

FGFR Inhibition for Bladder Cancer

Erdafitinib has favorable response rate in advanced bladder cancers, including those that do not respond to immunotherapy

By Sarah Bronson

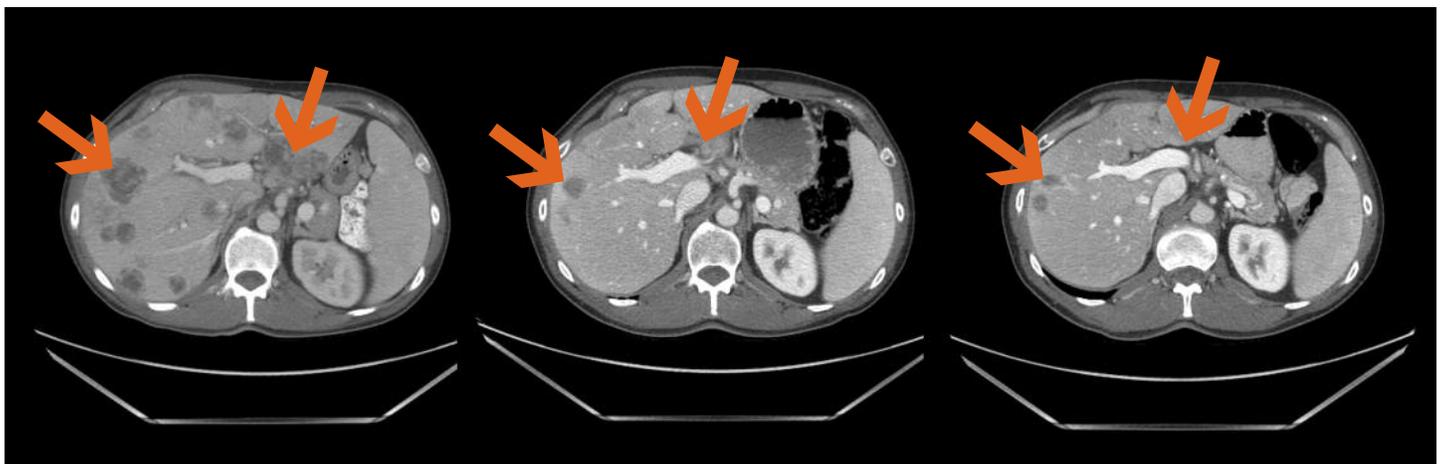
For patients with advanced or metastatic bladder cancer whose disease does not respond to standard cisplatin-based chemotherapy, immunotherapy is an attractive treatment option. However, only 15%–20% of bladder cancers respond to immune checkpoint inhibitors, and patients whose disease does not respond to chemotherapy or immunotherapy have few treatment options. Fortunately, some such patients may achieve a response to new agents that target FGFR

(fibroblast growth factor receptor).

FGFR genes are mutated in 20%–60% of urothelial carcinomas, the most common bladder cancers. In particular, *FGFR3*, which appears to be involved in the development of bladder cancer, is mutated in about 15% of patients with metastatic urothelial carcinoma. *FGFR3* mutations are believed to contribute to higher rates of cancer cell proliferation in the urothelial lining, allowing the cells to acquire more mutations and transition to higher-

grade, more invasive disease.

Bladder tumors with these mutations seem uniquely resistant to immunotherapy. “*FGFR3*-mutant bladder tumors appear to be associated with the luminal 1 subtype, which is immunologically cold, with low expression of immune markers,” said Arlene Siefker-Radtke, M.D., a professor in the Department of Genitourinary Medical Oncology at The University of Texas MD Anderson Cancer Center. “As we were treating bladder cancer patients



Rapidly progressive, symptomatic liver metastases (arrows) are shown before treatment with erdafitinib (left), after 6 weeks of treatment (center), and after 12 weeks of treatment (right). In addition to the dramatic reduction in tumor volume, the patient experienced resolution of clinical symptoms. Images courtesy of Dr. Arlene Siefker-Radtke.

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FGFR Inhibition for Bladder Cancer

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with immune checkpoint inhibitors, I started noticing that the *FGFR3*-mutant tumors were not responding well, and these patients were stopping treatment relatively quickly.”

To address the unmet need of patients whose advanced or metastatic bladder cancer does not respond to chemotherapy or immune checkpoint inhibitors, Dr. Siefker-Radtke is leading clinical trials of the pan-FGFR inhibitor erdafitinib and the *FGFR3* inhibitor B-701.

Erdafitinib

Potential of erdafitinib

Because erdafitinib inhibits all four *FGFR* isotypes at low concentrations of the drug, this agent may work better than previously studied *FGFR*-inhibiting compounds in tumors with *FGFR* mutations. After erdafitinib showed early evidence of activity against *FGFR*-mutant bladder cancer in a small phase I trial, a phase II trial (No. 2015-0112) was performed to test the tolerability and effectiveness of various dose regimens of the drug in patients with previously treated metastatic or unresectable *FGFR2*- or *FGFR3*-mutant urothelial carcinoma of the bladder. The drug was well tolerated at a continuous dose of up to 8 mg orally daily, and the dose could be titrated up to 9

“[W]e are seeing evidence of durable responses [to erdafitinib], with some responses lasting more than 1 year with continued treatment.”

– Dr. Arlene Siefker-Radtke

mg daily in patients who did not experience toxic effects or high phosphorus levels.

Better yet, among the 59 patients treated, “The overall response rate at the optimal daily dose of 8–9 mg, depending on the patient, was 42%, and we are seeing evidence of durable responses, with some responses lasting more than 1 year with continued treatment,” Dr. Siefker-Radtke said.

These responses have included partial remissions of urothelial carcinoma liver metastases, which typically have a poor prognosis, even with treatment. Liver metastases from bladder cancers typically do not respond well to treatments that target the immune system, Dr. Siefker-Radtke said. However, some

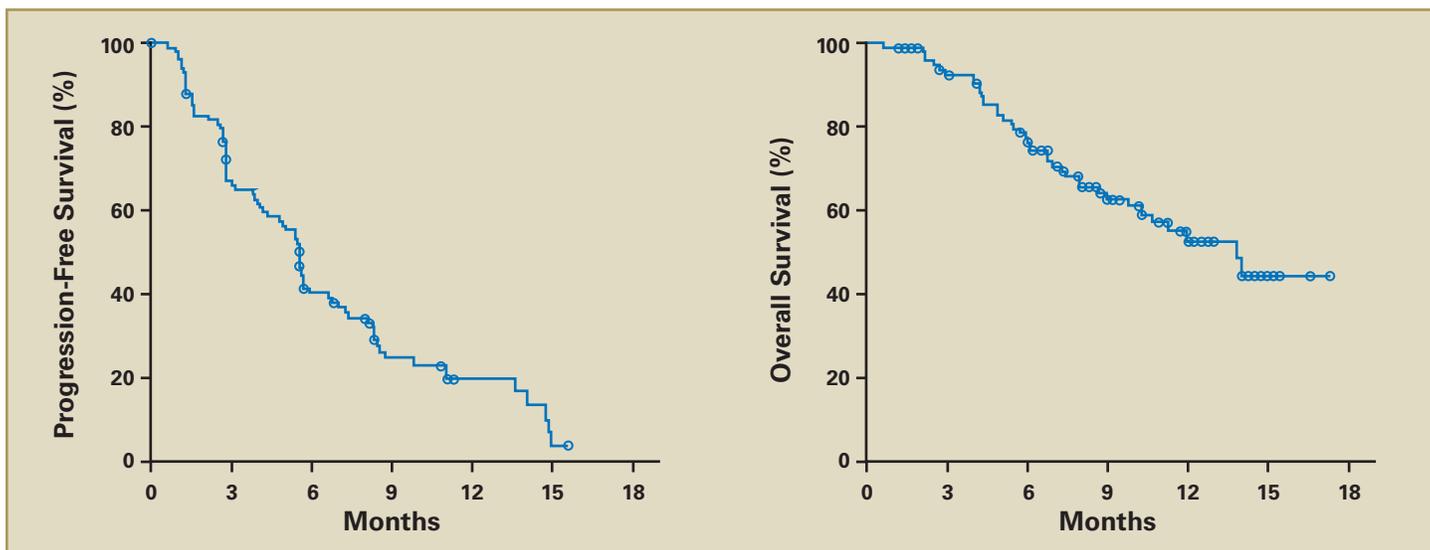
patients in the erdafitinib trial saw their liver metastases shrink dramatically, including one patient who had previously tried immunotherapy and had not had any benefit from it.

The experiences of the patients in the trial supported the theory that *FGFR3*-mutant tumors are less responsive to immunotherapy. “Twenty-two of the patients had prior immunotherapy, and only one of them had responded to an immune checkpoint inhibitor,” Dr. Siefker-Radtke said. “And that response was not durable.”

Because of these results, presented at the American Society of Clinical Oncology meeting this June, the U.S. Food and Drug Administration has granted erdafitinib a breakthrough therapy designation for the treatment of metastatic urothelial carcinoma.

Current erdafitinib trials

An upcoming phase III trial (No. 2018-0027) will more clearly define the role of both erdafitinib and immune checkpoint inhibitors in the treatment of *FGFR*-mutant bladder cancers. The trial will enroll patients who have *FGFR*-mutant metastatic or unresectable urothelial carcinoma of the bladder and have undergone prior systemic therapy. Patients who have previously been treated with a PD-1



Progression-free (left) and overall (right) survival curves are shown for patients with metastatic or unresectable urothelial carcinoma treated with the optimal dose of erdafitinib in a phase II trial. The median progression-free and overall survival durations were 5.5 and 13.8 months, respectively. Images courtesy of Dr. Arlene Siefker-Radtke.

(programmed cell death protein 1) inhibitor will be randomly assigned to receive either erdafitinib or chemotherapy with taxanes (the standard of care). And patients who have not undergone prior immunotherapy will be randomly assigned to receive either erdafitinib or the PD-1 inhibitor pembrolizumab.

“This trial will help us determine whether *FGFR3*-mutant tumors respond better to erdafitinib or immunotherapy,” Dr. Siefker-Radtke said.

Another upcoming trial (No. 2018-0142) will examine how erdafitinib may interact with immune checkpoint inhibitors in combination therapy, possibly by allowing more immune cells to enter the tumor. Patients in the phase II portion of the trial will receive erdafitinib alone or combined with the PD-1 inhibitor JNJ-63723283.

“We will see if the use of erdafitinib will change the tumor environment to one that’s more sensitive to immune checkpoint inhibition and perhaps have synergistic effects,” said Dr. Siefker-

Radtke, who will be the principal investigator of both trials.

B-701

It is not clear whether a pan-FGFR inhibitor such as erdafitinib or a specific inhibitor of *FGFR3* will provide a more effective strategy in patients with *FGFR3*-mutant bladder cancer because toxic effects may increase as more FGFR isotypes are inhibited. To illuminate the potential of a more selective inhibitor, an ongoing phase IB/II trial (No. 2017-0580) will determine the safety and efficacy of an agent that selectively targets *FGFR3*. The drug, B-701, is given alone or in combination with pembrolizumab in patients who have locally advanced or metastatic urothelial carcinoma with or without *FGFR3* mutations.

The B-701 trial, like the erdafitinib trials, is led by Dr. Siefker-Radtke. “Only by doing these trials will we gain an understanding of whether pan-FGFR inhibition or *FGFR3* inhibition is required for a treatment that is both safe and effective,” she said.

Future possibilities

Although pan-FGFR inhibitors such as erdafitinib and more specific *FGFR3* inhibitors such as B-701 have been developed with advanced bladder cancer in mind, their uses could eventually extend to earlier-stage disease. Dr. Siefker-Radtke said that either drug, if it continues to demonstrate activity against bladder cancer, could present a new option for patients whose early-stage disease may require cystectomy. She added, “Maybe erdafitinib or B-701 will allow patients to keep their bladders longer or keep their tumors from transforming into a more aggressive disease.” ■

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To learn more about clinical trials at MD Anderson, visit www.clinicaltrials.org and search by cancer type, treatment, physician, or trial number.

IN BRIEF

Targeted Therapies Matched to Tumor-Specific Mutations Prolong Survival

Targeted therapies matched to specific gene mutations in patients’ tumors yielded longer progression-free and overall survival durations than did nonmatched therapies in an analysis of long-term data from a study at The University of Texas MD Anderson Cancer Center.

In the ongoing “umbrella” study (IMPACT, No. 2007-0885), patients with advanced, refractory solid cancers who have been referred to phase I clinical trials at MD Anderson undergo molecular testing of their tumors. In a recent analysis of 3,743 patients who had undergone such testing, 1,307 had at least one molecular alteration in their cancer and received matched targeted therapy (n = 711) or nonmatched therapy (n = 596) given alone or com-

bined with other anticancer drugs, depending on the trials.

“We hypothesized that genetic and molecular analysis of solid tumors could enable the selection of optimal therapy,” said Apostolia Tsimberidou, M.D., Ph.D., a professor in the Department of Investigational Cancer Therapeutics and the study’s principal investigator.

In the analysis, the median progression-free and overall survival durations were significantly longer for patients who received matched targeted therapy (4.0 and 9.3 months) than for those who received nonmatched therapy (2.8 and 7.3 months). The 3-year overall survival rate was 15% in the matched targeted therapy group and 7% in the nonmatched therapy group. And the 10-year overall survival rate was 6% in the matched targeted therapy group and 1% in the nonmatched therapy group. Alterations in the PI3K/AKT/mTOR pathway were associated with shorter

progression-free and overall survival durations.

The analysis also revealed several prognostic factors. In addition to treatment with matched targeted therapy, independent predictors of longer overall survival included normal lactate dehydrogenase levels, functional status, albumin levels, and platelet counts and the absence of liver metastases or PI3K/AKT/mTOR alterations.

Dr. Tsimberidou and colleagues presented their findings at the American Society of Clinical Oncology annual meeting in June (abstract No. LBA2553). The researchers are now conducting a randomized phase II trial (IMPACT2, No. NCT02152254) to confirm the benefits of matched targeted therapy. “Ideally, in the future, tumor testing and cell-free DNA analysis at the time of patients’ diagnosis will become the standard of care,” Dr. Tsimberidou said. ■

Managing High-Risk Breast Lesions

Strong provider recommendation for preventive therapy increases its use in women with lobular carcinoma in situ, atypical hyperplasia

By Bryan Tutt

Although preventive therapy can reduce breast cancer risk in patients with lobular carcinoma in situ (LCIS) or atypical hyperplasia, most patients choose not to undergo such therapy. Clinicians at The University of Texas MD Anderson Cancer Center have developed a program to educate patients with LCIS or atypical hyperplasia about the importance of preventive therapy and encourage them to take this critical step to reduce their breast cancer risk.

Without intervention, women with LCIS or atypical hyperplasia are at least four times as likely as women without the conditions to develop breast cancer in their lifetimes. Hormonal therapy with tamoxifen or raloxifene can reduce this risk by 75%.

“Primary care physicians can prescribe these medications and follow up women in their clinic,” said Abenaa Brewster, M.D., M.H.S., a professor in the Department of Clinical Cancer Prevention and medical director of the

Nellie B. Connally Breast Center. “Or physicians who do not feel comfortable prescribing these medications can refer their patients to a high-risk clinic.”

One such high-risk clinic is MD Anderson’s Cancer Prevention Center. But even here, Dr. Brewster, along with colleagues including Therese Bevers, M.D., a professor in the Department of Clinical Cancer Prevention and medical director of the Cancer Prevention Center, found that less than half of patients with LCIS or atypical hyperplasia were opting for preventive therapy. The clinicians developed a program to increase the use of preventive therapy by making sure patients understand the benefits of preventive therapy and ensuring that physicians strongly recommend such therapy.

Preventive therapy

When used for breast cancer prevention in women at high risk of the disease, tamoxifen or raloxifene is typi-

cally given for 5 years. Tamoxifen is approved for use in both pre- and postmenopausal women, whereas raloxifene is approved for use only in postmenopausal women.

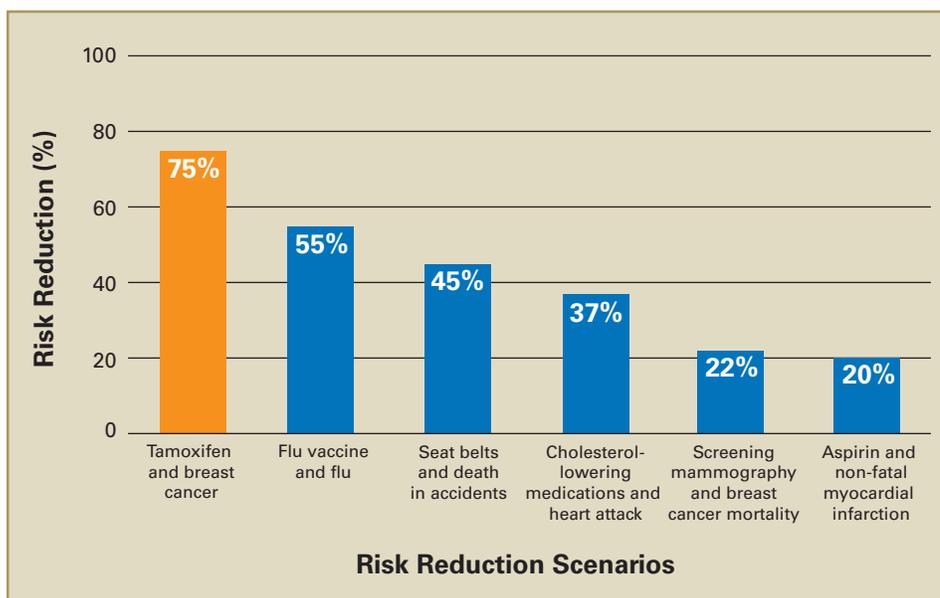
Most women who receive tamoxifen or raloxifene experience no adverse effects. However, both drugs can cause menopausal symptoms, such as hot flashes, and the rare but more serious side effect of blood clots—specifically, deep venous thrombosis or pulmonary embolism. Tamoxifen, but not raloxifene, also increases the risk of uterine cancer.

“Patients and physicians need to think about the pros and cons of taking these drugs and decide whether they are favorably balanced,” Dr. Bevers said. “Some patients and physicians worry about the increased risk of uterine cancer with tamoxifen, but it’s a numbers game. We’re going to cause only a handful of uterine cancers while we prevent many more breast cancers. In women with LCIS or atypical hyperplasia, absent an absolute contraindication like a previous blood clot, the risk reduction is so large that it far outweighs the potential harms of the drug.”

Making a strong recommendation

The benefits of preventive hormonal therapy so outweigh its risks that the National Comprehensive Cancer Network guidelines call for physicians to strongly recommend such therapy for women with LCIS or atypical hyperplasia. However, despite these guidelines, only 20%–30% of women with LCIS or atypical hyperplasia in high-risk clinics receive preventive therapy.

“Physicians have been explaining the risks and benefits and then leaving the decision up to the patient,” Dr. Brewster said. “Of course, the patient makes the final decision about any



The bar graph above shows the reduction in breast cancer risk in patients treated with tamoxifen compared with reductions resulting from interventions to decrease the risk of other conditions. Image courtesy of Dr. Therese Bevers.

Clinic Diagnoses Breast Lesions

The sole focus of the Undiagnosed Breast Clinic in MD Anderson's Cancer Prevention Center is to detect and accurately diagnose breast cancer. The clinic provides consultations and second opinions for patients with breast symptoms such as lumps, swelling, redness, nipple discharge, or abnormal findings on mammography or other imaging studies.

Patients seen in the clinic undergo a thorough examination with a review of their medical history. In addition, any outside pathology specimens and imaging studies are reviewed by a multidisciplinary team of cancer detection specialists, pathologists, and/or radiologists.

"If the lesion has previously been biopsied, we review the pathology to see if we concur with the diagnosis," Dr. Bevers said. "For LCIS and atypical hyperplasia, we typically talk about how extensive the proliferation is on

the pathology slides—does it only involve one or two terminal ductal lobular units, which we consider a limited amount, or is it more extensive? An additional consideration in a high-risk lesion is whether the neoplasia was associated with the targeted lesion or was an incidental background finding in the pathological specimen. We also want to make sure that more than 50% of the lesion has been sampled, so a review of the pre- and postbiopsy mammograms with our breast imaging team is critical."

Needle or excisional biopsies may be ordered for patients whose lesions have not been biopsied or for whom an additional biopsy is required. In some centers, women with abnormal lesions such as LCIS or atypical hyperplasia routinely undergo excisional biopsy to rule out ductal carcinoma in situ or invasive breast cancer; however, only certain patients at MD Anderson undergo excisional biopsy. "If the lesion has been well sampled and the LCIS or atypical hyperplasia is limited or incidental,

excision is commonly not recommended. This decision is made in our weekly multidisciplinary conference for the management of benign breast lesions." Dr. Bevers said. However, she added, if less than half of the lesion was sampled or the proliferative lesion was extensive (i.e., more than three terminal ductal lobular units), an excisional biopsy would be recommended to make sure no cancer was missed owing to sampling error.

Additional biopsies and imaging studies, when needed, typically are done the day of the patient's initial visit. Dr. Bevers said that every effort is made to get information to the patient as soon as possible. "We're often able to give an indication of our level of concern based on our workup the same day," she said. "It's reassuring for women when we're able to answer some of their questions at the end of the day. There's less fear of the unknown, so they can start to formulate a plan and know what the next steps in cancer treatment, screening, or preventive therapy will be." ■

treatment, but it makes a difference if the physician says, 'I strongly recommend that you take this.'"

Drs. Brewster and Bevers and their colleagues developed a program to ensure that MD Anderson patients with LCIS or atypical hyperplasia receive a strong recommendation for preventive therapy. To make certain that the message was clearly delivered and understood, both providers and patients were surveyed about the strength of the recommendation after each clinic visit. In addition, an audit system was put in place to track the proportion of patients who received prescriptions for tamoxifen or raloxifene, and each provider was given quarterly feedback about his or her prescribing pattern.

The program has had the desired effect. At the initiation of the program in 2015, a survey of MD Anderson patients with LCIS or atypical hyperplasia showed that only 44% had received or were receiving preventive therapy. But between 2015 and 2017, 82% of such patients received prescriptions for

preventive therapy. And among the patients who received the prescriptions, 76% of newly diagnosed patients and 48% of previously diagnosed patients were adhering to the therapy at 6 months. "The discrepancy between newly and previously diagnosed patients was an interesting finding that taught us that patients have to really buy into preventive treatment from the beginning," Dr. Brewster said.

The program has been expanded to all of MD Anderson's Houston-area locations where patients with LCIS or atypical hyperplasia are seen. "These are high-risk lesions," Dr. Bevers said. "We should be helping women to understand the significant benefits of preventive treatment, and we should be saying we strongly recommend it." ■

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FURTHER READING

Brewster AM, Thomas P, Brown P, et al. A system-level approach to improve the uptake of anti-estrogen preventive therapy among women with atypical hyperplasia and lobular cancer in situ. *Cancer Prev Res (Phila)*. 2018;11:295–302.

SCREENING

Regardless of whether patients with LCIS or atypical hyperplasia undergo preventive therapy, they should undergo breast cancer screening more frequently than women at low risk for the disease do. In most cases, this screening includes a clinical examination every 6 months plus mammography and magnetic resonance imaging alternating every 6 months. Physicians can access MD Anderson's clinical practice algorithms for screening and risk reduction for breast and other cancers at <http://bit.ly/2FLwonH>.

Aerosolized Gemcitabine for Pulmonary Metastases

Clinical trial tests novel chemotherapy delivery system for patients with lung metastases from osteosarcoma or other solid tumors

By Bryan Tutt

Pulmonary metastases are the leading cause of death in patients with osteosarcoma. Resection of the lung metastases is potentially curative, but surgery is not feasible for some patients. Many patients with lung metastases therefore receive systemic chemotherapy, which has significant side effects and, in this population, limited survival benefits. To reduce side effects and improve outcomes for patients with lung metastases from osteosarcoma and other cancers, researchers have developed a novel approach that delivers aerosolized chemotherapy directly to the lungs.

The potential benefit of aerosolized chemotherapy was established in pre-clinical studies by researchers including Eugenie Kleinerman, M.D., and Nancy Gordon, M.D., a professor and assistant professor, respectively, in the Division of Pediatrics at The University of Texas MD Anderson Cancer Center. “We found that we can administer a much lower dose by aerosol than what is usually given systemically and achieve greater benefit, thus decreasing the systemic toxic effects of the treatment,” Dr. Gordon said.

In the preclinical studies, the

“We found that we can administer a much lower dose by aerosol than what is usually given systemically and achieve greater benefit.”

– Dr. Nancy Gordon



A nurse dressed in a protective mask and garments monitors the progress of aerosolized gemcitabine therapy in a patient with lung metastases. Photo courtesy of Maxsane Mitchell.

aerosolized cytotoxic agent that was most effective against lung metastases from osteosarcoma was gemcitabine. Normally given intravenously, gemcitabine is approved by the U.S. Food and Drug Administration for the treatment of several cancers and has shown activity against various types of sarcoma in clinical trials. On the basis of the preclinical findings, a clinical trial of aerosolized gemcitabine for children and adults with solid tumors and lung metastases is now enrolling patients at MD Anderson.

Clinical trial

The phase I trial (No. 2015-0720) is open to patients 12–50 years old who have lung metastases from osteosarcoma or other solid tumors and no proven survival-extending treatment options. “Because we’re studying the feasibility,

safety, and toxicity of this treatment strategy rather than efficacy, we’re including patients with all types of solid tumors who have lung metastases,” said Najat Daw Bitar, M.D., a professor in the Division of Pediatrics and the trial’s principal investigator. She added that patients who have asthma or poor lung function for other reasons are excluded from the trial.

Patients in the trial receive aerosolized gemcitabine twice weekly for up to 12 28-day cycles. The primary outcome measures are the maximum tolerated dose and toxic effects. The researchers will also study the drug’s pharmacokinetics and tumor response according to Response Evaluation Criteria In Solid Tumors, version 1.1.

Once the maximum tolerated dose is established, the trial will enroll only

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What the National Cancer Institute Does

Resources for cancer patients, caregivers, physicians, researchers



If you're a cancer patient or caregiver, you've no doubt heard of the U.S. National Cancer Institute (NCI). You may have visited their Web site to learn about a cancer-related topic. But you probably don't know everything the NCI does to fight cancer.

As part of the National Institutes of Health (NIH), the NCI is charged with the mission to conduct and support cancer research and help people live longer, healthier lives. The NCI also helps educate cancer professionals, patients, and caregivers. Through these efforts, the NCI benefits cancer patients directly and indirectly.

Research

NCI-supported research helps cancer patients in many ways. Cutting-edge treatments are available to some patients through clinical trials, and many established cancer treatments are the result of previous NCI-funded research.

The NCI funds more cancer research than any organization in the world. Some of this research takes place in the NCI's own laboratories at the Center for Cancer Research in Maryland. The NCI supports other research projects through grants to universities, hospitals, private industry, and research foundations.

A key feature of the NCI's research initiatives is collaboration between institutions, especially in conducting clinical trials. For a trial to prove that a new treatment is safe and effective against a particular type of cancer, the treatment must be tested in hundreds or even thousands of patients. It's often impossible for a single cancer center to recruit this many patients. The NCI recognized this problem in the 1950s and established the Cooperative Group program, now called the National Clinical Trials Network (NCTN), to provide funding and infrastructure to support large, multi-institutional clinical trials. As many as 25,000 cancer patients partici-

pate in NCTN treatment or imaging trials at more than 3,100 centers each year.

The NCI also supports designated cancer centers, which conduct laboratory, clinical, and population-based research. The NCI sets the standards for these centers, which receive funds from the NIH in the form of Cancer Center Support Grants. Some of these NCI-designated cancer centers, including The University of Texas MD Anderson Cancer Center, earn the additional designation of comprehensive cancer center by providing community outreach and education programs.

Education

Education is an important part of the NCI's mission, and the agency's efforts in this area are broad in scope. Some of these efforts are geared toward professionals (cancer researchers and physicians), while others are focused on patients and caregivers.

For professionals, the NCI provides fellowships, training grants, and career development awards. Fellowships help people who have recently finished their advanced degrees to gain hands-on clinical or research experience under the guidance of expert mentors. Training grants help institutions set up fellowship and other training programs, and career development awards fund research by fellows and other junior researchers.

For both professionals and patients, the NCI offers Physician Data Query (PDQ, www.cancer.gov/publications/pdq), an online source of information about a multitude of cancer-related topics. PDQ summaries give information about screening, treatment, and supportive care for various cancers in children and adults. There are two summaries for each topic: a detailed, technical version for professionals and a patient-focused version. PDQ also provides information about genetics, cancer

drugs, alternative/complementary medicine, and cancer prevention as well as dictionaries of cancer terms, genetic terms, and cancer drugs.

The NCI provides a wealth of online resources specifically for patients at www.cancer.gov/resources-for/patients, including basic information about cancer, diagnosis and staging, treatment, treatment side effects, clinical trials, coping, managing care, and other cancer-related topics. More detailed fact sheets are available about individual types of cancer and specific treatments.

The NCI's online resources for caregivers (www.cancer.gov/resources-for/caregivers) include much of the same information that is available for patients. But additional information is available on topics such as support for caregivers and advice for parents of children with cancer.

Finally, the NCI Contact Center (www.cancer.gov/contact), also called the Cancer Information Service, is available to answer questions from patients, caregivers, health care providers, and researchers. The toll-free phone line (800-4-CANCER, or 800-422-6237) and live online chat are available Monday through Friday from 9:00 AM to 9:00 PM Eastern Time. And questions can be submitted at any time by an online submission form.

By funding cancer research and providing education for patients, caregivers, physicians, and researchers, the NCI supports cancer prevention, treatment, and survivorship throughout the United States. ■

FOR MORE INFORMATION

- Visit the NCI at www.cancer.gov
- Call askMDAnderson at 877-632-6789
- Email The Learning Center at MD Anderson at asktlcstaff@mdanderson.org
- Visit www.mdanderson.org
- To learn more about clinical trials, visit www.clinicaltrials.org

Aerosolized Gemcitabine

[Continued from page 6]

patients with osteosarcoma. “We want to get preliminary information to see if we should pursue a bigger study in patients with osteosarcoma,” Dr. Daw Bitar said. “But this novel therapeutic strategy doesn’t necessarily only apply to lung metastases from osteosarcoma. It can potentially be used in lung metastases from any solid tumors that respond to gemcitabine.”

Ensuring safety

“We monitor patients’ pulmonary function throughout the trial,” Dr. Gordon said. To facilitate this monitoring, patients are provided with a spirometer and a tablet. Before coming to the clinic on the day of each treatment, patients answer a questionnaire about their current health using the tablet and blow into the spirometer. The data from the questionnaire and spirometer are transferred to the patients’ physicians via a Web portal. A 10% or greater decline in pulmonary function is immediately investigated and, if the decline persists, could result in treatment cessation.

Several precautions are taken to ensure that hospital staff and patients’ family members are not exposed to the aero-

solized cytotoxic agent during treatment. Treatment is given on an outpatient basis at MD Anderson with the patient under a plastic canopy in a negative pressure room. The patient receives gemcitabine via a nebulizer that delivers treatment only when the patient inhales. Furthermore, the nurses administering the treatment wear filtration masks and protective gloves and garments.

“If we can prove that the treatment is safe and does not pose a risk to caregivers, our ultimate goal is for the patients to get their therapy at home,” Dr. Daw Bitar said. ■

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To learn more about the clinical trial of aerosolized gemcitabine for patients with lung metastases, visit www.clinicaltrials.org and search for study No. 2015-0720.

ERRATUM

The image on page 4 of our previous issue (“Diet May Improve Gut Microbiome in Colorectal Cancer Survivors,” *OncoLog*, May/June 2018; Vol. 63, No. 4–5) contained incomprehensible text because of a font issue. The correct image is available at <https://bit.ly/2L9l2ry>.

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