Surgery Provides Relief in Treating Spinal Cord Compression

Spinal cord compression is a painful and debilitating condition that may occur when cancer spreads to the vertebrae and causes pressure on the spinal cord. The types of cancers that most often result in spinal cord compression are those in which tumors have the greatest tendency to spread to the bone, such as prostate, lung, and breast cancers.

A new study at the University of Kentucky has found that surgery followed by radiation to relieve spinal cord compression is significantly more effective than radiation alone. Surgery was performed to remove as much of the tumor as possible, with the goal of relieving the compression and stabilizing the spine. The two-step treatment allowed most patients to continue walking as well as to maintain control of their bladder. In addition, cancer patients whose spinal cord compression was so severe that they could not walk were more likely to walk again if they had surgery plus radiation.

“This study is the first real advance in the treatment of this condition made in the last 30 years,” said Roy Patchell, MD, lead investigator of the study. “Many fewer cancer patients will become paraplegic due to the spread of cancer to the spine.”

In a study of 101 patients, 50 were treated with surgery followed by radiation and 51 received radiation alone.

The study results showed:

- Surgery patients were able to walk significantly longer than those who only received radiation—an average of 126 days compared with 35 days.
- Sixteen patients from each group entered the study unable to walk; nine patients (56%) who underwent surgery were able to walk again, compared with three (19%) patients who received only radiation.
- Surgery did not significantly affect survival, but there was a trend towards longer survival among patients who had the operation.

The study produced such positive results favoring surgical treatment that the trial was stopped early so that all the patients could benefit from the option of the surgery.

This type of surgery is generally available in larger medical centers and is most often performed by neurosurgeons—surgeons with expertise in the nervous system—or orthopedic surgeons—surgeons who specialize in the skeletal system. (Abstract #2)
A team of researchers at the University of Indiana has conducted the largest phase III study to evaluate the effectiveness of two different therapies for non-small cell lung cancer (NSCLC) that has recurred following initial treatment.

In a study of 571 patients with NSCLC, researchers compared the chemotherapy drugs docetaxel (Taxotere) and pemetrexed (Alimta). Researchers found that pemetrexed is as effective as docetaxel in treating patients with NSCLC that has recurred following treatment.

While cancer growth remained stable for the same period of time in 43% of all patients in the study, 9.1% of patients taking pemetrexed, compared with 8.8% of patients taking docetaxel, experienced either partial or complete remission. Partial remission is when a tumor has been reduced to less than half of its original size and when more treatment may lead to complete remission.

Complete remission is when the disease is under control and the patient has no signs or symptoms of the disease. The average length of survival for patients taking pemetrexed was 8.3 months versus 7.9 months for those taking docetaxel.

Patients taking pemetrexed were also much less likely to experience severe chemotherapy-related side effects, such as fever, infections, hair loss, and peripheral neuropathy, which is numbness of the extremities, such as the hands and feet. They were also less likely to be hospitalized for these side effects or need granulocyte colony-stimulating factor (G-CSF). G-CSF is a therapy that treats bone marrow deficiency (that can occur following chemotherapy) by stimulating the production of healthy white blood cells.

Currently, pemetrexed is available in clinical trials as well as through a special program for patients with malignant mesothelioma, a rare group of cancers that line the chest cavity, abdominal cavity, and the cavity around the heart.

(Abstract #2503)
BAC, or bronchioloalveolar cell carcinoma, is a form of non-small cell lung cancer (NSCLC). Until recently, it was thought that BAC was a rare cancer, but now researchers think that up to 20% of all NSCLCs contain some BAC. Generally, BAC tumors grow more slowly than other lung cancers, but after treatment these tumors often recur in multiple areas of the lung. BAC tumors are more common among women and less likely to be linked to smoking. As many as one-third of BAC patients have never smoked, compared with about 10% of all lung cancer patients. BAC usually does not respond to treatment. However, a phase II study found that the drug erlotinib (Tarceva) shows promise in treating patients with BAC. Erlotinib fights cancer by blocking the actions of a protein called the epidermal growth factor receptor (EGFR). This protein is necessary for the growth of many cancer cells. In 30 patients with BAC who had been treated with erlotinib for one month or more, eight (27%) responded to the drug. Researchers also found that erlotinib was more effective in patients who had never smoked. Of the eight patients who responded to the drug, five had never smoked and two had smoked less than ten pack years. (A pack-year is a cumulative measure of smoking: One pack-year is equivalent to smoking one pack of cigarettes every day for one year). In comparison, only three of 22 former or current smokers’ cancers responded to the treatment. Lead investigator Vincent Miller, MD, of Memorial Sloan-Kettering Cancer Center, called the findings “encouraging,” especially because the majority of the study’s participants experienced only mild toxicity.

These findings suggest that lung cancer may behave differently in those who have never smoked than in former or current smokers. It also highlights the importance of doctors getting detailed information about patients’ smoking histories.

Currently, erlotinib is only available in ongoing clinical trials. Dr. Miller and his colleagues are planning a phase III study of erlotinib in BAC patients, which is set to begin later this year. “If the study’s results can be confirmed in a phase III trial, erlotinib would be considered as an initial treatment option for many patients with inoperable BAC,” said Dr. Miller. (Abstract #2491)

Adenocarcinoma, a form of non-small cell lung cancer (NSCLC), accounts for approximately 40% of all cases of lung cancer. It is the most common form of NSCLC and the most common type of lung cancer overall. It is also the most likely to respond to treatment with surgery or radiation.

New findings also suggest that patients with stage I adenocarcinoma who receive the oral chemotherapy drug UFT following surgery may live longer than those who are treated with surgery alone. In a large study of nearly 1,000 patients with adenocarcinoma that had not spread beyond the lung, researchers at the Tokyo Medical University found the five-year survival rate for these patients was 87.9%, compared with 85.4% for patients who received surgery alone. The benefit of UFT was even greater in patients who had tumors larger than three centimeters that had not spread to the surrounding lymph nodes. In this group, 84.9% of patients treated with UFT were alive after five years, compared with 73.5% of patients who received surgery alone. Fewer than 3% of patients treated with UFT experienced side effects. Those who did reported mild nausea, vomiting, diarrhea, liver dysfunction, and bone marrow dysfunction.

“The fact that long-term oral treatment with UFT after surgery was shown to extend survival and cause minimal side effects is likely to improve the standard of care in patients with stage I lung adenocarcinoma,” said study investigator Masahiro Tsuboi, MD.

Presently, surgery alone is the standard treatment for stage I adenocarcinoma. UFT is widely available in Japan, but is not currently available in the United States. (Abstract #2498)
Some Lung Cancer Patients Benefit from Surgery, Chemotherapy Combination

Non-small cell lung cancer (NSCLC) is the most common form of lung cancer. In general, early stage NSCLC is treated with surgery.

Because of the benefits experienced by patients who received both surgery and chemotherapy to treat other cancers, researchers launched the International Adjuvant Lung Cancer Trial to study the combination treatment in patients with NSCLC.

In the first large-scale trial studying the effects of chemotherapy after surgery for the treatment of NSCLC, 1,867 lung cancer patients received either chemotherapy after surgery, or surgery alone. Those who received chemotherapy were treated with cisplatin (Platinol), plus either etoposide (VePesid), vinorelbine (Navelbine), vinblastine (Velban), or vindesine (Eldesine).

Patients who were treated with both surgery and chemotherapy were more likely to live longer and be cured of the disease than if they had been treated with surgery alone, according to study results.

The findings show that of the patients treated with chemotherapy following surgery:

- 61% were cancer free two years later, compared with 55% of patients treated with surgery alone.
- In addition, 39% of patients treated with chemotherapy following surgery were cancer free five years later, compared with 34% of patients treated with surgery alone.

Cancer is considered cured if it does not recur within five years after treatment. Researchers found that five years after treatment, there was a 5% increase in survival in patients who received both surgery and chemotherapy.

“A 5% increase in survival is significant enough to recommend chemotherapy after surgery,” said Thierry Le Chevalier, MD, of the Institut Gustave Roussy in France, and lead researcher of the trial. Researchers anticipate their findings could change the standard of care for lung cancer.

In treating NSCLC, cisplatin caused some serious side effects, including a drop in white blood cells, which left some patients susceptible to infection. Other clinical trials are now evaluating whether new drugs such as gemcitabine (Gemzar) and taxanes (a group of drugs that includes paclitaxel [Taxol] and docetaxel [Taxotere]), used in combination with surgery, may be more effective in treating NSCLC with fewer side effects. (Abstract #6)

For patients with NSCLC that has spread to the surrounding lymph nodes, a separate team of researchers at Loyola University Chicago’s Cardinal Bernardin Cancer Center recommends that patients be treated with chemotherapy, radiation, and surgery.

In a study of 411 patients with NSCLC that had spread to the lymph nodes in the mediastinum—the area between the lungs—researchers found that the combined approach of all three treatments reduces the chance that cancer will return following treatment, and increases the amount of time patients will remain cancer free, compared to a two-step treatment of chemotherapy and radiation. Researchers also noted that both approaches are more effective than surgery or radiation alone.

“We now have two very promising treatment options to discuss with patients that offer them a better chance of curing their cancer,” said lead researcher Kathy S. Albain, MD.

Patients participating in the trials received either a combination of the chemotherapy drugs cisplatin (Platinol) and etoposide (VePesid) with limited-dose radiation and then surgery, or the same chemotherapy regimen plus full-dose radiation. (Abstract #2497)

The results showed:

- Patients who received the three-pronged treatment approach remained cancer free for an average of 14 months, compared with 11.7 months for those who received the two-pronged approach.
- Three years after treatment, 29% of those who received chemotherapy, radiation, and surgery were living cancer free compared with 19% of patients who had chemotherapy and radiation.
- The average survival for all patients was 22 months, significantly longer than either surgery or radiation alone.
- Overall survival three years after treatment was higher in the group that underwent surgery. Of this group, 38% of the patients were alive 3 years after the treatment, compared with 33% of those treated with only chemotherapy and radiation.

Dr. Albain cautioned that patients should be counseled by a team of doctors, including a medical oncologist, a radiation oncologist, and a thoracic surgeon, about the potential risks and benefits of both treatment approaches.

Surgery patients had a greater risk of respiratory complications after the surgery, and those treated with chemotherapy and radiation had a greater chance of severe difficulty with swallowing. (Abstract #2497)
Genetic Differences May Someday Dictate Treatment and Predict Survival

Differences in a patient’s genetic make-up not only affect how cancer progresses, but how effective different cancer treatments will be for each individual patient.

A recent study funded by the National Cancer Institute found that genetic variations in an individual’s ability to repair DNA damage helped predict survival in lung cancer patients who were treated with the common chemotherapy drugs cisplatin (Platinol) or carboplatin (Paraplatin). The findings, if confirmed by larger studies, may help oncologists choose chemotherapy drugs based on the patient’s genetic make-up.

“We often see that certain patients with advanced stage non-small cell lung cancer tolerate chemotherapy incredibly well and have excellent resources. On the other hand, many patients tolerate chemotherapy very poorly due to toxicities, or their tumors grow despite the most aggressive treatment,” said Sarada Gurubhagavatul, MD, Massachusetts General Hospital. “We suspected that one of the reasons for these differences in outcome has something to do with the genetic make-up of the individual.”

The study involved 103 patients diagnosed with stage III or IV non-small cell lung cancer (NSCLC) who were treated with cisplatin or carboplatin. The researchers found that certain variations in the DNA repair genes XPD and XRCC1—which are responsible for correcting mistakes that can occur when DNA is copied in preparation for cell division—were associated with a shortened survival.

In addition, when the researchers compared combinations of variations in both genes, they found that more variations were associated with decreased average survival.

Patients with a total of three variations in the XPD and XRCC1 genes survived an average of 6.8 months, while patients with two variations survived a median of 11 months, and those with one variation survived 16.6 months. Patients with no variation survived an average of 20.4 months.

“…we soon may be able to select the best preoperative chemotherapy regimen for patients based on the gene expression profile of their tumors.”

— Lajos Pusztai, MD, PhD

In another study looking at how a patient’s genetic make-up can affect their response to treatment, researchers at the M.D. Anderson Cancer Center have found a set of key genetic markers that may predict whether patients with breast cancer are likely to benefit from a common chemotherapy treatment given before surgery.

“In the past, we have not been able to reliably predict at the time of diagnosis which patients will experience a complete pathologic response to any chemotherapy regimen,” said lead investigator Lajos Pusztai, MD, PhD, M.D. Anderson Cancer Center.

The research shows that the genetic markers were 75% accurate in predicting whether chemotherapy would completely eliminate tumor cells in patients with early stage breast cancer treated with a regimen known as T/FAC. T/FAC consists of paclitaxel (Taxol) followed by 5-Fluorouracil (5-FU), doxorubicin (Adriamycin or Rubex), and cyclophosphamide (Cytoxan).

“If our results are confirmed by larger ongoing studies, we soon may be able to select the best preoperative chemotherapy regimen for patients based on the gene expression profile of their tumors,” said Dr. Pusztai. “This would maximize the chance of curing their disease while sparing them from the toxic side effects of less effective treatments.”

While the results are promising, Dr. Pusztai cautioned that they need to be validated in large clinical trials before a test to predict patients’ responses to chemotherapy could be routinely used.

(_abstract #491)

“What this means for patients

The concept of selecting a chemotherapy drug based on a patient’s genetic make-up is relatively new, and not something that is likely to be routinely used to determine treatment for many years to come. However, these findings bring oncologists one step closer to selecting the most effective chemotherapy treatment for individual patients based on their own unique genetic make-up.
In Treating Colorectal Cancer, Two Drugs May be Better than One

A study involving 329 colorectal patients found that a combination of two chemotherapy drugs shrinks tumors and slows tumor growth more effectively than just one drug.

The trial, led by David Cunningham, MD, of the Royal Marsden Hospital in England, showed that cetuximab (Erbitux) and irinotecan (Camptosar) given together are more effective than cetuximab alone when treating patients for whom previous treatment has not slowed the disease.

The trial studied colorectal cancer patients whose disease was getting worse despite having been treated with cetuximab. Two-thirds of patients were given the cetuximab and irinotecan combination, and one-third received only cetuximab.

The study results showed:

- The two-drug combination shrank tumors in 22.9% of patients, compared with 10.8% of those who received cetuximab alone.
- Patients who received both cetuximab and irinotecan had no signs of tumor progression for 4.1 months, compared with 1.5 months for patients who received only cetuximab.
- Survival time was 8.6 months for the combination group and 6.9 months for patients who received only cetuximab.
- The one-year survival rates were approximately 30% for both treatment groups.

While researchers suggest that the findings are likely to change the standard of care for patients with metastatic colorectal cancer that has progressed after standard chemotherapy, they also noted that patients who received both cetuximab and irinotecan were more likely to experience severe side effects than those who received only cetuximab.

About 65% of the patients receiving the combination chemotherapy had diarrhea, weakness, low white blood cell count, rash, or vomiting. Nearly half of the patients who took only cetuximab also experienced severe side effects, including difficulty in breathing, weakness, and abdominal pain. (Abstract #1012)

In a related trial studying the side effects of irinotecan, Mark J. Ratain, MD, of the University of Chicago Medical Center, found that some colorectal cancer patients are more likely to experience severe side effects from irinotecan because of a genetic alteration. In the study of 61 patients treated with irinotecan, researchers found that patients who had a particular genetic abnormality were more likely to have low white blood cell counts—a condition that can lead to serious and sometimes life-threatening infections—in response to being treated with irinotecan.

In the body, irinotecan is converted into a more powerful form of the drug, called SN-38. Patients with the genetic abnormality lack a well-functioning enzyme—called UGT1A1—that is needed to protect healthy cells from the toxic effects of SN-38. This leads to the patient’s increased exposure to SN-38 throughout the entire body, resulting in severe side effects.

“The study’s results underscore the need to identify patients genetically predisposed to severe side effects from irinotecan treatment,” said Dr. Ratain. “Those patients could be given other chemotherapy drugs or reduced doses of irinotecan.”

A predictive genetic test to detect this abnormality is currently available though a clinical trial at the University of Chicago Medical Center. Dr. Ratain estimated that a screening test would become more widely available within the next two years so patients who are predisposed to severe toxicity from irinotecan might be identified by a genetic test before beginning treatment. This could influence both choice of drugs and dosage of drugs, Dr. Ratain said. (Abstract #495)

QUICK FACTS

CLINICAL TRIALS
Clinical trials are designed to evaluate whether a new treatment is safe, effective, and better than the current standard of care. In the case of cancer, clinical trials have led to scientific advances that have increased doctors’ understanding of how and why tumors develop and grow, and improved the treatment and care of people living with cancer.

Clinical trials are carried out in steps called phases. Each phase is designed to learn different information.

PHASE I trials gather data on dosage, timing, and safety of a new treatment. Phase I trials generally last several months to a year and usually involve a very small number of patients, typically no more than 10 to 20. Once there is a hint of response by a patient to a therapy, disease-specific research can begin with a Phase II trial.

PHASE II trials are designed to provide more detailed information about the safety of the treatment, as well as to evaluate if the drug is effective. These trials take approximately two years to complete and...
New Combination of Chemotherapy Drugs Delays Tumor Progression in Advanced Colorectal Cancer

Researchers at the Vanderbilt-Ingram Cancer Center have found that the new cancer drug oxaliplatin (Eloxatin), when used in combination with standard chemotherapy drugs 5-fluorouracil (5-FU) and leucovorin (Wellcovorin), slows tumor growth and offers relief from some tumor-related symptoms in patients with advanced colorectal cancer that has spread beyond the colon and the surrounding lymph nodes.

The combination of the three drugs is an experimental treatment known as FOLFOX4. The standard treatment for advanced colorectal cancer is a combination of irinotecan (Camptosar), 5-FU, and leucovorin, known as IFL.

In a study of 821 patients with metastatic colorectal cancer that had first been treated with IFL, researchers compared the benefits of three different treatments: 1) 5-FU and leucovorin 2) oxaliplatin alone or 3) the FOLFOX4 regimen.

The results showed:

♦ 9% of patients benefited from the FOLFOX4 combination, while less than 1% percent of the patients benefited from 5-FU and leucovorin.

♦ Patients who received FOLFOX4 had a longer delay before their tumors grew, with 4.9 months compared with 2.6 months for those who took 5-FU and leucovorin.

♦ Symptoms related to the tumor—such as weight loss, abdominal pain, weakness, and fatigue—were relieved in about 30% of patients treated with FOLFOX4, compared with about 15% of patients who received 5-FU and leucovorin.

♦ Oxaliplatin alone was no more effective than 5-FU and leucovorin.

“The ability of FOLFOX4 to delay tumor progression and relieve cancer-related symptoms is clinically meaningful to our patients,” said lead investigator Mace L. Rothenberg, MD, of the Vanderbilt-Ingram Cancer Center.

Oxaliplatin is a platinum-based chemotherapy drug that is similar to the conventional chemotherapy drugs cisplatin (Platinol) and carboplatin (Paraplatin).

“The ability of FOLFOX4 to delay tumor progression and relieve cancer-related symptoms is clinically meaningful to our patients.”

– Mace L. Rothenberg, MD

At the center of the drug molecule is an atom of platinum. This atom of platinum attacks the cancer cell and interrupts the process of cell division.

(ABSTRACT #1011)

FOR MORE INFORMATION

For more information about cancer, please visit People Living with Cancer (www.PLWC.org). People Living with Cancer is ASCO’s consumer website, designed to help patients and their families find accurate, timely, and oncologist-approved information about cancer. The website contains comprehensive information on more than 50 types of cancer, including details on risk factors, symptoms, diagnosis, and treatment.

On People Living with Cancer, you can also find:

Patient Guides ASCO’s Patient Guide Series is designed to inform patients regarding their cancer care, and to help encourage communication between patients and their doctors. The series includes the following titles: Follow-Up Care for Breast Cancer; Advanced Lung Cancer Treatment; Follow-Up Care for Colorectal Cancer; Preventing and Treating Nausea and Vomiting Caused by Cancer Treatment; Understanding Tumor Markers for Breast and Colorectal Cancers; Epoetin Treatment; and Bisphosphonates for Multiple Myeloma.

Cancer Advances This series of consumer publications is designed to help inform people interested in the latest advances in cancer research. These publications serve to explain, in consumer terms, important studies and areas of research, as well as their relative significance, in order to help put new findings into perspective.

For more information about ASCO’s patient resources, call toll free 888.651.3038.
Studies Suggest MRI More Effective than Mammography

Many health organizations recommend that women 20 years and older perform a monthly self-breast exam—an easy-to-learn procedure for examining one’s own breasts—and have a clinical breast exam—a breast exam performed by a doctor—every three years. For women with a high risk of breast cancer, experts recommend that they have their first mammogram at age 30, or five years before the earliest onset of the disease in their family.

However, while mammography is the best tool for detecting breast cancer in women at an average risk for the disease, there is some uncertainty over the best type of imaging technique that should be used to screen women at high risk. Some research has suggested the use of magnetic resonance imaging (MRI) in addition to mammography to screen women at high-risk for breast cancer. An MRI uses a magnetic field to produce the image of an internal organ on a computer.

To determine whether MRI should be added as a screening method in high-risk populations, researchers led by Christiane Kuhl, MD, of the University of Bonn in Germany, studied 462 women who were found to be carriers of BRCA1 or BRCA2 or who, based on their personal history or strong family history, were suspected to be carriers of BRCA1 or BRCA2.

In this study, a strong family history was defined as any of the following: a relative with a breast cancer diagnosis at age 35 or younger; a relative with ovarian cancer diagnosed at age 40 or younger; both breast and ovarian cancer in a relative; or at least two relatives with breast and/or ovarian cancer, one of whom was diagnosed at age 50 or younger.

All women in the study were screened with a clinical breast examination, mammography, high-resolution ultrasound of the breast—a technique that uses sound waves to detect abnormalities in body tissues—and an MRI. For the first five years of the study, researchers found 51 breast cancers in 45 patients.

MRI offered the highest sensitivity for diagnosing breast cancer at 96.1%, compared with 42.8% for mammography, 47% for ultrasound, and 25% during a clinical breast exam. MRI was also associated with the lowest rate of unnecessary biopsies, a procedure that removes a small piece of tissue for examination under the microscope to help detect cancer.

Because of these findings, the researchers concluded that MRI of the breast should replace mammography to screen women with a strong family history of the disease or women who have known BRCA mutations for two reasons:

1) These women tend to start screening earlier when their breasts are more dense and the sensitivity of mammography is therefore low.

2) Women with BRCA mutations are more sensitive to the effects of radiation (that they are exposed to during a mammography), which can cause genetic mutations that may lead to cancer. (Abstract #4)

A team of Dutch researchers reported similar findings. As part of the Dutch MRI Screening Study (MRISC), researchers from several institutes in the Netherlands evaluated the benefit of twice-yearly clinical breast examinations, yearly mammography, and yearly MRI in 1,905 women at high risk of breast cancer due to a mutation in the BRCA1 or BRCA2 gene or a strong family history of the disease.

“We recommend the routine use of MRI in addition to mammography, especially in women with proven mutations in the BRCA1/2 genes, because these women generally develop rapidly growing tumors and show the lowest sensitivity to mammography because of their young age and dense breast tissue,” said Jan G.M. Klijn, MD, PhD, Chairman of the Rotterdam Family Cancer Clinic and a lead investigator of the study.

During an average follow-up period of two years, 40 breast cancers were found. In the 1,905 women, many (46%) of the tumors were small—one centimeter or less in size—and 77% of patients had lymph nodes that were free
of cancer cells, which means that the cancer had not spread beyond the breast.

While clinical breast examination detected 16% of the tumors and mammography detected 36%, MRI was significantly more effective at detecting 71% of the breast cancers. For women with invasive breast cancer, MRI detected 83% of the tumors compared with mammography, which detected only 26%.

However, while MRI was found to be more effective at detecting tumors of the breast than both mammography and clinical breast examination, it was also found to be slightly less specific. Lower specificity means that it is more likely to produce false positive results. False positives can lead to unnecessary biopsies and anxiety for patients. (Abstract #5)

A third study evaluating the benefit of MRI for women at high risk for breast cancer found that MRI needs to be refined before its use can be recommended, even for women at high risk for the disease, due to a high rate of false positives.

“The psychological impact of a false-positive MRI is not trivial,” said Mark E. Robson, MD, Assistant Attending Physician at Memorial Sloan-Kettering Cancer Center, in New York, NY, and lead investigator of the study.

In a trial of 53 women with BRCA mutations who participated in MRI screening, researchers found that MRI was 100% sensitive for detecting both ductal carcinoma in situ—a pre-cancerous breast condition—as well as breast cancer. However, it was only 81% specific.

“The improved sensitivity of MRI screening is very encouraging,” said Dr. Robson. “MRI can clearly detect breast abnormalities that are not seen by mammography. Unfortunately, we are finding that many of these abnormalities are not cancers.”

Until the specificity of an MRI can be improved, Dr. Robson recommends that women who are considering an MRI be aware of the significant risk of false positive results. (Abstract #362)

**LEUKEMIA**

Oral Chemotherapy Drug Shows Promise in Treating People Living with AML

In leukemia, immature blood cells, called blasts, become stuck in their early stage of development. In the acute phase of the disease, these blasts reproduce rapidly, take over the bone marrow, and crowd out the normal, mature red and white blood cells and platelets that are produced there.

Findings from a study at the Dana-Farber Cancer Institute in Boston show that a new oral chemotherapy drug called PKC 412 may reduce the number of blasts in patients with acute myelogenous leukemia (AML), a cancer that attacks the cells in the blood, bone marrow, and lymph nodes.

This phase II clinical trial involved 14 patients with advanced AML who received PKC 412 in pill form three times a day.

The study results showed:

- In 12 of 14 patients, the number of blasts circulating in their blood decreased by more than 50%. In two of these 12 patients, blasts completely disappeared.
- Five patients experienced a reduction of more than 50% of the number of blasts in their bone marrow. One out of the five patients had their blood counts return to normal three months after starting PKC 412 treatment.

“We’re very encouraged by the patients’ initial responses to PKC 412,” said the study’s lead investigator, Richard Stone, MD, Dana-Farber Cancer Institute. “This could be the start of truly targeted therapy for AML.”

All of the patients involved in the study were known to have a genetic abnormality of the FLT3 gene. In patients with an abnormal FLT3 gene, a protein that normally switches on and then off during blood cell maturation, never turns off. This abnormality has been directly linked to AML in one-third of all adult AML patients. The drug PKC 412 is designed to block the FLT3 gene.

Based on the promising results of the current study, Dr. Stone and his colleagues have expanded the trial and have long-term plans to use the drug in combination with chemotherapy (the standard treatment) in patients with AML, as well as in patients who do not have an abnormality in the FLT3 gene. (Abstract #2265)
Older Women with Breast Cancer Benefit from Chemotherapy

Women over the age of 75 are more likely to have breast cancer spread to their lymph nodes than younger postmenopausal women. However, fewer women in this higher age category are given intense therapy for breast cancer than are younger postmenopausal women, according to a study conducted at the European Institute of Oncology in Milan, Italy.

Researchers found that doctors generally exclude patients over the age of 75 from intense chemotherapy because they are perceived to be too frail to handle the side effects. This age bias is likely due to doctors’ misconceptions about the ability of older patients to handle aggressive treatment because of illnesses and conditions associated with age, and incorrect assumptions about the aggressiveness of their disease.

In a study of 2,999 women over the age of 50 who had invasive breast cancer, researchers evaluated each patient’s disease, as well as the patient’s treatment options. While the use of surgery was similar among the different age groups—ages 50-64, ages 65-75, and older than 75—the use of other treatments differed.

In women who had surgery to conserve their breast, radiation therapy was not offered to 46.3% of patients over age 75, compared with 15.5% of women ages 65-75, and 14.4% of patients ages 50-64. Chemotherapy was offered to only 6.4% of patients over the age of 75, compared with 35.4% of the other two groups.

Giuseppe Curigliano, MD, the study’s lead investigator, credited these differences to the widespread, though incorrect, impression that breast cancer is aggressive in younger women but not aggressive among older women. However, just the opposite is true.

Women over the age of 75 were more likely to have cancer that could spread: 62% had lymph nodes that contained cancer cells, compared with 52% of women in the 65-75 age group and 51% of women aged 50-64. (Abstract #3065)

In another study looking at the use of adjuvant chemotherapy in the older population, researchers from the Cancer and Leukemia Group B (CALGB), one of the National Cancer Cooperative Groups, found that adjuvant chemotherapy is just as effective in treating older women with breast cancer that has spread to the lymph nodes as it is in treating younger women. Adjuvant chemotherapy is chemotherapy that’s given in addition to the primary treatment, such as surgery, to improve the chances of curing cancer.

“In general, healthy older people can tolerate treatment as well as younger patients,” said Giuseppe Curigliano, MD, the study’s lead investigator, and the study’s lead investigator. In this study of nearly 6,500 patients, age was shown to have no effect on breast cancer survival.

Researchers also found that older women are underrepresented in clinical trials of breast cancer treatments. Among the study group, only 8% of patients were 65 or older and only 2% were 70 or older.

Many doctors simply are not aware of the benefits of chemotherapy treatment for older patients, Dr. Muss explained. The low number of older women who participate in clinical trials reflects many doctors’ misconception that older patients may not be able to tolerate the more intense chemotherapies that are often studied in clinical trials. (Abstract #11)

WHAT THIS MEANS FOR PATIENTS

“It is more the general condition of the patient, rather than age, that should be dealt with when treatment options are being considered,” said Dr. Curigliano.

One of the best ways to ensure that you or a loved one is getting the best quality of care is to truly understand your diagnosis and treatment. Dr. Muss recommends that older women, in particular, ask the following questions when facing a breast cancer diagnosis:

• What are the benefits of chemotherapy and/or hormone therapy for my tumor?

• How will my quality of life be affected if I am treated for breast cancer with chemotherapy?

• Are there any open clinical trials that fit my needs?

• Am I eligible for any clinical trials?
Older Patients Less Likely to be Referred to Oncologists, Participate in Clinical Trials

Researchers from the Princess Margaret Hospital and Toronto General Hospital conducted a survey of primary care physicians (PCP) in Canada, asking them about the care they provide to older patients. Of the 9,312 surveys mailed out, 2,089 were evaluated.

Based on the survey results, the researchers found that PCPs are less likely to refer their older patients living with cancer to oncologists than their younger patients. While 86% of PCPs would refer older patients with early stage, potentially curable cancers to oncologists, only 65% said they would refer older patients with advanced, potentially incurable cancers.

Despite the fact that patients over the age of 65 represent more than half of all cancer patients, researchers found this population to be underrepresented among patients using cancer care services. (Cancer care services included a range of services, including visits to the oncologist and participation in clinical trials.)

The factors that influenced a PCP’s decision to refer a patient to an oncologist included the type and stage of cancer, the patient’s symptoms, and the patient’s desire to be referred. Factors such as age, social support, socioeconomic status, educational level, and accessibility of cancer specialists did not influence the PCP’s decisions, according to the study’s findings.

To address this issue, the researchers recommended better education of PCPs who care for older patients. “If patients were better educated by their primary care physicians, perhaps some would make different healthcare decisions,” said lead researcher Carol Townsley, MD. “Some patients may be missing opportunities to receive medical intervention for their cancer based on a preconceived notion that there may not be any treatment available.” (Abstract #3061)

Their findings showed:

- 49% of all breast cancers are diagnosed in older patients, but only 45% of patients enrolled in breast cancer clinical trials are over the age of 65.
- 67% of all lung cancers are diagnosed in older patients, but only 35% of patients enrolled in lung cancer clinical trials are over the age of 65.
- 70% of all colorectal cancers are diagnosed in older patients, but only 41% of patients enrolled in colorectal cancer clinical trials are over the age of 65.
- 71% of all pancreatic cancers are diagnosed in older patients, but only 33% of patients enrolled in pancreatic cancer clinical trials are over the age of 65.
- 44% of all ovarian cancers are diagnosed in older patients, but only 31% of patients enrolled in ovarian cancer clinical trials are over the age of 65.
- 54% of all leukemias are diagnosed in older patients, but only 24% of patients enrolled in leukemia clinical trials are over the age of 65.

Among patients who were 75 years and older, clinical trial participation rates were even lower.

The researchers encourage the development of strategies to increase the enrollment of older patients in clinical trials, as well as to increase the number of clinical trials designed specifically for older individuals.

‘Healthcare providers should evaluate older cancer patients for enrollment in clinical trials on the basis of their health status, cognitive function, and socioeconomic support, rather than by their chronological age,’ concluded Lilia Talarico, MD, lead author of the study. (Abstract #2928)

WHAT THIS MEANS FOR PATIENTS

People living with cancer need to establish an open line of communication with their physicians, so that they are able to actively participate in decisions regarding their treatment options. In particular, patients should ask about the standard of care for their type of cancer and what clinical trials may be available to them.
For more information about cancer or the research presented at ASCO’s 2003 Annual Meeting, please call 888.651.3038

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