0:07:47.87 is reduced they can present
0:07:47.87 -> 0:07:49.88 with bleeding or easy bruising,
0:07:49.88 -> 0:07:51.865 so sometimes these people present
0:07:51.865 -> 0:07:54.262 because they have other symptoms and
0:07:54.262 -> 0:07:56.32 then it's revealed that these symptoms
0:07:56.32 -> 0:07:58.499 are because of a low blood count.
0:07:58.5 -> 0:08:00.65 For individuals who have lymphomas,
0:08:00.65 -> 0:08:02.702 sometimes they will present with a
0:08:02.702 -> 0:08:05.071 large lymph node and so in that case
0:08:05.071 -> 0:08:07.559 they may have a lump or bump if you will
0:08:07.56 -> 0:08:11.34 that causes them to present to medical
0:08:11.34 -> 0:08:13.68 attention and then for multiple myeloma,
0:08:13.68 -> 0:08:16.228 which is what I specifically focus in,
0:08:16.23 -> 0:08:18.3 sometimes people will not have any
0:08:18.3 -> 0:08:20.077 symptoms and again it's picked
0:08:20.077 -> 0:08:22.075 up because blood work is done

0:08:22.075 -> 0:08:23.074 for another reason,
0:08:23.08 -> 0:08:26.144 like an elevated total protein on a serum
0:08:26.144 -> 0:08:28.585 chemistry which is a type of blood test.
0:08:28.59 -> 0:08:30.126 Other symptoms that individuals
0:08:30.126 -> 0:08:32.43 could have could again be anemia.
0:08:32.43 -> 0:08:34.453 If the plasma cells increase in the
0:08:34.453 -> 0:08:36.706 bone marrow to the point where they
0:08:36.706 -> 0:08:38.686 start crowding out the normal cells,
0:08:38.69 -> 0:08:40.706 plasma cells also produce high amounts
0:08:40.706 -> 0:08:43.249 of protein that can be seen in the
0:08:43.249 -> 0:08:44.953 blood that are cleared through the
0:08:45.013 -> 0:08:46.993 kidneys and could lead to renal
0:08:46.993 -> 0:08:48.721 dysfunction or failure in severe
0:08:48.721 -> 0:08:51.528 cases if it has not been recognized,
0:08:51.53 -> 0:08:54.306 and plasma cells also accumulate in the bone,
0:08:54.31 -> 0:08:56.27 that can lead to weakness of the
0:08:56.27 -> 0:08:58.249 bone and hence pain or fractures.
0:08:59.67 -> 0:09:02.53 And so it sounds like a lot of these are
0:09:02.605 -> 0:09:05.16 really picked up on basic blood tests
0:09:05.16 -> 0:09:08.259 that you have when you go to your doctor.
0:09:08.26 -> 0:09:10.57 So how frequently should you be
0:09:10.57 -> 0:09:12.51 having routine blood tests done?
0:09:12.51 -> 0:09:14.478 Especially if these things don't generally
0:09:14.478 -> 0:09:17.1 present with a lot of symptoms?
0:09:17.53 -> 0:09:20.422 There isn't currently
0:09:20.422 -> 0:09:22.35 screening that's recommended
0:09:22.429 -> 0:09:24.729 for multiple myeloma or MGUS
0:09:24.73 -> 0:09:27.09 which is the precursor condition.
0:09:27.09 -> 0:09:29.71 So typically we tell patients
0:09:29.71 -> 0:09:31.46 to follow the guidance from
0:09:31.46 -> 0:09:32.86 their primary care physician,

0:09:32.86 -> 0:09:35.52 meaning their blood work really depends
0:09:35.52 -> 0:09:37.922 on other medical problems.
0:09:37.922 -> 0:09:39.266 For example, if someone
0:09:39.266 -> 0:09:40.61 has a heart condition,
0:09:40.61 -> 0:09:43.25 diabetes or another medical issue,
0:09:43.25 -> 0:09:45.344 they're probably going to have blood
0:09:45.344 -> 0:09:47.153 work done more frequently because
0:09:47.153 -> 0:09:49.247 of monitoring of that condition and
0:09:49.247 -> 0:09:51.26 the medications that are needed.
0:09:54.171 -> 0:09:56.577 When you talk about these
0:09:56.577 -> 0:09:59.01 conditions being found in older patients,
0:10:00.183 -> 0:10:02.92 who are also the ones more likely
0:10:02.995 -> 0:10:05.3 to have other comorbidities that
0:10:05.3 -> 0:10:07.605 will require routine blood tests,
0:10:07.61 -> 0:10:10.562 I wonder how many people who are younger
0:10:10.562 -> 0:10:13.531 might be walking around completely
0:10:13.531 -> 0:10:16.443 asymptomatic but actually harboring
0:10:16.443 -> 0:10:19.661 one of these hematologic malignancies
0:10:19.661 -> 0:10:21.698 that have never been picked up simply
0:10:21.698 -> 0:10:23.348 because they've never had a blood test.
0:10:23.35 -> 0:10:26.213 Is that possible or do these things
0:10:26.213 -> 0:10:28.291 actually then progress to the
0:10:28.291 -> 0:10:30.33 point of being symptomatic?
0:10:30.36 -> 0:10:32.586 Again when you talk about
0:10:32.586 -> 0:10:33.463 hematologic malignancies
0:10:33.463 -> 0:10:36.984 that's a very broad topic and so
0:10:36.984 -> 0:10:40.178 everyone is very individualized.
0:10:40.178 -> 0:10:42.684 And so if we look at multiple
0:10:42.684 -> 0:10:44.38 myeloma for individuals with
0:10:44.38 -> 0:10:46.865 the precursor condition MGUS,
0:10:46.87 -> 0:10:49.294 they can be asymptomatic for years

0:10:49.294 -> 0:10:52.07 and for many patients
0:10:52.07 -> 0:10:54.525 it never progresses.
0:10:54.525 -> 0:10:56.295 For individuals who have a low risk
0:10:56.3 -> 0:10:57.876 MGUS we
0:10:59.85 -> 0:11:01.824 tell them that the risk of
0:11:01.824 -> 0:11:03.428 progression is roughly 1% per year.
0:11:03.428 -> 0:11:05.521 So there's a large majority of
0:11:05.521 -> 0:11:07.29 people who will never progress.
0:11:07.29 -> 0:11:09.305 If someone has multiple myeloma
0:11:09.305 -> 0:11:10.917 and it's left untreated,
0:11:10.92 -> 0:11:13.104 it will progress to the point where
0:11:13.104 -> 0:11:15.068 they may develop symptoms,
0:11:15.07 -> 0:11:17.455 what was discussed being
0:11:17.455 -> 0:11:19.84 anemia leading to fatigue, potential
0:11:19.84 -> 0:11:22.65 kidney damage, or bone damage,
0:11:22.65 -> 0:11:24.792 so those patients will progress and
0:11:24.792 -> 0:11:26.63 become symptomatic at some point,
0:11:26.63 -> 0:11:28.195 it's difficult to predict that
0:11:28.195 -> 0:11:29.134 rate of progression.
0:11:29.86 -> 0:11:32.18 And what about
0:11:32.18 -> 0:11:34.916 for lymphomas and leukemias?
0:11:34.92 -> 0:11:37.61 Are those also ones that
0:11:37.61 -> 0:11:39.762 will progress to symptoms?
0:11:39.77 -> 0:11:41.737 Or is it possible for them to
0:11:41.737 -> 0:11:43.388 be pretty asymptomatic until
0:11:43.388 -> 0:11:46.124 they actually end up having a
0:11:46.124 -> 0:11:48.408 test that that diagnosis it?
0:11:48.41 -> 0:11:50.868 Yeah, so for your acute leukemias,
0:11:50.88 -> 0:11:52.77 and even the majority of
0:11:52.77 -> 0:11:53.904 your chronic leukemias,
0:11:53.91 -> 0:11:56.18 they will often progress again,

0:11:56.18 -> 0:11:59.026 varying rates of progression to the point
0:11:59.026 -> 0:12:00.209 where people will become symptomatic.
0:12:00.209 -> 0:12:02.663 Similarly, if someone had an aggressive
0:12:02.663 -> 0:12:05.198 lymphoma or a high grade lymphoma,
0:12:05.2 -> 0:12:07.464 they would progress to the point of symptoms.
0:12:07.47 -> 0:12:09.655 It is possible for individuals
0:12:09.655 -> 0:12:12.27 who have a indolent or a slowly
0:12:12.27 -> 0:12:13.57 progressing lymphoma that they
0:12:13.57 -> 0:12:15.796 may have had it for several years
0:12:15.796 -> 0:12:17.311 before the point of progression.
0:12:17.97 -> 0:12:20.427 The other question that I had was
0:12:20.427 -> 0:12:23.154 you talk about one of the
0:12:23.154 -> 0:12:25.249 things that's often a trigger to
0:12:25.25 -> 0:12:28.635 finding diagnosis of these
0:12:28.635 -> 0:12:31.343 conditions as being anemia.
0:12:31.35 -> 0:12:33.688 And for example, in multiple myeloma,
0:12:33.69 -> 0:12:35.03 where the plasma cells kind
0:12:35.03 -> 0:12:36.37 of crowd out other cells,
0:12:36.37 -> 0:12:40.699 and so the red blood cell count goes down.
0:12:40.7 -> 0:12:41.604 Two questions,
0:12:41.604 -> 0:12:44.11 first question is oftentimes anemia,
0:12:44.11 -> 0:12:46.41 especially in older people,
0:12:46.41 -> 0:12:50.096 can be associated with other things, right?
0:12:50.096 -> 0:12:52.48 GI bleeds,
0:12:52.48 -> 0:12:54.8 losing blood from other sources,
0:12:54.8 -> 0:12:56.162 iron deficiency anemia.
0:12:56.162 -> 0:12:59.34 How do you really tell that this
0:12:59.426 -> 0:13:02.091 is from something like multiple
0:13:02.091 -> 0:13:04.33 myeloma versus other things?
0:13:05.2 -> 0:13:07.57 Yeah, that's a really good question,
0:13:07.57 -> 0:13:08.89 and as you mentioned,

0:13:08.89 -> 0:13:10.87 people who are older and even
0:13:10.938 -> 0:13:12.518 younger individuals can have
0:13:12.518 -> 0:13:14.888 anemia for a variety of reasons.
0:13:14.89 -> 0:13:17.137 So typically we will work up and
0:13:17.137 -> 0:13:19.529 do a basic anemia evaluation,
0:13:19.53 -> 0:13:21.605 which includes looking at
0:13:21.605 -> 0:13:23.265 things like iron deficiency,
0:13:23.27 -> 0:13:24.842 other nutritional deficiencies,
0:13:24.842 -> 0:13:27.45 vitamin B12, and folic acid to
0:13:27.45 -> 0:13:30.335 make sure we exclude kind of
0:13:30.335 -> 0:13:32.6 the most common and treatable
0:13:32.6 -> 0:13:35.15 reasons for anemia first and then
0:13:35.15 -> 0:13:37.32 when we really don't have a source,
0:13:37.32 -> 0:13:39.36 then we kind of go on to kind of that
0:13:39.421 -> 0:13:41.923 next level of evaluation that does
0:13:41.923 -> 0:13:43.174 include hematological disorders.
0:13:43.97 -> 0:13:45.811 Well, we're gonna need to take a
0:13:45.811 -> 0:13:47.588 short break for a medical minute,
0:13:47.59 -> 0:13:49.767 but when we get back we'll learn
0:13:49.767 -> 0:13:52.471 more about how to diagnose and treat
0:13:52.471 -> 0:13:54.167 these hematologic conditions with
0:13:54.167 -> 0:13:56.88 my guest doctor Terri Parker.
0:13:56.89 -> 0:13:58.46 Funding for Yale Cancer Answers comes
0:13:58.46 -> 0:14:00.65 from AstraZeneca, dedicated to
0:14:00.65 -> 0:14:02.234 advancing options and providing
0:14:02.234 -> 0:14:04.67 hope for people living with cancer.
0:14:04.67 -> 0:14:05.828 More information at
0:14:07.96 -> 0:14:08.55 astrazeneca-us.com.
0:14:10.63 -> 0:14:12.25 There are many obstacles to
0:14:12.25 -> 0:14:13.546 face when quitting smoking.
0:14:13.55 -> 0:14:15.386 As smoking involves the potent drug

0:14:15.39 -> 0:14:17.655 Nicotine. Quitting smoking is a
0:14:17.655 -> 0:14:19.467 very important lifestyle change,
0:14:19.47 -> 0:14:20.949 especially for patients
0:14:20.949 -> 0:14:22.428 undergoing cancer treatment,
0:14:22.43 -> 0:14:24.644 as it's been shown to positively
0:14:24.644 -> 0:14:26.12 impact response to treatments and
0:14:26.187 -> 0:14:28.392 decrease the likelihood that patients
0:14:28.392 -> 0:14:30.156 will develop second malignancies
0:14:30.156 -> 0:14:32.268 and increase rates of survival.
0:14:32.27 -> 0:14:34.022 Tobacco treatment programs are
0:14:34.022 -> 0:14:36.212 currently being offered at federally
0:14:36.212 -> 0:14:37.492 designated Comprehensive cancer
0:14:37.492 -> 0:14:39.85 centers such as Yale Cancer Center
0:14:39.85 -> 0:14:42.09 and at Smilow Cancer Hospital.
0:14:42.09 -> 0:14:43.746 All treatment components are
0:14:43.746 -> 0:14:45.816 evidence based and patients are
0:14:45.816 -> 0:14:47.731 treated with FDA approved first
0:14:47.731 -> 0:14:49.526 line medications as well as
0:14:49.526 -> 0:14:51.545 smoking cessation counseling that
0:14:51.545 -> 0:14:53.669 stresses appropriate coping skills.
0:14:53.67 -> 0:14:55.938 More information is available at Yale
0:14:55.938 -> 0:14:57.983 Cancer Center dot org. You're listening
0:14:57.983 -> 0:14:59.839 to Connecticut Public Radio.
0:15:01.01 -> 0:15:03.11 Welcome back to Yale Cancer Answers.
0:15:03.11 -> 0:15:04.718 This is doctor Anees Chagpar
0:15:04.718 -> 0:15:06.52 and I'm joined tonight by
0:15:06.52 -> 0:15:08.185 my guest doctor Terri Parker.
0:15:08.19 -> 0:15:09.918 We're talking about hematologic
0:15:09.918 -> 0:15:11.058 malignancies,
0:15:11.058 -> 0:15:13.89 and particularly Doctor Parker's
0:15:13.89 -> 0:15:16.146 specialty of multiple myeloma.

0:15:16.146 -> 0:15:18.422 Now, right before the break,
0:15:18.422 -> 0:15:22.067 Terri, you were saying that a lot of people
0:15:22.067 -> 0:15:25.031 are diagnosed with multiple myeloma when
0:15:25.031 -> 0:15:28.579 anemia is found on a routine blood test.
0:15:28.58 -> 0:15:29.712 And that
0:15:29.712 -> 0:15:31.41 the first step is oftentimes to
0:15:31.476 -> 0:15:33.52 rule out the things that are common,
0:15:34.584 -> 0:15:37.776 rule out iron deficiency,
0:15:37.78 -> 0:15:40.558 anemia and B12, and folic acid.
0:15:40.56 -> 0:15:42.246 And all of those good things.
0:15:42.25 -> 0:15:43.082 But ultimately,
0:15:43.082 -> 0:15:46.41 if all of those things are ruled out,
0:15:46.41 -> 0:15:48.43 how then does the diagnosis
0:15:48.43 -> 0:15:50.915 proceed for people actually to be
0:15:50.915 -> 0:15:52.885 found to have multiple myeloma?
0:15:53.18 -> 0:15:55.336 And so the first step is actually
0:15:55.336 -> 0:15:57.139 additional blood in urine studies,
0:15:57.14 -> 0:16:00.316 so we will do a battery of tests,
0:16:00.32 -> 0:16:03.26 specifically tests that are called a serum
0:16:03.26 -> 0:16:04.026 protein electrophoresis,
0:16:04.026 -> 0:16:07.09 which is a blood test that looks to
0:16:07.159 -> 0:16:09.84 see if there's an increase in abnormal
0:16:09.84 -> 0:16:11.89 or monoclonal protein in the blood.
0:16:11.89 -> 0:16:14.098 We do a similar test in the urine.
0:16:14.1 -> 0:16:17.268 We will test other specific things
0:16:17.268 -> 0:16:19.38 called an immunofixation electrophoresis,
0:16:19.38 -> 0:16:20.442 quantitative immunoglobulins,
0:16:20.442 -> 0:16:23.097 and serum free light chains.
0:16:23.1 -> 0:16:25.652 And we put together all of these blood
0:16:25.652 -> 0:16:28.36 test and urine studies to determine if
0:16:28.36 -> 0:16:30.91 there is a monoclonal protein present

0:16:30.91 -> 0:16:33.549 which is a protein that's being secreted
0:16:33.55 -> 0:16:35.36 by an abnormal plasma cell.
0:16:35.84 -> 0:16:38.84 And so if you find that,
0:16:38.84 -> 0:16:41.576 then that means that people have
0:16:41.576 -> 0:16:43.6 multiple myeloma?
0:16:43.63 -> 0:16:45.4 Not necessarily, as I mentioned earlier,
0:16:45.4 -> 0:16:47.805 we can see a monoclonal
0:16:47.805 -> 0:16:49.248 protein precursor conditions,
0:16:49.25 -> 0:16:52.05 and so we take a look at the whole picture.
0:16:52.05 -> 0:16:54.066 So we look at the amount
0:16:54.066 -> 0:16:55.074 of monoclonal protein.
0:16:55.08 -> 0:16:58.068 If the patient has any other
0:16:58.068 -> 0:17:01.464 systemic symptoms, such as anemia,
0:17:01.464 -> 0:17:03.858 renal kidney insufficiency,
0:17:03.86 -> 0:17:06.308 or bone pain,
0:17:06.31 -> 0:17:08.396 this is more consistent with what
0:17:08.396 -> 0:17:10.936 we would call a monoclonal gammopathy
0:17:10.936 -> 0:17:12.517 of undetermined significance,
0:17:12.52 -> 0:17:14.398 that would be considered low risk
0:17:14.398 -> 0:17:16.678 that we would just have to observe,
0:17:16.68 -> 0:17:19.277 or if there were a significant amount
0:17:19.277 -> 0:17:21.646 of protein or other symptoms that
0:17:21.646 -> 0:17:24.397 would make us go one step further,
0:17:24.4 -> 0:17:26.395 which would be a bone marrow biopsy,
0:17:26.4 -> 0:17:29.022 which is the definitive way to
0:17:29.022 -> 0:17:30.77 diagnose multiple myeloma.
0:17:31.15 -> 0:17:33.887 And so when somebody has a bone
0:17:33.887 -> 0:17:36.469 marrow biopsy what exactly does that
0:17:36.469 -> 0:17:39.127 tell you?
0:17:39.13 -> 0:17:40.38 The bone marrow
0:17:40.39 -> 0:17:44.046 biopsy itself tells us what is the actual

0:17:44.046 -> 0:17:46.879 percentage of abnormal plasma cells.
0:17:46.88 -> 0:17:49.13 So we're looking for these abnormal
0:17:49.13 -> 0:17:50.63 or monoclonal plasma cells.
0:17:50.63 -> 0:17:53.238 So kind of one type of plasma cell,
0:17:53.24 -> 0:17:55.544 and they need to be over
0:17:55.544 -> 0:17:57.078 10% in the bone marrow.
0:17:57.078 -> 0:17:58.8 So that's what we're looking for,
0:17:58.8 -> 0:18:01.376 and that is diagnostic of multiple myeloma.
0:18:01.63 -> 0:18:03.646 And then if you find that,
0:18:03.65 -> 0:18:05.49 what's the next step?
0:18:05.49 -> 0:18:07.194 Is there staging or do you
0:18:07.194 -> 0:18:08.33 go straight to treatment?
0:18:08.33 -> 0:18:10.2 How does that work?
0:18:10.23 -> 0:18:13.15 Then we have to make another determination
0:18:13.15 -> 0:18:16.028 so we have what we call smoldering
0:18:16.03 -> 0:18:18.57 Multiple myeloma, which are symptomatic
0:18:22.774 -> 0:18:25.334 so individuals who have smoldering multiple
0:18:25.334 -> 0:18:28.61 myeloma meet that strict cutoff of 10%
0:18:28.61 -> 0:18:31.286 involvement of bone marrow but
0:18:31.286 -> 0:18:33.07 are really otherwise asymptomatic,
0:18:33.07 -> 0:18:36.12 meaning they don't have anemia,
0:18:36.12 -> 0:18:38.61 they have preserved kidney function,
0:18:38.61 -> 0:18:41.73 their calcium levels are within normal range,
0:18:41.73 -> 0:18:44.709 they don't have any bone pains or what we
0:18:44.709 -> 0:18:47.844 call lytic lesions or holes in their bones,
0:18:47.85 -> 0:18:49.762 and so these people we would really observe.
0:18:49.762 -> 0:18:52.184 But they have a higher risk of
0:18:52.184 -> 0:18:53.886 progression to symptomatic multiple
0:18:53.886 -> 0:18:56.046 myeloma that would need treatment.
0:18:56.22 -> 0:18:57.36 Wait a minute, wait a minute.
0:18:57.36 -> 0:19:00.198 So how do these people with

0:19:00.198 -> 0:19:01.617 smoldering multiple myeloma
0:19:01.617 -> 0:19:04.117 present if they don't have anemia?
0:19:04.12 -> 0:19:05.92 They don't have any
0:19:05.92 -> 0:19:07.27 abnormal kidney function.
0:19:07.27 -> 0:19:09.42 How do you see them?
0:19:09.87 -> 0:19:13.038 Yeah, so a lot of times these individuals
0:19:13.038 -> 0:19:15.692 are referred because they had a blood
0:19:15.692 -> 0:19:18.874 test done and that was what we call
0:19:18.874 -> 0:19:20.736 a comprehensive metabolic panel that
0:19:20.736 -> 0:19:22.932 included a total protein and they
0:19:22.932 -> 0:19:25.436 were noted to have a total protein
0:19:25.436 -> 0:19:27.796 that was elevated and so their primary
0:19:27.796 -> 0:19:29.8 care physician picked up that the
0:19:29.865 -> 0:19:32.161 total protein was high and then sent
0:19:32.161 -> 0:19:34.301 them for further evaluation for an
0:19:34.301 -> 0:19:36.485 issue such as a monoclonal protein.
0:19:36.49 -> 0:19:38.186 So that's one way we often will see
0:19:38.19 -> 0:19:43.428 these individuals, another is that monoclonal
0:19:43.43 -> 0:19:45.585 gammopathy's and multiple myeloma can
0:19:45.585 -> 0:19:48.36 be associated with other medical problems,
0:19:48.36 -> 0:19:51.99 for example as serum protein electrophoresis,
0:19:51.99 -> 0:19:54.406 which is the blood tests that we do
0:19:54.406 -> 0:19:57.094 as part of the evaluation for myeloma
0:19:57.094 -> 0:19:59.709 is often done an evaluation for
0:19:59.709 -> 0:20:01.849 secondary causes for osteoporosis,
0:20:01.85 -> 0:20:04.778 so sometimes patients will have it done as
0:20:04.778 -> 0:20:08.276 a work up if they are have osteoporosis at
0:20:08.28 -> 0:20:11.016 a younger age.
0:20:11.02 -> 0:20:13.08 We also can see neuropathy,
0:20:13.08 -> 0:20:15.628 so that's kind of numbness and tingling
0:20:15.628 -> 0:20:17.5 in the extremities in patients who

0:20:17.5 -> 0:20:19.648 have come up with these as well and
0:20:19.648 -> 0:20:21.244 so sometimes a neurologist as part
0:20:21.244 -> 0:20:23.57 of a work up for other reasons for a
0:20:23.57 -> 0:20:25.566 patient to have a peripheral neuropathy
0:20:25.566 -> 0:20:27.67 will send these studies,
0:20:27.67 -> 0:20:29.511 so that's how a lot of these
0:20:29.511 -> 0:20:30.52 patients present to us
0:20:30.52 -> 0:20:34.21 if they don't have any other organ damage.
0:20:34.36 -> 0:20:37.816 So these people with smoldering
0:20:37.816 -> 0:20:39.544 multiple myeloma
0:20:39.55 -> 0:20:41.59 still could have symptoms, right?
0:20:41.59 -> 0:20:43.315 They could still have this
0:20:43.315 -> 0:20:44.005 peripheral neuropathy,
0:20:44.01 -> 0:20:46.788 or they could still have osteoporosis,
0:20:46.79 -> 0:20:48.96 but they just can't have the other
0:20:48.96 -> 0:20:51.015 things that you mentioned, right?
0:20:51.015 -> 0:20:53.19 The anemia, the kidney function,
0:20:53.19 -> 0:20:55.068 the lytic lesions of the bone?
0:20:55.07 -> 0:20:56.22 Do I have that right?
0:20:56.22 -> 0:20:57.04 Yeah, that's
0:20:57.05 -> 0:20:58.628 right. So they can't really have
0:20:58.628 -> 0:21:00.629 what we call this end organ damage.
0:21:00.63 -> 0:21:03.225 You know our classification between
0:21:03.225 -> 0:21:05.301 smoldering myeloma and myeloma
0:21:05.301 -> 0:21:07.61 has changed over the years,
0:21:07.61 -> 0:21:10.508 and we now also have a set of criteria
0:21:10.51 -> 0:21:13.062 that I call my myeloma defining
0:21:13.062 -> 0:21:15.236 events which don't have to be organ
0:21:15.236 -> 0:21:17.944 damage but just a kind of a significant
0:21:17.944 -> 0:21:20.533 amount of disease burden, and we will
0:21:20.533 -> 0:21:22.238 treat those individuals as myeloma,

0:21:22.24 -> 0:21:24.607 even if they don't have any of the other
0:21:24.607 -> 0:21:26.457 classic symptoms you just mentioned.
0:21:26.46 -> 0:21:28.945 So really, we're looking for a significant
0:21:28.945 -> 0:21:30.769 involvement of the bone marrow,
0:21:30.77 -> 0:21:32.989 and we classify that as over 60%
0:21:32.99 -> 0:21:35.55 involvement or a very significant
0:21:35.55 -> 0:21:38.11 serum free light chain burden.
0:21:38.11 -> 0:21:40.558 And for those individuals we will treat them
0:21:40.56 -> 0:21:41.571 as multiple myeloma,
0:21:41.571 -> 0:21:43.93 even if they don't have those classic
0:21:43.989 -> 0:21:45.987 end organ damage that we mentioned.
0:21:46.49 -> 0:21:49.388 What does treatment entail?
0:21:49.39 -> 0:21:51.03 Yeah, so treatment for a
0:21:51.04 -> 0:21:54.024 newly diagnosed patient is
0:21:54.024 -> 0:21:57.008 a combination of drugs.
0:21:57.01 -> 0:21:57.798 Typically what you would
0:21:57.8 -> 0:21:58.664 consider chemotherapy.
0:21:58.664 -> 0:22:02.12 So we often refer to it as frontline
0:22:02.195 -> 0:22:04.1 or induction chemotherapy,
0:22:04.1 -> 0:22:07.775 as we're trying to induce a response.
0:22:07.78 -> 0:22:09.328 The treatment typically consists
0:22:09.328 -> 0:22:11.263 of a combination of three
0:22:11.27 -> 0:22:13.556 or four drugs and the determination
0:22:13.556 -> 0:22:16.234 of how many drugs and which drugs
0:22:16.234 -> 0:22:18.747 are often based on a few different
0:22:18.823 -> 0:22:21.468 patient specific factors in addition
0:22:21.468 -> 0:22:23.584 to disease specific factors.
0:22:23.59 -> 0:22:25.32 And so when we talk
0:22:25.32 -> 0:22:26.434 about patient specific factors,
0:22:26.434 -> 0:22:29.49 we really look at a patient and ask
0:22:30.201 -> 0:22:32.296 the question, how well do we think

0:22:32.296 -> 0:22:34.594 this individual could tolerate the treatment?
0:22:34.6 -> 0:22:38.128 What is their fitness?
0:22:38.13 -> 0:22:40.279 We don't necessarily look at
0:22:40.279 -> 0:22:42.619 age but kind of the overall person.
0:22:42.62 -> 0:22:44.636 What are their other medical problems,
0:22:44.64 -> 0:22:45.98 their comorbidities?
0:22:45.98 -> 0:22:49.33 What medications are they taking?
0:22:49.902 -> 0:22:51.332 Do they have heart dysfunction
0:22:51.332 -> 0:22:52.4 at baseline?
0:22:52.4 -> 0:22:54.255 Do they already have a neuropathy
0:22:54.255 -> 0:22:55.368 that's pretty severe?
0:22:55.37 -> 0:22:58.906 And then we look at the myeloma itself,
0:22:58.91 -> 0:23:00.69 meaning for every bone marrow
0:23:00.69 -> 0:23:02.114 biopsy that we do,
0:23:02.12 -> 0:23:04.535 we also send a study called cytogenetics
0:23:04.54 -> 0:23:07.196 and that is the study of
0:23:07.196 -> 0:23:09.01 chromosomes within that plasma cell.
0:23:09.01 -> 0:23:10.648 So we're really looking to see
0:23:10.648 -> 0:23:12.7 if there is any rearrangements.
0:23:12.7 -> 0:23:14.13 Additions, deletions,
0:23:14.13 -> 0:23:17.705 breaks and by utilizing these
0:23:17.705 -> 0:23:19.135 cytogenetic testing,
0:23:19.14 -> 0:23:21.498 we determine if someone is considered
0:23:21.498 -> 0:23:24.366 high risk or standard risk and that
0:23:24.366 -> 0:23:26.406 influences which treatment we give.
0:23:27.16 -> 0:23:29.278 And so what is the difference
0:23:29.278 -> 0:23:31.795 between a high risk and a standard
0:23:31.795 -> 0:23:33.72 risk patient in terms of treatment?
0:23:33.72 -> 0:23:35.448 I mean is it more drugs?
0:23:35.45 -> 0:23:37.518 Is it more duration?
0:23:37.518 -> 0:23:39.586 Is it more toxic?

0:23:39.59 -> 0:23:41.21 Yeah, so it's not necessarily
0:23:41.22 -> 0:23:42.585 more drugs. Fortunately,
0:23:42.585 -> 0:23:45.77 in multiple myeloma most of our drugs
0:23:45.85 -> 0:23:48.566 are very targeted to the plasma cell,
0:23:48.57 -> 0:23:50.677 but it may just be a
0:23:50.677 -> 0:23:52.02 different type of drug.
0:23:52.02 -> 0:23:55.464 So it may consist of four
0:23:55.464 -> 0:23:58.479 drugs versus a 3 drug regimen.
0:23:58.48 -> 0:24:00.286 You know there's still a lot
0:24:00.286 -> 0:24:02.092 of research being done to see
0:24:02.092 -> 0:24:03.718 what is truly the best regimen
0:24:03.718 -> 0:24:04.914 for high risk individuals,
0:24:04.914 -> 0:24:07.038 and there's a lot of different
0:24:07.038 -> 0:24:08.1 opinions out there,
0:24:08.1 -> 0:24:09.372 but it's usually going to be
0:24:09.372 -> 0:24:10.836 a four or three drug regimen
0:24:10.836 -> 0:24:11.956 with potentially one difference
0:24:11.956 -> 0:24:13.71 in one of the medications.
0:24:15.06 -> 0:24:18.388 And as we think about
0:24:18.388 -> 0:24:21.02 multiple myeloma and how you treat it,
0:24:21.02 -> 0:24:24.058 it seems to me that
0:24:24.06 -> 0:24:27.084 part of this has to do with how advanced
0:24:27.084 -> 0:24:30.122 the myeloma is in terms of how much of
0:24:30.122 -> 0:24:32.997 the bone marrow is actually involved,
0:24:33 -> 0:24:35.21 whether there's end organ damage,
0:24:35.21 -> 0:24:38.157 health, how fit the patient is, and so on.
0:24:38.157 -> 0:24:41.851 All of which makes me wonder about
0:24:41.851 -> 0:24:45.59 how important it is to get to a doctor
0:24:45.59 -> 0:24:47.249 as soon as you have those symptoms,
0:24:47.25 -> 0:24:50.764 how important it is to come to
0:24:50.764 -> 0:24:53.074 get diagnosed early versus late?

0:24:53.08 -> 0:24:54.455 I mean certainly that's something
0:24:54.455 -> 0:24:56.678 we talk about in a lot of cancers,
0:24:56.68 -> 0:24:59.263 but it sounds like in multiple myeloma
0:24:59.263 -> 0:25:01.829 there's really no real screening tests.
0:25:01.83 -> 0:25:04.29 No recommendations for annual blood work,
0:25:04.29 -> 0:25:04.956 for example.
0:25:04.956 -> 0:25:07.287 So does that really play a role?
0:25:07.29 -> 0:25:09.194 Or does it not matter as much?
0:25:10.43 -> 0:25:12.93 Yeah, so in multiple myeloma
0:25:12.93 -> 0:25:15.051 as in a lot of the hematological
0:25:15.051 -> 0:25:15.96 malignancies
0:25:15.96 -> 0:25:20.064 we don't stage it as we do our
0:25:22.186 -> 0:25:24.61 solid tumors and
0:25:24.681 -> 0:25:27.106 we don't talk about metastasis and
0:25:27.106 -> 0:25:30.228 so really the amount of bone marrow
0:25:30.23 -> 0:25:33.156 involvement doesn't play a role in what
0:25:33.156 -> 0:25:36.548 we decide to do for upfront treatments.
0:25:36.55 -> 0:25:38.236 So our staging is really based
0:25:38.236 -> 0:25:40.296 on blood work and we
0:25:40.296 -> 0:25:42.048 will often treat someone who is
0:25:42.05 -> 0:25:44.864 say a stage one versus stage three,
0:25:44.87 -> 0:25:47.066 very similarly because we have very
0:25:47.066 -> 0:25:49.799 effective drugs in the first line setting.
0:25:49.8 -> 0:25:51.705 But obviously we would want
0:25:51.705 -> 0:25:53.229 to seek medical attention
0:25:53.23 -> 0:25:54.89 if you had any symptoms,
0:25:54.89 -> 0:25:57.888 because say you present with kidney
0:25:57.888 -> 0:25:59.64 dysfunction, renal failure that
0:25:59.64 -> 0:26:02.309 does limit some of the treatments
0:26:02.309 -> 0:26:04.745 that we could give up front.
0:26:04.75 -> 0:26:07.225 And obviously if you start to have bone pain,

0:26:07.23 -> 0:26:09.126 you want to seek medical attention
0:26:09.126 -> 0:26:11.044 because you wouldn't want to end
0:26:11.044 -> 0:26:12.534 up with a pathological fracture.
0:26:12.54 -> 0:26:14.454 So we do encourage people if
0:26:14.454 -> 0:26:16.621 they have any symptoms to really
0:26:16.621 -> 0:26:17.86 seek medical attention.
0:26:19.84 -> 0:26:21.81 And the sooner you are diagnosed,
0:26:21.81 -> 0:26:23.435 the potentially more treatment options
0:26:23.435 -> 0:26:25.689 you have and the better shape you
0:26:25.689 -> 0:26:27.405 will be in to tolerate treatment.
0:26:28.4 -> 0:26:30.234 The other thing that you mentioned,
0:26:30.24 -> 0:26:31.758 which I think is something that
0:26:31.758 -> 0:26:33.339 it's important that we pick up on,
0:26:33.34 -> 0:26:34.936 is that you said that the
0:26:34.936 -> 0:26:36.6 treatments now are very effective.
0:26:36.6 -> 0:26:38.77 So tell us a little bit about
0:26:38.77 -> 0:26:40.53 prognosis of patients who are
0:26:40.53 -> 0:26:42.07 treated with multiple myeloma.
0:26:43.17 -> 0:26:46.452 Fortunately we have keep
0:26:46.452 -> 0:26:49.238 moving our overall survival and
0:26:49.238 -> 0:26:51.738 the percent surviving at five
0:26:51.738 -> 0:26:54.455 years each year thanks to the
0:26:54.455 -> 0:26:56.227 development of newer treatments.
0:26:56.23 -> 0:26:58.84 And so it used to be,
0:26:58.84 -> 0:27:00.751 several years ago, say in 2005,
0:27:00.751 -> 0:27:02.653 if we were giving this talk,
0:27:02.66 -> 0:27:04.556 we would talk about an overall
0:27:04.556 -> 0:27:06.846 survival of two to five years
0:27:11.36 -> 0:27:13.19 and so more recently we say
0:27:13.19 -> 0:27:15.334 five to 10 years and we're now
0:27:15.334 -> 0:27:16.958 talking about potentially

0:27:16.958 -> 0:27:19.345 moving that to 10 to 15 years.
0:27:19.35 -> 0:27:21.247 If you look at the most recent
0:27:21.247 -> 0:27:23.383 data in the United States regarding
0:27:23.383 -> 0:27:25.478 the percentage of patients that
0:27:25.478 -> 0:27:27.289 are alive at five years,
0:27:27.29 -> 0:27:29.61 it's about just over 55%.
0:27:29.61 -> 0:27:30.819 So, very encouraging.
0:27:31.64 -> 0:27:33.579 That's really great, and I guess
0:27:33.579 -> 0:27:35.578 that leads me to my next question,
0:27:35.58 -> 0:27:37.65 which is what are the exciting
0:27:37.65 -> 0:27:39.853 advances that are going on in
0:27:39.853 -> 0:27:41.728 terms of multiple myeloma research.
0:27:41.73 -> 0:27:44.619 How are you and others trying to move
0:27:44.619 -> 0:27:47.73 the ball even further down the field?
0:27:47.74 -> 0:27:49.152 That's a great question.
0:27:49.152 -> 0:27:51.27 There is so much exciting research
0:27:51.335 -> 0:27:53.302 being done here at Yale and within
0:27:53.302 -> 0:27:55.229 the field of multiple myeloma.
0:27:55.23 -> 0:27:57.316 And really at all stages.
0:27:58.856 -> 0:28:01.89 Right now we often will refer to multiple myeloma
0:28:01.89 -> 0:28:04.962 as a cancer that is treatable
0:28:04.962 -> 0:28:06.498 but not curable.
0:28:06.5 -> 0:28:08.36 So we're currently looking at
0:28:08.36 -> 0:28:10.22 ways to improve that frontline
0:28:10.286 -> 0:28:11.732 therapy maintenance therapy,
0:28:11.732 -> 0:28:14.768 in individuals who have relapsed refractory.
0:28:15.673 -> 0:28:17.178 The most exciting things are
0:28:17.178 -> 0:28:19.028 probably the development of CAR T
0:28:19.03 -> 0:28:20.94 which recently gained FDA approval
0:28:20.94 -> 0:28:23.368 and in addition to looking at the
0:28:23.368 -> 0:28:25.152 biospecific antibodies which are

0:28:25.152 -> 0:28:26.936 currently in clinical trial.
0:28:27.68 -> 0:28:29.588 Doctor Terri Parker is an assistant
0:28:29.6 -> 0:28:31.74 professor of medicine and hematology
0:28:31.75 -> 0:28:34.01 at the Yale School of Medicine. If
0:28:34.02 -> 0:28:35.945 you have questions, the address is
0:28:35.945 -> 0:28:38.6 cancer answers at yale dot edu
0:28:38.6 -> 0:28:40.56 and past editions of the program are
0:28:40.56 -> 0:28:42.63 available in audio and written form at
0:28:43.86 -> 0:28:44.123 yalecancercenter.org.
0:28:44.123 -> 0:28:46.227 We hope you'll join us next week to
0:28:46.227 -> 0:28:47.804 learn more about the fight against
0:28:47.804 -> 0:28:49.586 cancer here on Connecticut Public
0:28:49.586 -> 0:28:51.639 radio funding for Yale Cancer
0:28:51.64 -> 0:28:53.748 Answers is provided by Smilow Cancer
0:28:53.76 -> 0:28:55.468 Hospital and AstraZeneca.