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Latest News in Blood Cancer Research

*Highlights from the
2010 Annual Meeting of the
American Society of Hematology*

Editor

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Learn about:

- Treatment advances in blood cancers
- Medications being developed
- Future clinical trials
- Resources that can help



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This special edition of the CancerCare Connect® booklet series presents cutting-edge research highlights from the 2010 Annual Meeting of the American Society of Hematology, which took place December 4–7 in Orlando, Florida.

Please note that some of the treatments discussed are still in the very early stages of research and may not be available to the general public outside of a clinical trial.

The information contained in this booklet is intended for discussion with your doctor. He or she can let you know whether these advances in the treatment of blood cancers affect your treatment plan and if a clinical trial is right for you.

Leukemia

Since the treatment of chronic myelogenous leukemia (CML) changed dramatically in 2001 with the introduction of imatinib (Gleevec), the pace of drug discovery has quickened. At the 2010 American Society of Hematology Annual Meeting, researchers reported on nilotinib (Tasigna), dasatinib (Sprycel), and bosutinib (as yet unnamed). Nilotinib and dasatinib are approved by the U. S. Food and Drug Administration (FDA) for first-line treatment of CML; clinical trials show they are more beneficial than imatinib. Clinical trials show that in those rare individuals whose CML has a specific mutation, or genetic change, nothing has worked except bosutinib. Also detailed here are encouraging results for people with chronic lymphocytic leukemia and acute lymphoblastic leukemia.

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Alternatives to Standard Treatment for Chronic Myelogenous Leukemia

A clinical trial known as the DASISION study compared dasatinib and imatinib in more than 500 people with newly diagnosed CML. Eighteen months after treatment, there was no longer any evidence of cancer in the bone marrow (which produces blood cells) in nearly 80 percent of patients who received dasatinib, compared with 70 percent of patients who received imatinib. The time it took to see these improvements was 3.1 months for dasatinib versus 5.8 months for imatinib.

A clinical trial known as the ENESTnd study compared nilotinib and imatinib in more than 800 people with newly diagnosed CML. This is the first late-stage study comparing these two drugs for the treatment of these types of patients. After 24 months of treatment, the bone marrow had begun to work properly in about 70 percent of patients who received nilotinib, compared with about 45 percent of those who received imatinib.

In about 85 percent of the people who took nilotinib, there was no longer any evidence of cancer in their bone marrow. In those who took imatinib, 77 percent had no evidence of cancer in their bone marrow. Researchers also found that nilotinib was more effective than imatinib in slowing the cancer's growth to a more advanced stage.

The results of a smaller, early-stage clinical trial, called the GIMEMA study, supported the findings of the ENESTnd study. In the GIMEMA clinical trial, 97 percent of people with newly diagnosed CML were still alive three years after treatment with nilotinib. Nilotinib slowed the growth of cancer to a more advanced stage in 72 of the 73 patients treated.



WHAT PATIENTS NEED TO KNOW

Researchers believe that dasatinib and nilotinib may be more effective than imatinib for many people with newly diagnosed CML.

Once considered second choices after imatinib, dasatinib and nilotinib have now been approved by the FDA as first-line treatment options. As researchers understand more about leukemia cells, they should be able to learn which people with CML would be best treated with which of the three drugs.

Bosutinib for Newly Diagnosed Chronic Myelogenous Leukemia

A new drug called bosutinib may prove to be an effective alternative for certain people with newly diagnosed CML. A late-stage clinical trial known as the BELA study compared bosutinib and imatinib in about 500 people with Philadelphia chromosome-positive (Ph+) CML. (In these patients, the Philadelphia chromosome carries a mutation that causes leukemia cells to grow uncontrollably.)

One year after treatment, the bone marrow had begun to work properly in more patients treated with bosutinib than with imatinib (39 percent versus 26 percent). In nearly 70 percent of both groups, there was no longer any evidence of cancer in the bone marrow. The most common side effect of bosutinib was diarrhea, which occurred in two-thirds of patients taking the drug. However, no one had to stop taking bosutinib because of this side effect.

WHAT PATIENTS NEED TO KNOW

Researchers believe bosutinib may prove to be as effective for people with newly diagnosed CML as similar FDA-approved drugs such as imatinib, dasatinib, and nilotinib. Further studies should shed more light on how best to use

bosutinib, which is not yet approved, and whether it can also extend the lives of people with CML.

Ofatumumab for Resistant Chronic Lymphocytic Leukemia

According to the final results of an international clinical trial, a new drug called ofatumumab (Arzerra) appears to be an effective option for people whose chronic lymphocytic leukemia (CLL) has resisted first-line treatments. The trial included nearly 140 people with CLL who did not respond or no longer responded to fludarabine (Fludara and others), which is often used to treat resistant CLL. Researchers found that the cancer shrank or disappeared in more than 50 percent of those treated with ofatumumab.

WHAT PATIENTS NEED TO KNOW

In the past, only about 20 percent to 25 percent of people with resistant CLL responded to treatment, so researchers are impressed with the effectiveness of ofatumumab. Based on the results of this clinical trial, the FDA has approved ofatumumab as a treatment for people who have CLL that is resistant to drugs such as fludarabine and alemtuzumab (Campath). Ongoing clinical trials are studying the use of ofatumumab in combination with other drugs to find out whether it may be an effective treatment for people with early-stage CLL.

Imatinib and Stem Cell Transplant for Acute Lymphoblastic Leukemia

Treatment that combines imatinib followed by stem cell transplant (SCT) appears to extend the lives of people who have Ph+ acute lymphoblastic leukemia (ALL), an aggressive type of leukemia. According to the final results of a large clinical trial conducted by British and American researchers,

59 percent of patients treated with imatinib followed by SCT were still alive three years later, compared with 28 percent of those treated with only imatinib.

WHAT PATIENTS NEED TO KNOW

Not only has imatinib revolutionized treatment of CML, it also benefits people with ALL. It appears that the best results for people with Ph+ ALL can be obtained with imatinib followed by SCT. Although many researchers believe that SCT has taken a back seat to drugs such as imatinib in the treatment of leukemia, this clinical trial shows that SCT remains an important part of treatment for many people with ALL.

Rituximab and Stem Cell Transplant

A small, early-stage clinical trial has shown that use of the drug rituximab (Rituxan) before SCT may help reduce or control the occurrence of graft-versus-host disease (GVHD). (GVHD is a complication of SCT in which donated stem cells attack the healthy cells of the person receiving the transplant.) In this study, GVHD developed in about 40 percent of patients with leukemia or lymphoma who received rituximab before SCT.

WHAT PATIENTS NEED TO KNOW

Historically, about 65 percent of people receiving SCTs developed GVHD afterward, and 100 percent of those patients needed steroids to control it. However, in this clinical trial, only 33 percent of those who received rituximab required steroids to control GVHD when it developed. Further studies will be needed to confirm these promising results.

Cord Blood Transplantation for Acute Leukemia

A clinical trial has shown that SCT using two units of cord blood may be more effective in treating adults with leukemia than SCT using only one unit of cord blood. (Cord blood is blood taken from the umbilical cord and placenta after a baby is born.) European researchers studied the records



of 600 people with leukemia who had received donated cord blood. They found that two years after SCT, 44 percent of the patients who had received two units of cord blood (also called a double-unit transplant) had no signs of leukemia, compared with 35 percent of patients who had received one unit of cord blood (called a single-unit transplant).

In addition, only 15 percent of those who had the double-unit transplant experienced a relapse, compared with 25 percent of those who had

the single-unit transplant. (Relapse is the return of the signs and symptoms of cancer after a period of improvement.) However, GVHD occurred more often in people who received the double-unit transplant.

WHAT PATIENTS NEED TO KNOW

In the past, SCT using cord blood was a treatment for children with leukemia. However, while one unit of stem cells may be sufficient for children, the number of cells in a single unit of cord blood is often not enough for adults. This is the reason many cancer centers are studying the double-unit transplant for adults with acute leukemia. These early results must be confirmed in ongoing clinical trials.

Lymphoma

There were some significant and exciting advances in lymphoma treatment reported at the 2010 American Society of Hematology Annual Meeting. People with Hodgkin's lymphoma responded strikingly well to three new drugs, all bright lights of hope for those whose cancer has come back after having been heavily treated previously. Another important report involved rituximab (Rituxan), which may delay the need for additional treatment in follicular lymphoma. The report on combining rituximab and bendamustine (Treanda) is an exciting confirmation of what we are seeing in the clinic for follicular and mantle cell lymphomas.

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Possible New Standard of Care for Early Hodgkin Lymphoma

Adding an intense chemotherapy called BEACOPP to the standard treatment of ABVD (also a chemotherapy) plus radiation may prove to be a more effective way to treat early Hodgkin lymphoma (HL) than just ABVD and radiation. This is the conclusion of a clinical trial by the German Hodgkin Study Group (GHSG) in which 1,600 people with early-stage HL took part. The cancer stopped growing in 94 percent of patients who received BEACOPP and ABVD plus radiation, compared with 88 percent of those who received just ABVD plus radiation.

The radiation treatment—called involved-field radiation therapy (IFRT)—is given only to areas of the body affected by the lymphoma. BEACOPP consists of the following medications: bleomycin, etoposide, doxorubicin,

cyclophosphamide (Cytoxan and others), vincristine, procarbazine (Matulane), and prednisone. ABVD consists of doxorubicin, bleomycin, vinblastine, and dacarbazine (DTIC-Dome).

WHAT PATIENTS NEED TO KNOW

Researchers from the GHSG now believe that combination treatment with BEACOPP, ABVD, and IFRT should become the new standard of care for people with early-stage HL. However, many researchers in the United States are a bit more cautious. Although BEACOPP appears to be an effective treatment for HL, it is also linked to more side effects and the possibility of secondary tumors. Perhaps the most important thing about this newer combination treatment will be whether it can extend the lives of people with HL. The GHSG expects to see such a survival advantage as people with HL are followed for a longer time. Researchers in the U.S. and Europe await these long-term results.

Newer Options for Relapsed Hodgkin Lymphoma

Over time, lymphomas like HL tend to relapse, or come back. Although many blood cancers respond to treatment, as time passes, the tumors can resist chemotherapy or stem cell transplantation. Researchers are impressed by results of early-stage clinical trials on three new drugs for people who have resistant HL: brentuximab vedotin, panobinostat, and mocetinostat.

Brentuximab Vedotin

Researchers are calling the new drug brentuximab vedotin a “big breakthrough” in the treatment of people with HL. In a clinical trial, approximately 100 people with HL that resisted treatment and came back after stem cell transplantation received brentuximab vedotin. The cancer disappeared in

nearly 35 percent of these patients and shrank by more than half in another 40 percent of them.

The most common side effect with brentuximab vedotin is a nerve condition called peripheral neuropathy, which can cause pain, numbness, tingling, and swelling, usually in the hands or feet. In this clinical trial, peripheral neuropathy occurred in more than 40 percent of people who were treated with the drug. However, the neuropathy cleared up in about two-thirds of the patients after treatment with brentuximab vedotin was finished.

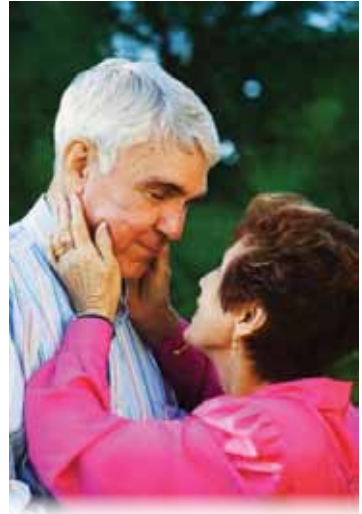
Panobinostat

In another clinical trial, more than 120 people with HL that did not respond or no longer responded to other treatments received panobinostat. The tumor disappeared or shrank by more than half in more than 25 percent of patients. The tumor neither grew nor shrank in another 55 percent of patients.

Mocetinostat

A third clinical trial included about 50 patients with resistant HL who were treated with mocetinostat. All of these people had already received an average of five treatments for HL, which did not work or no longer worked. The tumor disappeared or shrank by more than half in about 30 percent of these patients.

In the past, drugs like mocetinostat have been linked with thrombocytopenia in more than 50 percent of people treated with them. This condition results in a lower-than-usual number of platelets in the blood, which can cause easy bruising and bleeding. However, only about 20 percent of those treated with mocetinostat developed thrombocytopenia.



WHAT PATIENTS NEED TO KNOW

Such positive results have never been seen before in people with resistant HL. Researchers are so impressed that they are planning to submit the drug to the FDA for approval in early 2011. Along with brentuximab vedotin, panobinostat and mocetinostat may also prove to be effective treatment options in the future for people with resistant HL and perhaps other lymphomas. All three of these drugs also are being studied in people with newly diagnosed lymphoma.

Epratuzumab and Rituximab for Early-Stage Follicular Lymphoma

Combining the new drug epratuzumab with the standard drug rituximab appears to be an effective way to treat people with newly diagnosed follicular lymphoma (FL). In a clinical trial performed by the Cancer and Leukemia Group B, 60 patients with newly diagnosed FL received this combination treatment. The cancer disappeared in 33 percent of these patients, and tumors shrank by more than half in about 50 percent of them.

WHAT PATIENTS NEED TO KNOW

Researchers are encouraged by how well people with FL responded to epratuzumab and rituximab. Nearly one year after treatment, not one of the patients whose cancer had disappeared experienced a relapse.

Rituximab May Delay the Need for Additional Treatment of Advanced FL

In people with FL, treatment is not started until signs such as swollen lymph nodes or flu-like symptoms occur. But a clinical trial now shows that giving the drug rituximab to people with advanced-stage FL *before* they develop symptoms may delay the need for additional chemotherapy

or radiation. Rituximab given early may also extend the time it takes for the cancer to continue growing.

More than 450 people with advanced-stage FL who had no symptoms took part in this late-stage clinical trial. Some of the patients received rituximab, and others were treated with what doctors call watchful waiting—that is, just monitoring until treatment is needed. After three years, researchers compared the two groups. Among those who received rituximab, between 80 percent and 90 percent did not need additional treatment. Among those who received watchful waiting, only about 50 percent did not need more treatment.

In addition, the cancer had not continued to grow in about 80 percent of patients who received rituximab, compared with about 35 percent of those who received watchful waiting.

WHAT PATIENTS NEED TO KNOW

Many people who are first diagnosed with FL feel well and have no symptoms. Studies have shown that there is little benefit to starting treatment early in these people, so most doctors generally delay treatment until the cancer grows and symptoms develop. By using rituximab early, before symptoms develop, it may be possible to avoid the use of chemotherapy for more than two years, but researchers say it is too early to make definite recommendations about this new treatment.

The early use of rituximab may change the way people with advanced-stage FL who have no symptoms are treated in the future. Ongoing studies should also show whether the early use of rituximab can extend the lives of these people.

Ibritumomab Tiuxetan for Advanced FL

A drug called ibritumomab tiuxetan (Zevalin) seems to be a promising treatment for people with advanced-stage FL. In a clinical trial with more than 400 patients, this medication was used within a few months of first-line chemotherapy. It

took nearly three years longer for cancer to continue to grow in patients who received ibrutinomab tiuxetan than in those who did not (49 months versus 14 months). These results were even better in those whose cancer had disappeared or shrunk by more than 50 percent as a result of their first-time chemotherapy. For these people, it took five years for their cancer to continue to grow.

WHAT PATIENTS NEED TO KNOW

Giving a medication within a few months of first-line chemotherapy in the hopes of killing any cancer cells that may be left in the body is known as consolidation therapy. The effectiveness of ibrutinomab tiuxetan as consolidation therapy for people with advanced-stage FL is impressive. These results need to be confirmed in further clinical trials.

Cytarabine and Chemotherapy Before Stem Cell Transplantation for Relapsed Mantle Cell Lymphoma

Adding cytarabine (Cytosar-U and others) to chemotherapy before stem cell transplantation may prove to be an effective way to treat people under age 65 with mantle cell lymphoma (MCL). These early results come from a clinical trial in which more than 400 people younger than 65 with MCL took part. Some of the patients received alternating treatment with the chemotherapies R-CHOP and R-DHAP followed by high doses of cytarabine. A second group received just R-CHOP and no cytarabine. All of the patients then went on to receive a stem cell transplant. The cancer disappeared in 55 percent of those who received cytarabine, compared with 40 percent of those who did not. Also, the patients who were treated with cytarabine had fewer relapses than those who were not treated with cytarabine.

R-CHOP contains the drugs rituximab, cyclophosphamide,

doxorubicin, vincristine, and prednisone. R-DHAP contains the drugs rituximab, dexamethasone (Decadron and others), cytarabine, and cisplatin (Platinol and others).

WHAT PATIENTS NEED TO KNOW

In the past, people under age 65 with MCL were treated with either R-CHOP or R-DHAP. Now, it seems that using both R-CHOP and R-DHAP along with high doses of cytarabine is more effective than either R-CHOP or R-DHAP alone. Researchers do not yet know whether this new drug combination, given before stem cell transplantation, will extend the lives of people in this age group with MCL. However, they are impressed with these early results and believe it may become the new standard of care for these patients.

Bendamustine and Rituximab for Relapsed Lymphomas

The use of bendamustine (Treanda) and rituximab seems to be a better way to treat people with relapsed lymphomas than using fludarabine (Fludara) and rituximab. More than 200 people with relapsed lymphomas such as FL and MCL took part in a late-stage clinical trial comparing these two treatments. It took longer for the cancer to continue growing in patients who received bendamustine and rituximab than in those who received fludarabine and rituximab (30 months versus 11 months). Also, the tumor disappeared or shrank in 84 percent of those who were treated with bendamustine and rituximab, compared with 53 percent of those who received fludarabine and rituximab.

WHAT PATIENTS NEED TO KNOW

Researchers continue to be encouraged by the combination of bendamustine and rituximab in treating people with slow-growing lymphomas like FL and MCL. But, at this time, research has not shown a major difference between

the bendamustine and the fludarabine combinations in terms of extending the lives of these people. Continued use of rituximab as maintenance therapy also seems to be promising in people with relapsed lymphomas. Maintenance therapy is treatment that may be given for a long time. It helps keep cancer from coming back after it has disappeared following the first treatment.

Romidepsin and Pralatrexate for Relapsed Peripheral T-Cell Lymphoma

Two new drugs—romidepsin (Istodax) and pralatrexate (Folotyn)—are proving to be effective treatments for people with relapsed peripheral T-cell lymphoma (PTCL), a fast-growing but relatively rare type of non-Hodgkin lymphoma. These drugs are used as second treatments, if previous treatments do not work or stop working after a while.

In a clinical trial, more than 130 patients from the United States, Europe, and Australia received at least one dose of romidepsin for their relapsed PTCL. The cancer disappeared or shrank by more than half in approximately 26 percent of these patients. The most common side effects were nausea (experienced by nearly 60 percent of patients) and fatigue (experienced by about 40 percent).

In another clinical trial, a small group of people with PTCL received pralatrexate early in their treatment, immediately after CHOP chemotherapy. The tumor disappeared or shrank by more than half in 47 percent of patients. This result was much better than the 29 percent seen in patients who received pralatrexate after having already been treated with many different types of chemotherapy.

Romidepsin has been approved by the FDA for treating cutaneous T-cell lymphoma. Pralatrexate has been approved by the FDA for treating PTCL.

WHAT PATIENTS NEED TO KNOW

Because standard chemotherapy drugs have not been very effective in treating people with PTCL, researchers are happy with the early positive results on romidepsin and pralatrexate. The findings on romidepsin were confirmed in another study performed by the National Cancer Institute. The results with pralatrexate made it possible for some patients to go on to receive a stem cell transplant, which helped them remain cancer-free for two years afterward.

Multiple Myeloma

At the 2010 American Society of Hematology Annual Meeting, there was very positive news for people with multiple myeloma. For first-line treatment, we have effective new combinations using either bortezomib (Velcade) or lenalidomide (Revlimid). For resistant/relapsed myeloma, we also have two promising new drugs in the pipeline: pomalidomide and carfilzomib. Both are very beneficial for previously treated patients. Many doctors can recall a time when people with multiple myeloma lived only about a year after diagnosis. Now it is common for patients to live eight years or more after diagnosis.

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Bortezomib Combinations for Newly Diagnosed Multiple Myeloma

In a late-stage clinical trial called the UPFRONT study, the following drug combinations showed promise when used as first-time treatments:

- VD: bortezomib and dexamethasone (Decadron and others)
- VMP: bortezomib, melphalan (Alkeran), and prednisone

- VTD: bortezomib, thalidomide (Thalomid), and dexamethasone

Bortezomib has been approved by the U. S. Food and Drug Administration (FDA) for treating people whose multiple myeloma has not responded to other anti-cancer drugs. Because bortezomib has been effective for these patients, researchers have now begun to study bortezomib combinations in people who are newly diagnosed.

Three hundred people in their early 70s with newly diagnosed multiple myeloma were treated with VD, VMP, or VTD. None of these patients was a candidate for either aggressive high-dose chemotherapy or stem cell transplant. The tumor disappeared or shrank by more than half in 71 percent of those who received VD, 73 percent of those who received VMP, and 79 percent of those who received VTD. The continued use of bortezomib, called maintenance therapy, improved these results even more in all three groups.



All of the people in the study reported that they felt their quality of life had improved as a result of treatment with a bortezomib combination of drugs.

WHAT PATIENTS NEED TO KNOW

Because few effective treatments are available for people who are not candidates for a stem cell transplant, combination treatments containing bortezomib are some of the most exciting developments in treating multiple myeloma. The study is ongoing, and the patients will be followed closely to study the long-term effects of treatment with a bortezomib combination.

Lenalidomide Combination for Newly Diagnosed Multiple Myeloma

The combination of bortezomib, lenalidomide, and dexamethasone (called VRD) may also prove to be an effective way to treat people with newly diagnosed multiple myeloma, according to the results of a small clinical trial. The tumor shrank by more than half or disappeared in more than 80 percent of patients who received VRD. After the initial treatment with VRD, these patients had an autologous stem cell transplant, followed by more VRD, and then a year of maintenance therapy with lenalidomide. These results improved even more after the transplant and additional VRD.

Autologous stem cell transplantation is a procedure in which blood-forming stem cells are removed, stored, and later given back to the same person. The hope is that the stem cells will mature into healthy bone marrow cells and help replenish red and white blood cells more quickly.

WHAT PATIENTS NEED TO KNOW

Lenalidomide is considered a breakthrough medication for people with multiple myeloma. It seems to work in a number of ways, in part by helping the immune system fight the growth of cancer. The FDA approved lenalidomide in combination with other drugs to treat people with multiple myeloma that does not or no longer responds to other treatments. Lenalidomide may be effective in treating people with newly diagnosed multiple myeloma as well.

Lenalidomide Maintenance Therapy After Stem Cell Transplant for Newly Diagnosed Multiple Myeloma

In a late-stage clinical trial that included more than 450 patients with newly diagnosed multiple myeloma, extended

treatment with lenalidomide after an autologous stem cell transplant lengthened the time it took for the cancer to start growing again. It took 42 months for the cancer to continue growing in those who received lenalidomide, compared with 22 months in those who received a placebo (a look-alike capsule that contains no active ingredient). Two-thirds of the patients had received initial treatment containing thalidomide, lenalidomide, or bortezomib.

WHAT PATIENTS NEED TO KNOW

The positive results with lenalidomide maintenance therapy were so impressive that this study was stopped early, so that those receiving the placebo could switch to lenalidomide. Over time, researchers also hope to see improved survival rates for these patients with multiple myeloma.

Zoledronic Acid for Multiple Myeloma

In a late-stage clinical trial known as the MRC Myeloma IX study, almost 2,000 people with newly diagnosed multiple myeloma were treated with one of two bone-strengthening drugs—zoledronic acid (Zometa) or clodronate—in addition to standard treatment for multiple myeloma. It took longer for the cancer to continue growing in the people who received zoledronic acid than in those who received clodronate.

Patients who were treated with zoledronic acid also had fewer bone complications (such as fractures [breaks] and need for radiation or surgery) than those who were treated with clodronate (27 percent versus 35 percent). In addition, patients treated with zoledronic acid survived longer than those treated with clodronate.

WHAT PATIENTS NEED TO KNOW

Zoledronic acid has been approved by the FDA for reducing and delaying the risk of bone complications in people with multiple myeloma and other types of cancer. It appears to be

more beneficial than clodronate and may also be a promising way to help people with multiple myeloma live longer.

New Form of Bortezomib for Relapsed Multiple Myeloma

A new form of the drug bortezomib appears to be just as effective as the standard form but causes fewer side effects, according to a late-stage clinical trial. This study compared both types of bortezomib in more than 200 people whose multiple myeloma had relapsed (returned after a period of improvement). The standard form of bortezomib is given intravenously, or into a vein. The new form is given subcutaneously, or underneath the skin.

Regardless of the type of bortezomib given, the tumor disappeared or shrank by more than half in 42 percent of all patients.

Fifty-seven percent of people who received subcutaneous bortezomib experienced fewer serious side effects, versus 70 percent of those who received intravenous bortezomib. The side effects included a nerve condition called peripheral neuropathy, which occurred in 38 percent of the patients who were given the new form of bortezomib, compared with 53 percent of the patients who were given the standard form. Peripheral neuropathy causes pain, numbness, tingling, and swelling, usually in the hands or feet.

Of the patients who received subcutaneous bortezomib, 53 percent had to reduce the dose or stop treatment because of side effects, compared with 70 percent of patients who received intravenous bortezomib.



WHAT PATIENTS NEED TO KNOW

Based on these results, people with relapsed multiple myeloma may soon be offered a safer and more convenient yet equally effective way to receive treatment with bortezomib.

Pomalidomide and Dexamethasone for Resistant Multiple Myeloma

The combination of a new drug, pomalidomide, and a standard drug, dexamethasone, appears to benefit people whose multiple myeloma resists treatment. In a clinical trial, tumors shrank in 40 percent to 49 percent of 70 patients in two groups who were given pomalidomide and dexamethasone. Six months after receiving pomalidomide and dexamethasone, more than 70 percent of these patients had survived. All the patients who took part in this clinical trial had already received an average of six previous treatments for their multiple myeloma. These treatments, which included both bortezomib and lenalidomide, did not work or had stopped working.

WHAT PATIENTS NEED TO KNOW

People whose multiple myeloma resists several different combinations of drugs have few effective treatment options. But most of the patients who received this new combination of pomalidomide and dexamethasone are still in remission (a period in which the signs and symptoms of cancer have disappeared).

Carfilzomib for Resistant Multiple Myeloma

A new medication called carfilzomib may benefit people who have multiple myeloma that no longer responds to other treatments, according to the results of two clinical

trials. More than 250 patients who had already received an average of five previous treatments took part in the first study. The tumor shrank by at least half in 24 percent of those who were given carfilzomib. Carfilzomib also helped these people live more than 15 months after treatment, compared with the six to eight months seen with other multiple myeloma treatments.

More than 100 people who had already received between one and three previous treatments took part in the second study of carfilzomib. Here, researchers focused on the results among patients who had not already taken bortezomib. The tumor disappeared or shrank by more than half in nearly 50 percent of these patients.

Carfilzomib is also being tested in combination with other drugs in people with newly diagnosed multiple myeloma. In a small, very early-stage clinical trial, the tumor disappeared or shrank by more than half in 100 percent of patients who were given a combination of carfilzomib, lenalidomide, and dexamethasone. Researchers called this response “unprecedented.”

WHAT PATIENTS NEED TO KNOW

These early results with carfilzomib are encouraging, both in people with resistant multiple myeloma as well as newly diagnosed multiple myeloma. Carfilzomib, which belongs to the same class of drugs as bortezomib, seems to be better tolerated by patients than bortezomib. Peripheral neuropathy has been associated with the use of bortezomib, which sometimes prevents people from completing their treatment with this drug. Although many people who received carfilzomib experienced mild peripheral neuropathy, it did not stop them from completing their treatment. It is important to remember that these results with carfilzomib are preliminary and will have to be confirmed in further clinical trials.

How CancerCare® Helps

When you are being treated for a blood cancer, you may have many concerns. But the more you learn about what's involved and what to expect, the better you'll feel. CancerCare can help, too, through these free resources:

Counseling Our oncology social workers can speak with you one-on-one to help you find ways to cope with the emotional and practical challenges of cancer. Counseling services are available in person or over the phone.

Support groups Connect with other people who are in a similar situation in our free support groups, led by professional oncology social workers.

Connect Education Workshops Leading experts in oncology provide up-to-date information in these free, one-hour workshops over the telephone. Listen in live to learn about cancer-related issues from the convenience of your home or office. Past workshops are also available as podcasts on our website and on telephone replay 24 hours a day.

Publications Our free booklets and fact sheets offer up-to-date, easy-to-read information on topics such as the latest treatments, managing side effects, and coping with cancer.

Financial help Our staff helps you manage financial concerns and provides referrals. Limited aid also is available to eligible individuals through CancerCare's Door to Door Program. This program provides individual grants to patients, covering transportation costs such as the price of gasoline or taxi, bus, or train fare to and from their doctor's office.

Referrals to resources CancerCare can help you learn about other organizations in your community and nationwide that can assist you in finding information and help.

To learn more about how we help, call us at **1-800-813-HOPE (4673)** or visit our website, www.cancercare.org.

Resources

■ GENERAL

CancerCare

1-800-813-HOPE (4673)

www.cancercares.org

American Cancer Society

1-800-227-2345

www.cancer.org

Cancer.Net

Patient information from the American Society of Clinical Oncology

www.cancer.net

National Cancer Institute

1-800-422-6237

www.cancer.gov

■ BLOOD CANCER ORGANIZATIONS

International Myeloma Foundation

1-800-452-2873

www.myeloma.org

The Leukemia & Lymphoma Society

1-800-955-4572

www.lls.org

Lymphoma Research Foundation

1-800-500-9976

www.lymphoma.org

Multiple Myeloma Research Foundation

1-203-229-0464

www.multiplemyeloma.org

National Bone Marrow Transplant Link

1-800-546-5268

www.nbmtlink.org

National Marrow Donor Program

1-800-627-7692

www.marrows.org

■ CLINICAL TRIALS WEBSITES

Coalition of Cancer Cooperative Groups

www.CancerTrialsHelp.org

National Cancer Institute

www.cancer.gov/clinicaltrials



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The information presented in this patient booklet is provided for your general information only. It is not intended as medical advice and should not be relied upon as a substitute for consultations with qualified health professionals who are aware of your specific situation. We encourage you to take information and questions back to your individual health care provider as a way of creating a dialogue and partnership about your cancer and your treatment.

All people depicted in the photographs in this booklet are models and are used for illustrative purposes only.

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When one word changes your world,

CANCER*care*[®]

makes all the difference



With CancerCare,
the difference comes from:

- Professional oncology social workers
- Free counseling for you and your loved ones
- Education and practical help
- Up-to-date information

Our trusted team of professionally trained oncology social workers provides free counseling, education and practical help for you and your loved ones.



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Help and Hope

1-800-813-HOPE (4673)

www.cancercare.org