

Comprehensive, Personalized Breast Care

Avera Breast Center brings together all aspects of diagnosis, treatment and support

JANUARY 2012

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For a number of years, Avera McKennan has offered a full range of breast health services, with all the necessary components of diagnosis and treatment of breast cancer. Yet recent efforts to bring all the pieces together in a comprehensive, seamless program have resulted in world-class care through the Avera Breast Center.

The Avera Breast Center is the first comprehensive breast center in the state of South Dakota to hold full three-year accreditation through the National Accreditation Program for Breast Centers (NAPBC), which is administered by the American College of Surgeons. The Avera Breast Center is also an American College of Radiology Breast Imaging Center of Excellence.

“Five years ago, there was no comprehensive aspect to the breast cancer program in a formal sense, other than informal communication between doctors in the hallway or over the phone,” said Dr. Amy Krie, medical oncologist with Avera Medical Group Oncology & Hematology and medical director of the Avera Breast Center.

“Patients diagnosed with breast cancer go through so many different aspects of breast care. Outside of a comprehensive program, women have to figure out all the pieces for themselves,” said Jill Schultz, breast health manager for the Avera Breast Center. “A comprehensive approach improves quality of care, convenience for the patient, and efficiency.”

“We were providing good care through our breast program, but we knew we could do even better with more organized, more comprehensive care,” agreed Dr. Wade Dosch, surgeon with Avera Medical Group McGreevy 7th Avenue and partner in Avera Medical Group Comprehensive Breast Care, and cancer liaison physician to the American College of Surgeons’ Commission on Cancer. “The strength of the program that we have created is proven through our NAPBC accreditation, which is given to those centers that have voluntarily committed



to provide the highest level of quality breast care.”

The Prairie Center on the Avera McKennan campus is home to the Avera Cancer Institute, and the Avera Breast Center. “In this one location, women can receive screening and diagnostic services, surgical care, medical oncology and radiation oncology treatment, Integrative Medicine and survivorship care and support,” Dr. Dosch said. “Yet it’s more than bricks and mortar.”

Putting the pieces in place

Developments in the Avera Breast Center have been led by a Breast Health Professional Advisory Board. “Our role is to establish standards of care, and make sure we’re meeting those standards,” said Dr. Dosch. “The board guides the total program, strategically thinking ahead about what we should be doing, what’s new on the research front, and what’s becoming standard of care,” Schultz added.

Foundational to the cohesiveness of the program is the weekly Breast Conference, in which a multidisciplinary team of physicians meets to review each and every new case of breast cancer diagnosed at Avera.

“One key reason we established this system is so that no one falls through the cracks. Breast cancer is not a medical emergency – but it can be an emotional emergency for the patient. There is time to make an informed decision about the best possible treatment plan for that individual patient,” Dr. Dosch said. “Our multidisciplinary team recommends an individual plan of care for each patient,

based on all the options available. It has raised the bar, so that we are providing better care for all breast cancer patients than we did five or 10 years ago.”

“We know through research that patients who have their cases presented to a multidisciplinary conference have a higher rate of survival of breast cancer,” said Dr. Krie. The conference reviews five to 13 cases each week, including newly-diagnosed patients, post-surgical patients to review treatment plans, as well as patients with complex benign conditions.

“Through the conference, we’re able to collaborate and discuss what specific option is best for each woman, based on the type of cancer, the stage of the cancer, age, family history, risk of recurrence, demographics and more,” Dr. Krie said.

“Breast cancer is a multi-disciplinary disease. It is not a one-size-fits-all disease, but instead has numerous factors that make each patient unique,” said Dr. Julie Reiland, surgeon with Avera Medical Group Comprehensive Breast Care. As a breast surgeon, Dr. Reiland says she may have one idea how to treat a patient, but hears additional input through the Breast Conference. “It’s all complementary and additive. We’re all working together to come up with the exact best option for the patient,” Dr. Reiland said. “What’s great about the Breast Conference is that I have learned how my colleagues think about breast cancer, and I can take that knowledge and approach the treatment of breast cancer from a different perspective.”

“A COMPREHENSIVE APPROACH IMPROVES QUALITY OF CARE, CONVENIENCE FOR THE PATIENT, AND EFFICIENCY.”

- JILL SCHULTZ, BREAST HEALTH MANAGER FOR THE AVERA BREAST CENTER

Specialized care

Breast health navigators lend cohesiveness to the breast program as well. Navigators walk with patients through all aspects of diagnosis, treatment, follow-up and survivorship care. Most recently, the Avera Breast Center added nurse navigators who begin working with patients after an abnormal mammogram, before a breast cancer diagnosis is even confirmed. "They work with the patient as she gets additional images and biopsies if needed. Most turn out to be benign, yet these women have a number of questions and concerns," Dr. Dosch said. Once a diagnosis is confirmed, patients work with a certified nurse practitioner navigator. Navigators not only answer questions, they can expedite reports or appointments, and help patients know what to expect. Throughout treatment, navigators coordinate the care of multiple physicians. After treatment, navigators work with patients as they transition from "cancer patient" to "cancer survivor," with a long-term follow-up plan and complete summary of care for future reference.

Research is incorporated to provide cutting-edge treatments through clinical trials as well as groundbreaking research in the use of IntraOperative Electron Radiation Therapy (IOeRT) in the treatment of breast cancer, in cooperation with an international research consortium.

Beyond traditional treatments of surgery, chemotherapy and radiation, Avera has added the dimension of

Integrative Medicine, including massage, acupuncture, aromatherapy, mind-body movement, and more. "We are also offering survivorship care and dietitian support. All these pieces needed to be in place to have a truly comprehensive program," said Dr. Krie.

Avera has made significant strides in providing specialized care for women at higher risk for breast cancer, Dr. Krie said. Women who have a strong family history of breast cancer are evaluated, and genetic testing may be recommended if indicated. Depending on their risk, physicians work with patients on an optimal screening plan, lifestyle changes and medications to reduce their risk of cancer. Patients who test positive for the BRCA gene mutation are given the option of considering prophylactic mastectomy to prevent breast cancer. The BRCA gene mutation puts women at a 60 percent lifetime risk of developing breast cancer, compared to the normal risk of 12 percent.

The future of breast care

Gaining national accreditation and a new home for the Avera Breast Center were significant milestones, "but we're not finished," Dr. Dosch said.

One possibility for the future is a "second opinion clinic" in which patients could see all specialists in one day, such as a medical oncologist, radiation oncologist and surgeon, Dr. Dosch said. In the same spirit of the Breast Conference, this clinic would help ensure the patient receives the

best possible recommended plan of care.

The Avera Breast Center is working toward better and faster access to the team of breast cancer specialists for patients after an abnormal mammogram, Dr. Krie added.

"New treatments are constantly evolving," Dr. Krie said. "Not all breast cancers are the same, in fact there are several distinct types of breast cancer. Through genomics and genetic evaluation of tumors, we can distinguish which cancers benefit from chemotherapy, and which ones do not. In the future, we hope to arrive at more targeted therapy for breast cancer."

"Breast cancer treatment is very dynamic. There are excellent advancements coming out all the time," Dr. Reiland said. She hopes that in the future, breast cancer will no longer be viewed as a fearful, devastating diagnosis, but rather a medical problem that is very treatable with lessened effects on one's personal appearance and lifestyle. "We're getting closer to that, and it's very powerful. Women are not so much a victim anymore."

"Everyone on our team has a special interest in breast cancer care, and a personal mission to provide that higher standard of care," Dr. Dosch said. "We have a dedicated and vested interest to ensure that each patient gets the best and highest quality of care, at the same level as any cancer center in the country. This is our ultimate goal through the Avera Breast Center."

Components of a comprehensive breast program

The Avera Breast Center offers comprehensive breast care from prevention and screening to diagnosis, treatment, and survivorship care. Aspects of the program include:

State-of-the-art imaging and diagnostic tools

- Digital mammography, both screening and diagnostic
- A mobile digital mammography unit, serving women in the surrounding three-state area
- Breast ultrasound
- Breast Specific Gamma Imaging (BSGI), a powerful diagnostic tool for those challenging cases that often make fast, accurate diagnosis difficult. BSGI relies on the biologic

activity of tumors to produce images. Because the interpretation of BSGI is not affected by tissue density, it is an ideal diagnostic complement to mammography.

- Dexascan, a screening tool for osteoporosis
- Stereotactic guided biopsies
- Ultrasound guided biopsies
- Cyst aspiration
- Ductography (also called galactography or ductogalactography), a special type of contrast enhanced mammography used for imaging the

- breast ducts
- Breast MRI and MRI guided breast biopsy are available in the Avera McKennan Imaging Center
- Avera McKennan and the Avera Breast Center hold accreditation from the American College of Radiology in mammography, ultrasound, ultrasound guided biopsy, stereotactic biopsy and breast MRI.

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- DR. WADE DOSCH, SURGEON



The Avera Breast Center has a patient-friendly environment and process. For screening and diagnostic tests, patients check in, and go immediately to a dressing/consult room. Through another door, this room leads directly to the mammography room, so the patient experience is completely private. Patients do not have to wait in or walk through public or semi-public areas while wearing robes or gowns.

The latest treatment protocols

The range of breast cancer treatment through the Avera Cancer Institute and Avera Breast Center include breast surgery and reconstructive surgery, chemotherapy, radiation, and breast conservation surgery (lumpectomy) with external beam radiation or breast brachytherapy. And, on a research basis, some lumpectomy patients may qualify for IOERT, which shortens the traditional course of external-beam radiation.

“Virtually all breast cancer patients have some type of surgery, ranging from removal of only the part of the breast where the tumor is located and a sample of lymph nodes to establish stage of the cancer, to double mastectomy,” said surgeon Dr. Wade Dosch. “We know that if breast cancer spreads, it usually spreads to the lymph nodes first.” A sentinel lymph node biopsy is removal of the lymph node nearest the tumor to check for cancer cells.

Lumpectomy, or breast conserving surgery, is virtually always combined with

some form of radiation, either external beam or breast brachytherapy, in which a radioactive seed is placed directly in the cavity where the tumor was removed. “For early stage tumors, we know that outcomes are just as high as mastectomy,” Dr. Dosch said.

Dr. Barbara Schlager, radiation oncologist with Avera Medical Group Radiation Oncology, said that three decades ago, there was virtually only one treatment for breast cancer – mastectomy followed by radiation. “That was the treatment whether it was a 10 cm mass or a 2 mm mass,” she said. Also at that time, more than half of women had stage 2, 3 or 4 cancer when it was detected.

Thanks to today’s emphasis on annual mammography, tumors are detected when they are smaller, and when the cancer is in less advanced stages. “Because breast cancer is being found earlier, and thanks to the advancing science of medicine, we can offer breast conservation surgery with external beam radiation or brachytherapy with the same high outcomes as mastectomy. And now, through IOERT, we can deliver radiation directly into the open tumor bed during surgery,” Dr. Schlager said.

Targeted radiation works to prevent recurrence, which is most likely near the original tumor site, Dr. Schlager said. “Ninety percent of breast cancer recurrences are local.”

Oncoplasty, offered by breast surgeon Dr. Julie Reiland, is another option.

Oncoplasty involves using plastic surgery techniques at the time of the initial lumpectomy in order to make the breast look nice. “Of course, our first goal is to always get rid of the cancer. But then we can consider how we can help that woman look better, restore her self-esteem, and help her feel like she is back the way she was – or even better than before,” Dr. Reiland said.

Whether or not a patient needs mastectomy or double mastectomy depends on the size of the tumor, the size of the breast, if there are multiple spots of cancer, if it is an aggressive form of cancer, or if it is a second occurrence of breast cancer.

Mastectomy is removal of all breast tissue. Patients do not need radiation unless the tumor is close to other body structures, or if it has spread to lymph nodes. Patients may also benefit from chemotherapy if the cancer has spread to lymph nodes or beyond the breast. “Testing of the tumor, including molecular profiling, tells us if the patient would benefit from chemotherapy,” Dr. Dosch said.

After mastectomy, women may be fitted with a prosthesis or have reconstructive plastic surgery.

Through the Avera Cancer Institute, women have access to the latest in cancer care technology, including:

- **The ARTISTE linear accelerator.** This machine has the ability to closely tailor radiation doses for each individual treatment for greater effectiveness and decreased side effects.
- **Breast brachytherapy:** Selected patients, whose cancer is detected in early stages, can be treated with lumpectomy with targeted radiation therapy, involving the placement of a radioactive seed directly where the tumor was located. This treatment option has the benefit of minimizing the overall radiation treatment time frame to one week. The Avera Cancer Institute features a dedicated brachytherapy suite where patients receive the full course of treatment without having to be moved from one location to another.

“BECAUSE BREAST CANCER IS BEING FOUND EARLIER, AND THANKS TO THE ADVANCING SCIENCE OF MEDICINE, WE CAN OFFER BREAST CONSERVATION SURGERY WITH EXTERNAL BEAM RADIATION OR BRACHYTHERAPY WITH THE SAME HIGH OUTCOMES AS MASTECTOMY.”

- DR. BARBARA SCHLAGER, RADIATION ONCOLOGIST

- **External beam radiation with 3-D planning:** Select patients can opt for breast conserving surgery with external beam radiation with 3-D planning, which provides the highest possible accuracy in targeting treatment. At Avera McKennan, over a six-year period, cases treated in this way had only a 1.2 percent recurrence rate, compared to the national average of 7 to 10 percent.

Other aspects of the program:

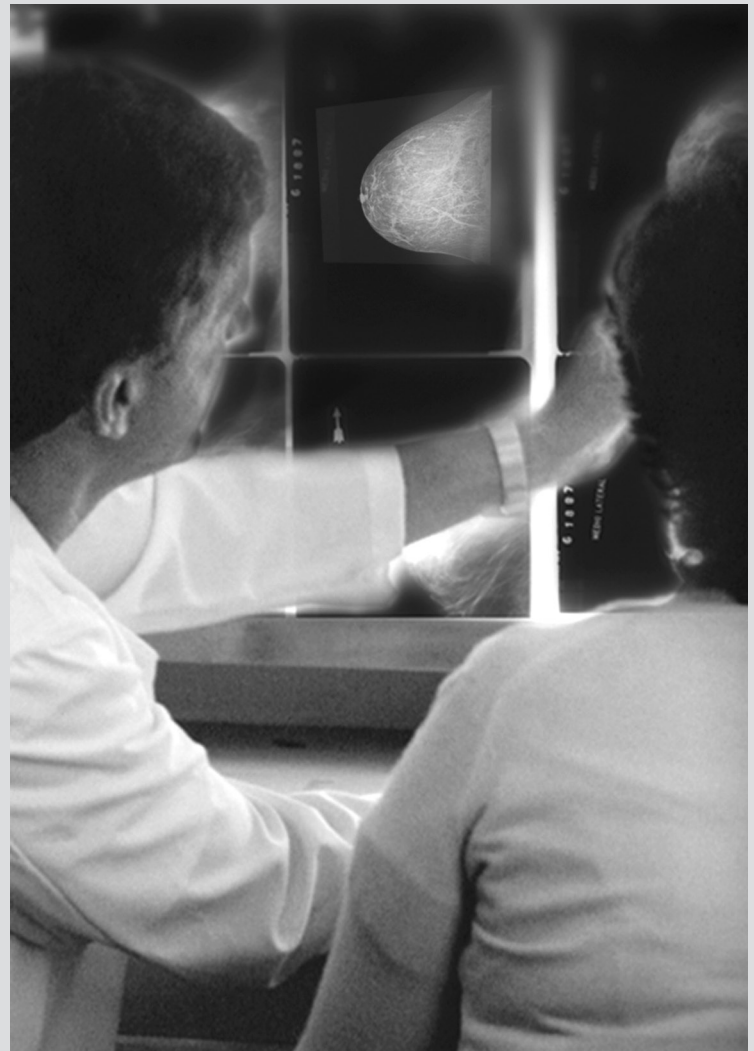
- A multi-disciplinary weekly breast conference, which reviews each new case of breast cancer diagnosed at Avera McKennan
- High-risk counseling with genetic testing
- A comprehensive breast navigation program
- Research, which includes access to clinical drug trials as well as a groundbreaking international study involving IOeRT in the treatment of breast cancer
- Survivorship care: After treatment, breast cancer survivors are offered a one-on-one transition visit to help them transition to life as a survivor rather than life as a cancer patient. Survivorship programs and support groups include Cancer Fitness Programs; Look Good, Feel Better; Young Women Affected by Breast Cancer; and A Time to Heal, a 12-week holistic rehabilitation program.
- Integrative Medicine, providing complementary therapies such as massage, acupuncture, aromatherapy, mind-body movement, and the Arts in Healing

- As a way to assist with anxiety and care for the whole person, the Avera Breast Center is offering massage therapy services, supported with funds raised through the Avera Race Against Breast Cancer
- Psychological and social services
- Nutritional services
- Community events including the Avera Race Against Breast Cancer with funds supporting local breast health programs, 'Think Pink' month education, and outreach
- Resource library
- Patient advocacy
- Spiritual support
- Complimentary wig program
- Lymphodema program

Clinical research trials

In addition, the Avera Cancer Institute is host to a number of clinical research studies for breast cancer patients, from the earliest stages of cancer (DCIS) and stage 1 invasive cancers all the way through metastatic disease (stage 4), said Cheryl Ageton, RN, clinic research coordinator for breast center clinical trials through the Avera Research Institute. The program has over a dozen open trials, with over 50 participating patients.

Avera is a site for both trials sponsored by the National Cancer Institute and pharmaceutical companies. "Clinical trials provide patients with new, cutting-edge treatments they otherwise would not have access to," Ageton said. Avera hosts many studies that are not available elsewhere locally, in the state or wider region.



"CLINICAL TRIALS PROVIDE PATIENTS WITH NEW, CUTTING-EDGE TREATMENTS THEY OTHERWISE WOULD NOT HAVE ACCESS TO."
- CHERYL AGETON, RN, CLINIC RESEARCH COORDINATOR, AVERA RESEARCH INSTITUTE

Groundbreaking research

The Avera Cancer Institute and Avera Breast Center are home to groundbreaking breast cancer research, with the use of IntraOperative Electron Radiation Therapy in the treatment of breast cancer.

IOeRT delivers a single targeted dose of radiation directly to a tumor site during surgery. While still in the research stages for breast cancer, IOeRT has already become standard treatment for certain types of cancer, such as advanced pelvic and abdominal tumors, sarcoma and colorectal cancers.

“This is exciting technology which we hope will ultimately give selected breast cancer patients another treatment option. We’re able to deliver the entire scope of treatment in a shorter time frame, and we hope we’ll see the same high outcomes that we’re already experiencing with other treatment regimens,” said Dr. Wade Dosch, surgeon and sub-investigator for the IOeRT study at Avera.

IOeRT equipment arrived on the Avera McKennan campus in May 2011. “We’re on track with the study. We were hoping to enroll two to three patients a month, and we’re already ahead of that plan. We have some patients who have already gone through the therapy and are now in the follow-up databank,” Dr. Dosch said.

Through the research project, IOeRT is presented as an option for women with early stage breast cancer. The treatment involves a lumpectomy, with IOeRT at the same time as surgery. Then women have three weeks of external beam radiation therapy. Radiation used in IOeRT is the same type of radiation which has been used for the past 40 years, whereas some other up-and-coming similar treatments employ a newer type of radiation which doesn’t have the same known history of effectiveness.

The study is comparing outcomes between patients treated with IOeRT, and patients treated with standard external beam radiation treatments for six weeks after lumpectomy. This standard treatment, or lumpectomy with breast brachytherapy, is very effective with high outcomes, a low recurrence rate and minor side effects.

Dr. Julie Reiland, Avera breast surgeon and principal investigator with the IOeRT study, says the Mobetron IOeRT machine at the Avera Cancer Institute is one of only 13 in the nation. “Avera is becoming a training center for other hospitals, as we are host to the first of the next generation of these machines.”

Patients will be followed for seven years after IOeRT treatment to track any incidence of recurrence. “Our thought is that lumpectomy with IOeRT and three weeks radiation will be just as effective as the existing standard of care, if not better,” Dr. Dosch said. If so, IOeRT could be a more convenient option for women, especially those who live in outlying areas who would need to drive to Sioux Falls to receive radiation treatments for six weeks following surgery.

The Avera Cancer Institute is the first U.S. institution to enroll patients in this international research trial, and the fourth institution in the world to enroll patients in the study.

In the rural Midwest, IOeRT could save significant drive time, stress and expense to cancer patients, Dr. Dosch said. “It is heartbreaking to watch a woman choose to have a mastectomy because she cannot tolerate the time commitment required of radiation therapy after breast conservation. It is hoped that more women – especially women in rural areas – would be able to fit the IOeRT treatment protocol into their schedule, and take advantage of breast-conserving surgery rather than undergoing mastectomy,” Dr. Dosch said.

Dr. Reiland says patients love participating in the study, not only because it’s more convenient for themselves, but because this study will help women who experience breast cancer in the future. “Women like to take care of each other and help someone else, and that is one of the key reasons they are eager to participate in this study,” she said.

IOeRT is being offered at Avera thanks to a \$2.5 million grant from the Leona M. and Harry B. Helmsley Charitable Trust. Results from the research study at the Avera Cancer Institute will eventually be combined with results from other research sites, and internationally published.