

THE CLINICAL CANCER LETTER

Cancer research news for clinicians

Dose Dense Chemotherapy Regimen Improves Survival In Breast Cancer

Reducing the interval between successive doses of a commonly used chemotherapy regimen improves survival in women whose breast cancer has spread to the lymph nodes, a clinical trial has shown.

While previous research has evaluated the use of various forms of “dose dense” chemotherapy, this is the first major controlled study to show a clear survival benefit for women with node-positive breast cancer.

The phase III study was conducted by Cancer and Leukemia Group B for the Breast Cancer Intergroup, a consortium of National Cancer Institute-sponsored Cooperative Clinical Trials Groups, and was presented
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Clinical Trials:

Novartis Begins Study Of Femara And Zometa In Postmenopausal Early Breast Cancer

Novartis is combining two drugs in a trial to evaluate bone loss associated with cancer treatment in postmenopausal women with early breast cancer.

The drugs being paired are Femara (letrozole tablets), an aromatase inhibitor in advanced breast cancer, and Zometa (zoledronic acid), an IV bisphosphonate for bone complications of advanced cancer.

The multicenter study, Z-FAST (Zometa/Femara Adjuvant Synergy Trial) is designed to address two questions: 1) Does treating early breast cancer with an aromatase inhibitor cause bone loss? 2) Can bone loss be reduced by including a potent IV bisphosphonate in the treatment paradigm?

The study will provide data for the patient population likely to benefit from this information—postmenopausal women receiving aromatase inhibitor therapy for early breast cancer in the adjuvant setting.

In postmenopausal women, aromatase inhibitors suppress the production of estrogen, a hormone that can promote growth of receptor positive breast cancer. Although the reduction of estrogen may be beneficial in the treatment of breast cancer, long-term use of aromatase inhibitors may also cause bone loss. Aromatase inhibitors such as Femara are becoming more widely studied in early breast cancer.

In the early breast cancer setting, aromatase inhibitors will be used for extended periods of time, making prevention of bone loss an important consideration. The study will evaluate the benefit of adding an IV bisphosphonate, Zometa, to an aromatase inhibitor, Femara, in
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Dose Dense Chemo Plus Neupogen: New Standard?

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at the San Antonio Breast Cancer Symposium earlier this month.

“This study suggests that many women with breast cancer may benefit from chemotherapy administered on a condensed schedule,” said Marc Citron, clinical professor of medicine, Albert Einstein College of Medicine, and the lead investigator of the study. “With the availability of new drugs to control one of the most serious side effects of chemotherapy administration, we can further increase the chances of survival for women with breast cancer.”

The dose dense regimen was made tolerable for patients because of the drug filgrastim, which helps prevent neutropenia, a serious complication of chemotherapy.

The researchers found that two dose dense regimens provided significantly higher disease-free survival rates than two regimens using conventional dosing, and that efficacy did not differ between the two dose dense regimens. Among patients on the dose dense regimens, disease-free survival was 82 percent after four years, compared to 75 percent for those who received conventional therapy. This difference corresponded to a 26 percent overall reduction in the risk of cancer recurrence ($p=0.010$).

“We are both excited and encouraged by these

results,” said Richard Schilsky, chairman of CALGB. “There has been a compelling theoretical rationale for dose-dense scheduling of chemotherapy, and now we are beginning to see the benefits of this approach in the clinic.”

The findings confirm the predictions of a mathematical model developed in the 1980s that suggested the value of increased dose density, which was the impetus for the study.

“In my view these data strongly suggest that the use of dose-dense chemotherapy with standard agents including paclitaxel may significantly improve the life-saving impact of treatment,” said Larry Norton, head of the Division of Solid Tumor Oncology, Memorial Sloan-Kettering Cancer Center, a pioneer in investigating the importance of dose-density and scheduling. “In addition, the dose-dense treatment is less toxic and completed in one-third less time, which should have a positive effect on the quality of life during therapy. This is a major step forward toward the total control of this potentially devastating disease.”

CALGB 9741 was designed to compare concurrent AC-T vs sequential A-T-C either in a 2-weekly dose-dense schedule or in a 3-weekly conventional schedule in women with axillary node-positive operable breast cancer. The cumulative dose of treatment in each of the arms was identical, Taxol ($175\text{mg}/\text{m}^2$), doxorubicin ($60\text{mg}/\text{m}^2$) and cyclophosphamide ($600\text{mg}/\text{m}^2$).

Researchers tested both dose dense and conventional chemotherapy regimens in 1,973 women with node-positive primary breast cancer and no other metastases. Following surgical removal of their tumors, the women were assigned to one of four treatment regimens involving the standard chemotherapy drugs doxorubicin (A), paclitaxel (T), and cyclophosphamide (C):

- Sequential administration (A followed by T, followed by C) in three-week intervals (conventional)
- Sequential administration in two-week intervals, with filgrastim (dose dense)
- Concurrent administration (A and C together, followed by T) in three-week intervals
- Concurrent administration in two-week intervals, with filgrastim (dose dense)

Since frequent administration of chemotherapy can result in a condition called neutropenia, a decline in the number of a certain type of white blood cells, the researchers administered filgrastim (Neupogen) to patients on the dose dense regimens. Also known

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as the granulocyte-colony stimulating factor (G-CSF), filgrastim helps prevent neutropenia by stimulating the formation of white blood cells called neutrophils. Without it, chemotherapy dosing frequency is limited to longer intervals.

“It is too soon to determine whether a dose dense chemotherapy regimen with filgrastim should be the new standard of care,” said Jeffrey Abrams, the oncologist in charge of breast cancer treatment trials at NCI. “However, the reduced risk of cancer recurrence and the low occurrence of side effects are encouraging, and further follow-up as well as other studies testing this approach will hopefully confirm the findings.”

In addition to improved disease-free survival, the study indicated that dose dense chemotherapy may also lead to higher overall survival rates. After three years, 92 percent of patients on the dose dense therapy were alive, compared to 90 percent of those on the conventionally administered regimens. This difference corresponded to a 31 percent overall reduction in the risk of death ($p=0.013$). However, the study authors cautioned that additional follow-up is necessary to confirm this overall survival benefit.

Side effects were found to be no more severe among patients on the dose dense regimens than among those on the conventional treatments, and patients on the dose dense regimens suffered fewer cases of neutropenia. In addition, the study showed that sequential administration produced slightly fewer side effects than the concurrent regimens, with equal efficacy.

Since the mathematical model that led to this study applies to most cancer types and many anti-cancer drugs, the researchers hypothesize that future clinical trials could examine the benefits of dose dense chemotherapy using other drugs and in other types of cancer.

San Antonio Breast Cancer

Symposium:

Arimidex Continues To Show Improvement Over Tamoxifen

Updated results from the ongoing Arimidex (anastrozole, AstraZeneca) early breast cancer trial were presented at the San Antonio Breast Cancer Symposium, indicating that Arimidex continues to show a statistically significant improvement in recurrence-free survival over tamoxifen.

The updated results were based on an analysis

of data at a median treatment duration of nearly four years (47 months). More than 1,400 patients in the Arimidex and tamoxifen arms of the study have now been followed for more than 54 months, nearing the 5-year standard treatment period generally used in the adjuvant setting. Arimidex is the only drug to show improvement over tamoxifen in early breast cancer.

The U.S. Food and Drug Administration approval of Arimidex for the adjuvant treatment of hormone-receptor positive early breast cancer in postmenopausal women was based on analysis of data from this trial at a median duration of treatment of 31 months, with further follow-up required to determine long-term outcome.

“The new data from the Arimidex Adjuvant trial, or the ATAC study, continue to illustrate the role that Arimidex can play in treating postmenopausal women with early breast cancer,” said principal U.S. investigator Aman Buzdar, of The University of Texas M. D. Anderson Cancer Center. “These findings reinforce that, with Arimidex, women now have a treatment option other than tamoxifen.”

The updated data analysis shows an 18% relative reduction in the risk of recurrence among patients with hormone-sensitive tumors treated with Arimidex, compared with tamoxifen (290 of 2,617 patients on Arimidex had a relapse or died as compared with 345 of 2,598 patients on tamoxifen).

The women with hormone-sensitive tumors represent 84% of patients in the trial, and are the target population for this hormonal treatment. There are insufficient numbers of events at this time to permit an analysis of overall survival from this trial.

Angina pectoris was reported more frequently in the Arimidex-treated patients than in the tamoxifen-treated patients (1.7% vs. 1%); the incidence of myocardial infarction was comparable. More patients receiving Arimidex were reported to have an elevated serum cholesterol compared to patients receiving tamoxifen (7% vs. 3%).

Iressa May Benefit Some Breast Cancer, Studies Find

Results from two phase II breast cancer trials studying Iressa (AstraZeneca), were presented at the San Antonio Breast Cancer Symposium.

In the first study, Iressa, 500 mg (single daily oral dose), was administered in a non-randomized, open-label phase II study, to 63 women with metastatic advanced breast cancer, age 34-80 years

old, who had continued to progress following multiple breast cancer treatments.

Overall, the vast majority of trial participants had tried all major treatment options for advanced breast cancer and their disease was actively progressing when they entered the trial.

Following treatment with Iressa, one patient achieved a partial response lasting five months and eight women experienced stabilization of their disease.

Despite active progression of disease at the time of study entry, 15 percent of the study population remained on Iressa for four to eight months or longer. Others noted marked reduction in bone pain and several were able to stop all pain medications.

“The results of this trial provide justification for further studies of Iressa,” said Kathy Albain, principal investigator for this trial and professor of medicine, Division of Hematology/Oncology, Loyola University Medical Center, Chicago. “These trials should be done in a variety of settings including patients with less advanced disease, perhaps after first remission, and also in combination with other agents.”

The most commonly reported adverse events in this trial included diarrhea (65 percent), acne-like rash (46 percent), dry skin (22 percent), nausea (33 percent) and vomiting (22 percent). These events were usually mild, but when severe (16 patients) were generally relieved by short treatment interruptions or by lowering the dose.

In the second study, John Robertson from the City Hospital, University of Nottingham, UK, presented early data from a study of 22 women where Iressa was administered in a non-randomized, open-label phase II study in patients with breast cancer who became clinically resistant to tamoxifen or were inappropriate for tamoxifen treatment.

At four weeks, 10 patients (46 percent) had not progressed, two patients (9 percent) demonstrated a partial response, and five patients (23 percent) had progressive disease. One patient with stable disease has been treated beyond six months to date.

All study patients were given 500 mg/day of Iressa. The median patient age was 61 years old (range 32-85 years old).

Side effects were experienced by 59 percent of study patients. Eight patients (36 percent) had a significant facial rash and 4 patients (18 percent) each had nausea, vomiting, alopecia and diarrhea. Eight patients (36 percent) had a dose interruption followed by a dose reduction.

American Society of Hematology: **Gleevec Improves Survival Of CML In Accelerated Phase**

Gleevec, the anti-leukemia drug from Novartis Pharmaceuticals, achieves a marked improvement in survival even for patients in the accelerated phase of chronic myeloid leukemia, according to a study presented at the American Society of Hematology annual meeting.

“Until now, the story of this disease has been like the story of Sisyphus who was condemned by the gods to roll a great stone up a mountain for all eternity,” said Richard Silver, a professor at Weill Medical College of Cornell University, who presented the results. “Gleevec has brought us a lot closer to the mountaintop than we’ve ever been.”

For 181 patients with accelerated disease who were treated with an initial dose of 600 milligrams per day, the two-year survival rate from the beginning of Gleevec treatment was about 66 percent, and the three-year rate was about 60 percent. At the latter point, about two thirds of the survivors had not moved beyond the acceleration phase to what is called a blast crisis.

CML can remain in a chronic phase for many years, but, when the disease enters the accelerated phase, it commonly leads to a terminal blast crisis within a matter of months. It is then that the system can be overwhelmed by a rampant proliferation of immature white cells.

Results with 600 milligrams were substantially better than with 400 milligrams, without an increase in side effects. Patients who started out with the lower dose had a survival rate of about 44 percent for two years and 30 percent for three years.

The study, which has 21 co-authors, concludes that Gleevec “at an initial dose of 600 milligrams significantly improves survival and shows significant superiority to the 400-milligram dose.”

The trial enrolled 235 patients at 18 centers in Europe and the U.S. between August 1999 and March 2000. Their disease was judged to be in the accelerated phase on the basis of any of four hematologic criteria and this was subsequently confirmed in 181 cases based on a central review of data. The confirmed cases were about evenly divided between men and women, and the median age at enrollment was 57. Sixty-two were treated initially with 400 milligrams of Gleevec a day and 119 were treated with 600 milligrams.

Unsurprisingly, survival reflected the body's response to therapy. Among patients who had a complete hematological remission of four weeks or more—meaning an apparent complete absence of blast cells in their marrow or blood—the three-year survival rate was about 85 percent, whereas patients who had only a transitory hematological remission or none at all had a three-year survival rate of only about 20 percent. Overall, 72 percent of the patients had a sustained hematologic response—that is, for four weeks or more—of which the majority were complete remissions.

Phase II Study Tests Chemo Plus Mylotarg For AML

A novel chemotherapy regimen that combines standard drugs with an antibody-targeted agent has shown early success in treating adults with acute myeloid leukemia, according to preliminary data from a multicenter study led by researchers at Dana-Farber Cancer Institute.

The findings from the phase II study were presented at the annual meeting of the American Society of Hematology earlier this month in Philadelphia.

The study participants were treated with cytarabine and daunorubicin, standard chemotherapy agents, and Mylotarg (gemtuzumab ozogamicin), an anti-body targeted chemotherapy. Interim results show that 83 percent of the evaluable participants (15 of 18) treated with the combination therapy achieved complete remission, and that the therapy was well tolerated. The median duration of complete response has not yet been reached (median follow-up is 193 days).

“Acute myeloid leukemia is an aggressive disease that requires aggressive treatment,” said the study's principal investigator, Daniel DeAngelo, of Dana-Farber. “It's very early in our investigation of this combination of therapies, but essentially it gave us a higher rate of remission than we've seen before without an increase in the side effects that typically accompany these conventional therapies. More research is needed, but these preliminary phase II results show that we are on the right track.”

Antibody-targeted chemotherapy with Mylotarg delivers the toxin to cells that express the CD33 protein on their surface, meaning that it attacks primarily diseased cells and generally does not affect healthy cells. Previous research has shown that when

used alone, Mylotarg has been associated with delayed or incomplete platelet recovery and, in some cases, a liver condition called hepatic veno-occlusive disease. Standard chemotherapy, while effective, is associated with severe side effects, such as mucositis that causes sores in the mouth, throat and digestive tract, diarrhea, vomiting, and hair loss.

“We've found that standard chemotherapy boosted the efficacy of Mylotarg, resulting in a complete remission - including platelet recovery - without significantly increasing the side effects,” said DeAngelo. “We need to see how these patients do over time, but right now the results are promising. It opens the door for more research to determine if this combination will allow more patients to benefit from antibody-targeted chemotherapy.”

Mylotarg (Wyeth Pharmaceuticals) is approved for the treatment of selected older patients with CD33-positive AML in first relapse.

"Proof Of Concept" Shown In Early Trial Of PKC-412

An experimental drug aimed precisely at a culprit genetic mutation has shown promising activity in a difficult-to-treat form of leukemia, say researchers from Dana-Farber Cancer Institute and their collaborators.

The scientists, who presented their findings at the annual meeting of the American Society of Hematology in Philadelphia, call the results a “proof of concept” even though none of the 15 patients treated with the drug, a Novartis compound known as PKC-412, went into remission. Thirteen of the patients did respond with reductions in their abnormally high white blood cell counts.

“This is really designer therapy” in that the drug is matched to a specific genetic flaw that distinguishes a particular form of acute myeloid leukemia, said Dana-Farber's Richard Stone.

The experimental compound is similar in concept to Gleevec, the researchers said.

In about one-third of patients with AML, the cancerous blood cells contain an abnormal gene called FLT3, and those patients have a poorer prognosis than individuals who carry a normal FLT3 gene. The mutant gene transmits a signal that drives the cells into abnormal, excessive proliferation.

Previous work by James Griffin and Ellen Weisberg, of Dana-Farber, and Gary Gilliland, of Brigham and Women's Hospital and Harvard Medical

School, had shown that the experimental drug could block the FLT3 growth signal in mice with a leukemia-like disease.

In the first human clinical trial, 15 AML patients were enrolled. They had either relapsed after treatment, achieved a temporary remission or had progressive disease. They took the drug in pill form for up to 92 days. Nausea was the most common side effect, but otherwise the drug was well-tolerated, the researchers said.

In 13 of the patients, the drug caused abnormally high white cell counts to come down, dramatically in some cases. One patient had a count of 100,000 drop to normal (between 4,000 and 10,000) within a few days, Stone said.

Although the drug didn't bring about a remission in any patient, "it's a lead," said Stone. "It is not a cure in itself, but combined with chemotherapy it might have a big impact."

The trial will continue to enroll patients until 20 have undergone treatment with PKC-412. After that, the drug might be paired with a conventional chemotherapy drug to study the effect of the combination, Stone said.

Clinical Trials:

Novartis Begins Z-FAST To Address Bone Loss

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postmenopausal women with early breast cancer in order to offer the efficacy of Femara with the bone protective effects of Zometa.

"There is a pressing clinical need to address the bone loss concerns of postmenopausal women with early breast cancer," said Adam Brufsky, principal investigator, Magee/UPCI Breast Program, University of Pittsburgh Cancer Institute.

"If proven successful, the combination of Femara and Zometa could change the treatment paradigm for many patients by simultaneously providing them with effective breast cancer treatment and bone loss protection in the adjuvant setting," said Richard Theriault, co-principal investigator, Department of Breast Medical Oncology, M.D. Anderson Cancer Center.

The open-label, randomized, multicenter trial will enroll approximately 500 postmenopausal women with stage I, II, IIIa, ER and/or PR+ breast cancer who have undergone complete tumor resection, and no clinical or radiological evidence of recurrent or

metastatic disease, at up to 120 centers in the U.S. and Canada.

Patients will remain in the study and be treated for a maximum of five years, or until disease progression, with Femara as their adjuvant therapy beginning day one. Patients will be randomized to one of two Zometa treatment arms, receiving either an upfront 4 mg, 15-minute infusion of Zometa every 6 months beginning on day one or a delayed start 4 mg, 15-minute infusion of Zometa every 6 months. The initiation of delayed start Zometa will be determined by a post-baseline bone mineral density below -2.0 SD.

Enrollment for a similar study, ZO-FAST (Zometa/Femara Adjuvant Synergy Trial) will begin in 30 countries outside the U.S. in January. Nine hundred patients are expected to participate. In addition to evaluating postmenopausal women, ZO-FAST will be open to newly postmenopausal women in whom menopause has been artificially induced by medically intervention, i.e. estrogen suppressive therapy or chemotherapy.

Novartis has two adjuvant trials (MA-17 and BIG 1-98) with Femara, involving 13,000 postmenopausal women. MA-17 is being conducted by the NCI of Canada Clinical Trials Group, and is designed to determine the disease-free and overall survival of postmenopausal women (ER+ and/or ER receptor unknown) taking Femara after at least five years of tamoxifen therapy compared to women taking placebo after at least five years of therapy. MA-17 reached its enrollment milestone of 4,800 patients earlier this year (Aug. 30, 2002).

A second phase III adjuvant study with Femara is being conducted by the Breast International Group (BIG 1-98) in collaboration with Novartis. The study has four treatment arms comparing: five years of Femara, five years of tamoxifen, two years of Femara followed by three years of tamoxifen, and two years of tamoxifen followed by three years of Femara. The BIG 1-98 trial has enrolled 7,105 patients to date with a targeted enrollment of 7,952. Results for both studies are expected to be available in 2004.

Femara is contraindicated in patients with known hypersensitivity to Femara or any of its excipients. Femara is generally well tolerated and adverse reactions rates in the first-line study in which Femara was compared to tamoxifen were similar with those seen in second-line studies. The most commonly reported adverse events for Femara vs. tamoxifen were bone pain, hot flushes, back pain, nausea,

dyspnea or labored breathing, arthralgia, fatigue, coughing, constipation, chest pain and headache. Femara may cause fetal harm when administered to pregnant women. There is no clinical experience to date on the use of Femara in combination with other anticancer agents.

In clinical trials in patients with bone metastases and hypercalcemia of malignancy, Zometa had a safety profile similar to other intravenous bisphosphonates.

The most commonly reported adverse events included flu-like syndrome (fever, arthralgias, myalgias, skeletal pain), fatigue, gastrointestinal reactions, anemia, weakness, cough, dyspnea and edema.

Chemotherapy Foundation Symposium:

Xeloda-Eloxatin Study Updated; Phase III Trial Interim Analysis

Updated results from a study of Xeloda (capecitabine, Hoffmann-La Roche), an oral tumor activated chemotherapy, in combination with Eloxatin (oxaliplatin, Sanofi) for first-line treatment of patients with metastatic colorectal cancer were presented at the annual Chemotherapy Foundation Symposium in New York City late last month.

Data from another study also show promise in the use of Xeloda monotherapy as an option for first-line therapy in esophago-gastric cancer and in combination with other chemotherapy agents.

James Cassidy, professor of medical oncology, Glasgow University, Scotland, presented updated data from ASCO 2002 on an international phase II study of Xeloda in combination with oxaliplatin (XELOX) as first-line therapy for metastatic colorectal cancer.

The data from this 96-patient study show an objective response rate of 55 percent with an additional 32 percent of patients having stable disease for greater than three months. Median survival is 19.5 months and median time to progression is currently 7.6 months. Patients enrolled in this study received 130 mg/m² of oxaliplatin intravenously day 1 of each 21-day treatment cycle and 1,000 mg/m² of oral Xeloda twice daily days 1-14 with one week rest.

Oxaliplatin, in combination with 5-FU/LV, is approved in the U.S. as second-line therapy for metastatic colorectal cancer. Xeloda is approved as first-line treatment for metastatic colorectal cancer when treatment with fluoropyrimidine therapy alone

is preferred.

“These results are encouraging and demonstrate the potential of Xeloda as a combination agent with oxaliplatin in colorectal cancer,” said Peter Kozuch, St. Luke’s-Roosevelt Hospital, New York. “These results may be good news for physicians as they point to potential new options in the management of colorectal cancer.”

Niall Tebbutt, of Royal Marsden Hospital, Sutton, UK, presented interim analysis from a randomized, multicenter phase III study comparing Xeloda with 5-FU and oxaliplatin with cisplatin in patients with advanced esophago-gastric cancer.

This study is a four-arm study comparing the following regimens: ECF (epirubicin, cisplatin, continuous infusional (CI) 5-FU) versus ECX (epirubicin, cisplatin, Xeloda twice daily without rest for the duration of therapy) and EOF (epirubicin, oxaliplatin, CI 5-FU) versus EOX (epirubicin, oxaliplatin, Xeloda twice daily without rest for the duration of therapy).

The interim results of this study demonstrated an overall response rate of 54 percent for the Xeloda treatment arms versus 28 percent for the CI 5-FU treatment arms and 34 percent for the cisplatin treatment arms versus 47.5 percent for the oxaliplatin treatment arms.

Rates of time to disease progression were 13 percent in the Xeloda treatment arms versus 33 percent in the 5-FU treatment arms and 20 percent in the cisplatin treatment arms versus 25 percent in the oxaliplatin treatment arms.

The safety profile included the incidences of diarrhea, stomatitis and hand-and-foot syndrome at 14 percent, 3 percent and 3 percent for the 5-FU treatment arms and 3 percent, 0 percent and 3 percent respectively for the Xeloda treatment arms.

The incidence of grade 3/4 neutropenia ranged from 32 to 42 percent, was generally brief in duration and the incidence of febrile neutropenia ranged from 2 to 6 percent. This interim analysis is based on 80 patients, however the study plans to recruit a total of 600 patients. This is the first study comparing Xeloda to continuous infusional 5-FU regimen.

A phase I study led by Dan Budman, North Shore Medical Center, evaluated the safety of an every other week dosing regimen of Xeloda in combination with Camptosar for patients with metastatic colorectal cancer. The combination on the every other week schedule is generally well tolerated in the patient population studied.

Clinical Trials Approved By NCI During November Are Listed

The National Cancer Institute's Cancer Therapy Evaluation Program Approved the following clinical research studies last month. For further information about a study, contact the principal investigator listed.

Phase I

Phase I Brachytherapy Dose Escalation Using the GliaSite RTS in Newly Diagnosed Glioblastoma Multiforme in Conjunction with External Beam Radiation Therapy. NABTT Brain Tumor consortium, protocol NABTT-2105, Stieber, Volker, phone 336-716-5041.

Phase I Study of Irinotecan and Cisplatin in Combination with Twice Daily Thoracic Radiotherapy (45 Gy) or Once Daily Thoracic Radiotherapy (70 Gy) for Patients with Limited Stage small Cell Lung Cancer. Radiation Therapy Oncology Group, protocol RTOG-0241, Langer, Corey, phone 215-728-2985.

Phase I/II

Phase I/II Trial of Intracerebral IL13-PE38QQR Infusions in Pediatric Patients with Recurrent Malignant Glioma. Pediatric Brain Tumor Consortium, protocol PBTC-011, Banerjee, Anuradha, phone 415-353-2383.

Phase II

Double-Blind Study of Nutritional Intervention for the Treatment of Cancer Oncology Cachexia Using Jeven Nutritional Supplement. Radiation Therapy Oncology Group, protocol 0122, Curran, Walter, phone 215-955-6700.

Phase II Study of Arsenic Trioxide in Patients with Adenocarcinoma of the Pancreas Refractory to Gemcitabine. University of Chicago, protocol 5839, Kindler, Hedy Lee, phone 773-702-4400.

Phase II Study of Fenretidine in Children with Recurrent/Resistant High Risk Neuroblastoma. Children's Oncology Group, protocol ADVL0024, Villablanca, Judith, phone 323-669-5654.

Non Myeloablative Allogeneic Hematopoietic Cell Transplantation for Patients with Disease Relapse or Myelodysplasia after Prior Autologous Transplantation. Cancer and Leukemia Group B, protocol CALGB-100002, Bashey, Asad, phone 858-657-6790.

Phase II Trial of Pemetrexed Disodium and Gemcitabine in Advanced Urothelial Cancer. Eastern

Cooperative Oncology Group, protocol E4802, Dreicer, Robert, phone 216-445-4623.

Phase II Evaluation of SGN-00101 Fusion Protein in Women with Cervical Intraepithelial Neoplasia 3, CIN 3. Gynecologic Oncology Group, protocol GOG-0197, Trimble, Cornelia, phone 410-614-2870.

Phase II Study of Perifosine (D-21266) in Patients with Previously Untreated Metastatic or Locally Advanced Soft Tissue Sarcoma. NCI of Canada, protocol NCIC-155, Knowling, Margaret, phone 604-877-6000, ext 2734.

Phase II Study of Perifosine (D-21266) in Previously Untreated Patients with Metastatic or Recurrent Malignant Melanoma. NCI of Canada, Ernst, Donald Scott, phone 403-670-2429.

Phase II Study of Intensity Modulated Radiation Therapy (IMRT) +/- Chemotherapy for Nasopharyngeal Cancer. Radiation Therapy Oncology Group, protocol RTOG-0225, Lee, Nancy, phone 415-353-8900.

Phase II Study of Chimerism-Mediated Immunotherapy Using Nonmyeloablative Allogeneic Peripheral Blood Stem Cell Transplantation in Older Patients With Acute Myeloid Leukemia in First Complete Remission. Southwest Oncology Group, protocol S0125, McSweeney, Peter Anthony, phone 303-372-9000.

Phase III

Randomized Trial of Trastuzumab (Herceptin) With and Without Tamoxifen in Stage IV ER+/her-2+ Breast Cancer. Cancer and Leukemia Group B, protocol CALGB-49903, Mortimer, Joanne, phone 757-668-5223.

Randomized Phase III Trial of Rituximab and Autologous Stem Cell Transplantation for B Cell Diffuse Large Cell Lymphoma. Eastern Cooperative Oncology Group, protocol E2499, Flinn, Ian, phone 410-614-5542.

Other

Vaginal Length, Elasticity, Lubrication and Sexual Function in Women Treated on GOG-0201 for Stage IB2 Cervix Carcinoma. Gynecologic Oncology Group, protocol GOG-8003, Watkins Bruner, Deborah, phone 215-728-2967.

Pilot Study To Correlate DNA Sequence Copy Number Abnormalities with Outcome in Patients with Advanced Epithelial Ovarian Cancer. GOG, Gershenson, David, phone 713-745-2565.