For the past three decades, Avera has been building a progressive, state-of-the-art cancer program. With expanded space and the latest cancer care technology, the Avera Cancer Institute offers the region’s most comprehensive, patient-centered cancer program.

The new Avera Cancer Institute has been designed by patients, for patients to be a place of hope, dignity, inspiration, courage and healing. The Avera Cancer Institute has been designed by patients, for patients to be a place of hope, dignity, inspiration, courage and healing.

The new Avera Cancer Institute facility now offers all this and more thanks to generous contributions from the community.

We have a dedicated team of physicians and staff who offer the latest in cancer care including:

- National Cancer Institute clinical trials
- The region’s most comprehensive and first NAPBC-accredited breast center, the Avera Breast Center
- The state’s only bone marrow transplant program
- Patient navigators in breast, gastrointestinal, lung and soon prostate
- Multidisciplinary teams of physicians and staff who meet weekly to design individualized plans of care for our patients
- The region’s largest Integrative Medicine program
- State-of-the-art surgical procedures such as robotics for gynecologic oncology and prostate and IntraOperative Electron Radiation Therapy for breast cancer surgery
- Comprehensive survivorship services

All this is offered in one location to help patients on their journey towards healing. I welcome you to read this publication to learn more about the region’s most comprehensive cancer program and how support from partners like you have made it possible.

Kris Gaster
Assistant Vice President for Outpatient Cancer Clinics

### Avera Medical Group Radiation Oncology

<table>
<thead>
<tr>
<th>Name</th>
<th>Phone</th>
<th>Medical Education</th>
<th>Residency</th>
<th>Fellowship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kathleen Schwenkloth, MD</td>
<td>(605) 332-1625</td>
<td>Creighton University School of Medicine, Omaha</td>
<td>Internal Medicine: St. Mary’s Medical Center; San Francisco Radiation Oncology: St. Mary’s Medical Center; San Francisco</td>
<td>Radiation Oncology: Albert Einstein Medical Center, Philadelphia</td>
</tr>
<tr>
<td>Barbara Schläger, MD</td>
<td>(605) 332-1625</td>
<td>Drexel University School of Medicine, Philadelphia</td>
<td>Radiation Oncology: Drexel University College of Medicine, Philadelphia; Radiation Oncology: Albert Einstein Medical Center, Philadelphia</td>
<td>Radiation Oncology: University of Iowa Hospitals and Clinics, Iowa City</td>
</tr>
<tr>
<td>James Simon, MD</td>
<td>(605) 322-1625</td>
<td>University of Iowa College of Medicine, Iowa City</td>
<td>Radiation Oncology: University of Iowa Hospitals and Clinics, Iowa City</td>
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### Avera Medical Group Gynecologic Oncology

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<tbody>
<tr>
<td>Luis A. Rojas, MD</td>
<td>(605) 322-7535</td>
<td>Universidad Nacional Pedro Henríquez Ureña, Santo Domingo, Dominican Republic</td>
<td>Radiation Oncology: American Academy of Oncology; University of Nebraska; University of Nebraska College of Medicine, Omaha</td>
<td>Radiation Oncology: University of Nebraska College of Medicine, Omaha</td>
</tr>
<tr>
<td>David Stark, MD</td>
<td>(605) 322-7535</td>
<td>University of Michigan Medical School, Ann Arbor</td>
<td>Radiation Oncology: University Hospitals of Cleveland; Cleveland</td>
<td>Radiation Oncology: Cleveland Clinic Foundation, Cleveland</td>
</tr>
<tr>
<td>Jennifer Rainer, CNP</td>
<td>(605) 322-7535</td>
<td>University of Cincinnati</td>
<td>Radiation Oncology: University of Cincinnati</td>
<td>Radiation Oncology: University Hospitals of Cleveland; Cleveland</td>
</tr>
<tr>
<td>Emily Andersen, CNP</td>
<td>(605) 322-7535</td>
<td>University of Nebraska College of Medicine, Omaha</td>
<td>Radiation Oncology: University of Nebraska College of Medicine, Omaha</td>
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### Avera Medical Group McHale Institute

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<th>Medical Education</th>
<th>Residency</th>
<th>Fellowship</th>
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<tbody>
<tr>
<td>Michael McHale, MD, FACP</td>
<td>(605) 339-4464</td>
<td>Medical Education</td>
<td>Family Medicine: Albert Einstein Medical Center, Philadelphia</td>
<td>Radiation Oncology: Albert Einstein Medical Center, Philadelphia</td>
</tr>
<tr>
<td>Missy Hoogewezen, CNP</td>
<td>(605) 339-4464</td>
<td>Medical Education</td>
<td>Family Medicine; Hahnemann University College of Medicine; University of Nebraska College of Medicine; Drexel University School of Medicine</td>
<td>Radiation Oncology: Albert Einstein Medical Center, Philadelphia</td>
</tr>
<tr>
<td>Theresa Mehlman, CNP</td>
<td>(605) 339-4464</td>
<td>Medical Education</td>
<td>Cancer Institute of New Jersey; University of Pennsylvania College of Medicine; Albert Einstein Medical Center, Philadelphia</td>
<td>Radiation Oncology: Albert Einstein Medical Center, Philadelphia</td>
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Cancer network and registry brings together cancer experts and data

A new regional Breast Cancer Network & Collaborative Registry (BCCR), launched with the National Cancer Institute Academic Center, and the Eppley Cancer Center at the University of Nebraska Medical Center in collaboration with the Avera Cancer Institute, is designed to bring cancer experts together, and gather patient information and tissue samples in order to develop improved prevention and treatment strategies in the fight against breast cancer.

This network and BCCR are designed to unite cancer centers with expertise in breast cancer epidemiology, genetics, biology, early detection and patient care to facilitate rapid and uniform collection of critical information and biological samples to be used in developing prevention and treatment strategies against breast cancer. One of the major goals of the network and the BCCR is to help researchers and clinicians identify factors that influence the risk of developing breast cancer, key factors that influence survival, and how the disease and different treatments affect the quality of life of breast cancer survivors.

Initiatives of the BCCR:
- Whole genome analysis to assist physicians in making the best treatment recommendations for their individual patients
- An e-Breast Cancer Registry to provide patients with personalized cancer prevention and control information
- An e-Breast Cancer Conference, in which patient cases are reviewed by a multidisciplinary team that collaborates on best treatment protocols
- e-Breast Cancer Consultation in which breast cancer specialists review cases submitted by oncologists

The purpose of this collaborative oncology network is to develop a national breast cancer resource and database in order to impact and influence diagnosis and treatment, and identify therapies which are specific and customized for each patient and offer less toxicity and improved survival.
Virtually everyone is touched by cancer. Those who are not cancer survivors themselves have someone very close to them who has experienced cancer. One of every two men, and one of every three women will be diagnosed with cancer at some point within their lifetime.

Because of this far-reaching impact, Avera McKennan has made a strong commitment to world-class cancer care. In addition to a new state-of-the-art facility, we continue to develop state-of-the-art programs, for example, tumor specific navigation services, case conferences, Integrative Medicine and enhanced survivorship care. We have purposefully put every piece in place in order to offer a destination cancer center, right here in Sioux Falls.

Our cancer care team is working tirelessly to provide personalized service. Through multidisciplinary collaboration, our goal is to develop the very best possible plan of care for each and every patient, whether that approach includes surgery, medical or gynecologic oncology, transplant, radiation oncology or participation in a clinical trial. We’re proud to be involved in research that offers cutting-edge options, including IntraOperative Electron Radiation Therapy in the treatment of breast cancer. And the whole time, our team is there alongside patients, offering a hand to hold and guiding them through their cancer journey.

We are also proud of our loyal partners and donors who have made gifts to support programs and services that help us carry out our mission. Your gifts have made a difference in the lives of our patients and their families by providing compassionate support and innovative care.

What patients experience at the Avera Cancer Institute, in a word, can be described as comprehensive. Our expert medical professionals work in partnership to achieve outcomes that meet or exceed those of national cancer centers. We’re delivering expert, comprehensive care to bring healing not only to the body, but to the mind and spirit as well.

Dr. David Kapaska
Regional President and CEO
Avera McKennan Hospital & University Health Center

•\n**Integrative therapies (cont.)**

• Massage therapy
  * Promotes relaxation
  * Relieves pain
  * Improves depression
  * Builds muscle tone
  * Decreases fatigue
  * Treats insomnia
  * Clears toxins
  * Enhances circulation

Each treatment room in the Integrative Medicine area is equipped with a specialized massage table designed for the comfort of cancer patients.

• Mind-body movement

Movement is not only therapeutic physically, but also emotionally and mentally.

Therapeutic movement classes include:
  * Tai Chi
  * Yoga
  * Pilates & core exercises
  * Guided exercises after cancer
  * And other specialty classes

• Arts in Healing program

Patients engage in these artistic activities that provide therapeutic benefits:
  * Painting
  * Drawing
  * Beadwork
  * Needlework
  * Pottery
  * Music

Artistic endeavors can take a patient’s focus off symptoms, and provide a positive emotional outlet.

• Nutrition counseling

A full-time dietician dedicated to cancer care helps patients with:
  * Weight gain or loss
  * Nausea
  * Choosing foods that enhance health during treatment

These services would not have been made possible without the generosity of our donors. We are grateful to have the region’s largest Integrative Medicine program and continue to offer these enhanced services to further our mission in treating the whole person; body, mind and spirit.

Survivorship
An important phase of cancer care

From the moment a person is diagnosed with cancer, that person is considered a cancer survivor. “Survivorship is seen as another phase of cancer care,” said Julie Dixin, ACI outpatient cancer program manager.

• A survivorship plan of care is a document that is built throughout cancer care and treatment, listing the specific diagnosis and stage of the cancer, and all treatment modes.

• Upon completion of treatment, patients sit down with a social worker and navigator and discuss the survivorship plan. This includes
  * Understanding what patients may expect in the long term
  * Recommendations for preventative health care, such as regular mammograms, pap smears or colonoscopies

• If patients move to a new community or travel, they can take their survivorship plan with them, and have all the documentation of the cancer care they received at the Avera Cancer Institute.

• Patients are also informed of any support programs that exist, including "A Time to Heal,” the cancer fitness program, support groups, and more.

• This process is currently "hard wired” into the breast cancer program, and also takes place for patients with other types of cancer, such as gynecologic, lung and GI cancers.

The transition between life as a patient and life as a cancer survivor can be a time of anxiety and uncertainty, said Lynne Hunter, social worker at the Avera Cancer Institute. “Cancer treatment is a time of meeting and overcoming new challenges day to day. Survivorship is all about returning to life.”
Holistic health, treating the body, mind and spirit

“The Avera Cancer Institute recognizes that along with a physical body, each individual has emotional, mental and spiritual aspects to his or her being. Holistic health is a healing philosophy that treats not only the physical body, but also the mind and spirit,” says Marcia Jones, Integrative Medicine supervisor at the Avera Cancer Institute.

Research shows that some 80 percent of cancer patients seek out therapies which complement their traditional medical treatment.

Cancer patients and non-cancer patients alike can benefit from Integrative Medicine offered at the Avera Cancer Institute. “Medications are often important for a person’s health and healing, but many patients seek out additional natural and holistic therapies as well. Quality of life is an important consideration. People are investing more time in themselves in order to feel well and get the most out of their days,” said Jones.

Integrative Medicine therapies complement traditional medical treatments, and address symptoms such as pain or nausea, as well as anxiety, stress and insomnia.

- **Integrative therapies**
  - Acupuncture
    Acupuncture is a therapy typically associated with pain relief, but it can also be used to treat a range of conditions. Acupuncture is provided by Dr. Dawn Flickema, family practitioner with Avera Medical Group McGreevy 69th & Western, who has received additional specialized training in medical acupuncture. While the patient relaxes, meridian points are stimulated by the placement of very thin needles for 12 to 20 minutes. Dr. Flickema performs 20–40 acupuncture treatments a week with the Integrative Medicine program in the Avera Cancer Institute.
  - Aromatherapy
    Inhaling the aroma of essential oils can help relieve pain, nausea, anxiety, insomnia and more. Some beneficial essential oils used to address these symptoms are:
    - Peppermint
    - Lavender
    - Mandarin
    - Ginger
    - Frankincense

An institute designed for cancer patients

The newly-constructed Prairie Center on the Avera McKennan campus in Sioux Falls is home to the Avera Cancer Institute. With 260,000 square feet of usable space, this building is unmatched as an environment of healing, designed for patients by patients.

The Prairie Center’s architectural design reflects our home on the Northern Plains of South Dakota. As a “green” building, the facility is friendly to our environment. Free of potentially toxic building materials, the building is also friendly to the people who come inside our doors for healing. Indoor and outdoor landscaping provides beauty as well as a vital connection to nature. The Prairie Center welcomes the community with public meeting space, a café with delicious menu choices, and continually changing art exhibits. In a setting of empowerment and healing, the Avera Cancer Institute offers a dedicated and experienced team of cancer experts, and the most advanced cancer treatment technology.

Beautiful and inspiring, the Avera Cancer Institute is a comprehensive care center which provides virtually all aspects of cancer care under one roof, including:
- Medical Oncology
- Hematology
- Bone Marrow Transplant
- Gynecologic Oncology
- Radiation Oncology
- Cancer Research
- Infusion Services
- Integrative Medicine
- Screening & Diagnostic Imaging
- Surgery
As the Cancer Liaison Physician (CLP) for Avera McKennan via the Commission on Cancer (CoC), my role is to provide leadership and direction in supporting the cancer program as well as helping maintain and comply with the CoC’s standards.

The Commission on Cancer is a consortium of professional organizations dedicated to improving survival and quality of life for cancer patients. The CoC accreditation program is voluntary and only granted to programs which provide the best cancer care and comply with established cancer care standards.

The cancer program at Avera McKennan has been accredited for the past 25 years, and we received the CoC’s Outstanding Achievement Award in 2009. Accreditation ensures that comprehensive care including a complete range of state-of-the-art equipment and services is available, and that data analysis, ongoing cancer clinical trials, cancer registry and prevention/early detection programs are in place. Our program also participates in the National Cancer Data Base (NCDB) to follow benchmark standards and enhance quality of care.

The CoC’s recognition validates that Avera McKennan’s cancer program is on par with the best cancer centers in the country, and reflects the high level of dedication of our physicians and staff, as well as the outstanding quality of our programs.

Dr. Wade Dosch
Surgeon and Cancer Liaison Physician to the CoC

### Comments from CoC Liaison physician Dr. Wade Dosch

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Dr. Wade Dosch
Surgeon and Cancer Liaison Physician to the CoC

### Summary by Body System and Sex Report

<table>
<thead>
<tr>
<th>Males</th>
<th>Females</th>
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<tbody>
<tr>
<td>Oral Cavity &amp; Pharynx ............</td>
<td>12 (2%)</td>
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<tr>
<td>Lung &amp; Bronchus .................</td>
<td>94 (13%)</td>
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<tr>
<td>Pancreas .......................</td>
<td>26 (4%)</td>
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<tr>
<td>Kidney &amp; Renal Pelvis ..........</td>
<td>26 (4%)</td>
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<tr>
<td>Urinary Bladder ...............</td>
<td>40 (6%)</td>
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<tr>
<td>Colon &amp; Rectum ..............</td>
<td>73 (10%)</td>
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<td>Prostate .....................</td>
<td>161 (22%)</td>
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<tr>
<td>Non-Hodgkin Lymphoma .........</td>
<td>41 (6%)</td>
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<td>Melanoma of the Skin ..........</td>
<td>29 (4%)</td>
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<tr>
<td>Leukemia ....................</td>
<td>34 (5%)</td>
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<tr>
<td>All Other Sites ................</td>
<td>182 (25%)</td>
</tr>
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Source: Avera Cancer Institute Cancer Registry

Images reprinted by the permission of the American Cancer Society, Inc. from www.cancer.org. All rights reserved.

### Cancer care near your community

The Avera Cancer Institute – bringing care, hope and healing to your community with physicians seeing cancer patients at these locations:

- Aberdeen, S.D.
- Brookings, S.D.
- Huron, S.D.
- Lake地区的
- Marshall, S.D.
- Pierre, S.D.
- Rock Valley, Iaowa
- Sioux Center, Iaowa
- Spirit Lake, Iaowa
- Watertown, S.D.
- Worthington, S.D.
- Armour, S.D.
- Estherville, Iaowa
- Luverne, S.D.
- Parkston, S.D.
- Pipestone, Minn.
- Sibley, Iaowa
- Spencer, Iaowa
- Tyler, Minn.
- Windom, Minn.
- Avera Queen of Peace Hospital, Mitchell, S.D.
- Avera Sacred Heart Hospital, Yankton, S.D.
- Avera St. Luke’s Hospital, Aberdeen, S.D.

Avera Regional Cancer Centers also include:

- Avera Queen of Peace Hospital, Mitchell, S.D.
- Avera Sacred Heart Hospital, Yankton, S.D.
- Avera St. Luke’s Hospital, Aberdeen, S.D.
From the patient’s perspective, a cancer diagnosis is difficult and even overwhelming.

A navigator is that person who comes alongside patients and their families to help guide them through the process of diagnosis, treatment, and survivorship. The navigator is a constant presence for the patient and family throughout the cancer care journey. Navigators:

• Provide answers to questions
• Provide education to help patients understand their diagnosis and pathology report
• Help patients focus on treatment decisions
• Expedite appointments
• Inform patients of all the resources and support services available to them

In furthering our mission, we are grateful to the community for making these services possible. Through private gifts and funds from the Avera Race Against Breast Cancer, we continue to provide vital navigation services to our patients and families.

“Cancer patients receive multi-modality treatment. As one constant in their treatment, navigators can answer questions at the patient’s level and interpret what’s being said by the medical community,” says Carole Chell.

• **Breast**
  The breast health navigator program was the first to be established at the Avera Cancer Institute. If a breast cancer diagnosis is confirmed, Nancy Terveen, CNP, provides navigation from diagnosis to completion of treatment.

• **Gastrointestinal**
  GI navigation services are provided by Liz Harden, CNP, who is available to all patients who have a diagnosis of gastrointestinal cancer or serious non-cancerous digestive disease.

• **Lung**
  Carole Chell, CNP, is the navigator for all patients diagnosed with lung cancer. Carole pioneered the navigation concept at Avera McKennan through the breast program, and is now taking her expertise to begin a navigation program for lung cancer patients.

• **Prostate**
  A generous gift from Doug and Mary Bowden in honor of their fathers who both had prostate cancer will fund a prostate navigator position. This navigator will assist in guiding men newly diagnosed with prostate cancer through their journey by providing education, support and assistance with other services.

**Accreditation and Awards**

The American College of Surgeons Commission on Cancer accreditation ensures the highest standards of care for cancer patients.

CEO Cancer Gold Standard™ accreditation recognizes the commitment of organizations to reduce the risk of cancer for employees and their families. Avera McKennan Hospital & University Health Center is the first company in South Dakota to receive this accreditation.

Foundation for the Accreditation of Cellular Therapy (FACT) accreditation for autologous and allogeneic adult transplantation, donor collection and lab processing of cellular products.

The Avera Breast Center received National Accreditation Program for Breast Centers (NAPBC) accreditation, administered by the American College of Surgeons; NAPBC accreditation is given to those centers that have voluntarily committed to provide the highest level of quality breast care.

The Avera Breast Center received American College of Radiology Breast Imaging Center of Excellence accreditation in all of the ACR’s voluntary breast-imaging programs and modules.

The Prairie Center received the 2011 Mayoral Beautification Award in the Business and/or Public Space category, as nominated by Sioux Falls Beautiful.
Research confirms clinic environment makes a difference for patients

The Environmental Study surveyed patients to measure their perceptions between care received in a traditional clinic design – in the former Avera Cancer Institute, and a patient-centered care environment – in the new Avera Cancer Institute housed in the Prairie Center.

• A total of 545 patients were surveyed – 299 who received care in the former Avera Cancer Institute, and 246 who received care in the new.
• The Avera Cancer Institute collaborated with research staff at the University of Vermont to develop the Physical Environment Questionnaire, surveying patients concerning:
  • Cleanliness
  • Air quality
  • Way-finding
  • Navigation ease
  • Lighting
  • Natural elements
  • Spaces for social activities, privacy, healing, sound and art
  • Overall look and design

Results showed:
• Higher patient satisfaction with the new clinic environment
• Significant associations between the clinic’s environment and patients’ emotional and behavioral functioning, and spiritual well-being

Existing research on this topic is limited, and this was the largest study of this kind to date. “We are grateful for the willingness of our patients and family members who took time to share their insight into how the environment impacts their well-being,” said Jarra Binder, oncology research nurse at the Avera Cancer Institute and coordinator of the project.

• Avera selected for ENACCT research project (cont.)
Goals of this program are to:
• Develop standard best practices
• Ensure that all patients who could potentially benefit from participating in a study are identified
• Clear up any public misconceptions about medical research

“By participating in the ENACCT project, the Avera Research Institute will be on the ground floor of developing best practices that will be utilized by cancer centers across the United States,” added Ryan Hansen, executive director of the Avera Research Institute.

• Avera research study evaluates effect of weight loss on cancer survival
Medical researchers have determined that obesity increases the risk of breast cancer, and the risk of recurrence of breast cancer and other estrogen-dependent cancers. What’s more, obesity increases the risk of dying from estrogen-receptor positive cancers, including breast and endometrial cancer. Due to this link, Dr. Amy Krie, medical oncologist with Avera Medical Group Oncology & Hematology who specializes in breast cancer, has instigated a study through the Avera Research Institute to find the impact of targeted weight loss upon survival of estrogen-positive cancer patients.

Estrogen in the body fuels tumor growth for estrogen-dependent cancer, and obesity increases levels of estrogen in the body. Obesity also provides other factors that fuel tumor growth. In addition to estrogen levels and obesity, increased levels of insulin increase the risk of dying from breast cancer.

Through this study:
• Approximately 30 cancer patients have been placed on a commercial diet plan, which provides adequate protein and decreased carbohydrates. Patients are monitored to ensure their health remains strong.
• Patients will be followed for 10 years, when the chance of recurrence is the highest.

If results of this small pilot study are positive, future studies may be expanded to a wider scope.

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“Our results validate that all the measures we took to create a patient-centered design are making a difference in the lives of our patients,”
~ Fred Slunecka
COO, Avera Health

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Genetics
In collaboration with the Avera Institute for Human Genetics, genetics is a growing focus of cancer research through the Avera Research Institute. One aspect is banking of specimens, in which researchers can look for genetic markers or mutations, which vary by tissue type and cancer type. “With today’s growing emphasis on personalized medicine, virtually all research projects have a genetics component,” said Krista Bohlen, research pharmacist with the Avera Research Institute. “Overall goals of genetic research are to uncover opportunities for prevention and earlier detection – perhaps at pre-cancerous stages through blood or urine samples, and to match genetic response with treatment for greater effectiveness of medications and chemotherapy.”

Krista Bohlen
Research Pharmacist
Avera Research Institute
Avera Research Institute offers 100 clinical trials

The Avera Research Institute, in collaboration with the Avera Cancer Institute, currently has approximately 100 open clinical studies through the National Cancer Institute, and industry sponsors. Patients may also participate in investigator-initiated trials — studies in which our physician proposes his or her own idea to research.

Seven research nurses, a research pharmacist and additional support staff coordinate trials in their area of expertise. Avera’s focus is to offer patients cutting-edge treatment options through national clinical trials, as well as to find new prevention, diagnosis, and treatment strategies.

Research Programs

• **Cancer Research Committee supports research process and spurs new ideas**

  Avera’s Cancer Research Committee brings together professionals from the Avera Cancer Institute and Avera Research Institute to:
  - Support the cancer research process
  - Generate ideas for research development
  - Encourage investigator-initiated studies — those studies based on an idea of Avera physicians

• **Avera selected for ENACCT research project**

  The Avera Research Institute is one of five sites nationwide selected by ENACCT, the Education Network to Advance Cancer Clinical Trials, to help develop best practices for community-based cancer centers when participating in clinical trials.

  Currently, best practices for enrolling patients into clinical trials at community cancer centers have not been formally identified. “We’re looking at the entire continuum of care, and critical pathways from the point of diagnosis or entry into the clinic, through follow-up care to identify best practices in research,” said Janna Binder, oncology research nurse with the Avera Research Institute.
Medical
• Dedicated
• Radiation
• Lymphedema
• Pathologists
• Genetic

Multidisciplinary Cancer Center
at
Avera
Breast
Center

Program overview

The Avera Breast Center brings together all aspects of breast care into one comprehensive program. This includes screening and all aspects of diagnostic imaging technology, early detection and diagnosis of breast cancer, and all treatment modalities including surgery, radiation oncology and medical oncology.

At our weekly Breast Conference, a multidisciplinary team of breast specialists develop and recommend the best treatment plan for each patient. Women receive navigation services, survivorship care, and seamless referral to specialists.

• First program in South Dakota to hold three-year/full accreditation by the National Accreditation Program for Breast Centers (NAPBC), administered by the American College of Surgeons.
• A Breast Imaging Center of Excellence (BICOE) as designated by the American College of Radiology

Women don't choose to get breast cancer, but they can choose their team. Our dedicated multidisciplinary team includes:

• Pathologists
• Radiologists
• Dedicated Breast Surgeons
• Plastic Surgeons
• Dedicated Breast Cancer Medical Oncologist
• Radiation Oncologists
• Lymphedema Specialists
• Genetic Counselor
• Patient Navigators
• Dietician
• Social Workers
• Chaplain
• Researchers
• Technologists

• Every woman. Every time.
100% of women diagnosed with breast cancer have their personal cases reviewed by a team of experts not once, but twice, for the best treatment plan.

• Breast Cancer Registry
Joining with a National Cancer Institute Designated Academic Center, Eppl ey Cancer Center at the University of Nebraska Medical Center, a regional Breast Cancer Network & Collaborative Registry (BCCR) provides a vital link for:
• Breast cancer epidemiology
• Genetics
• Patient personalized treatment
• Breast cancer biology

The goal is to develop prevention and treatment strategies against breast cancer through continued research.

• IntraOperative Electron Radiation Therapy
Participation in this trial with Salzburg, Austria, provides radiation at the time of breast-conserving surgery, and reduces the course of radiation treatments after surgery from six weeks to three weeks. Our site was first in the nation to enroll a patient in the trial.

• Finding the best prevention and treatment
• Genetic counseling for screening and risk reduction
• National clinical trials offering the best treatment
• Genetic testing to determine tumor response to chemotherapy

Groundbreaking research: IOeRT/Hypofractionation

The Avera Cancer Institute is conducting groundbreaking research in the use of IntraOperative Electron Radiation Therapy (IOeRT) in the treatment of breast cancer.

Thanks to a $2,492,032 grant from the Leona M. and Harry B. Helmsley Charitable Trust, a research-based project is allowing early-stage breast cancer patients to receive IOeRT at the time of surgery, and a shorter course of treatment of breast irradiation after breast-conserving surgery, or lumpectomy.

IOeRT is a high-dose radiation “boost” which shortens the course of post-surgery radiation treatments by weeks. In combination with hypofractionation, the overall treatment course for external beam radiation is cut in half, from six weeks to three weeks. “It is hoped the study will show that outcomes are just as high, or higher, than standard treatments,” said Dr. Julie Reiland, Avera breast surgeon and a co-principal investigator in the IOeRT study.

The study is comparing outcomes between patients treated with lumpectomy, IOeRT and three weeks of external beam radiation treatments to patients treated with surgery and six weeks of standard external beam radiation treatments. “Our thought is that lumpectomy with IOeRT and three weeks of radiation will be just as effective as the existing standard of care, if not better,” said Dr. Barbara Schlager, radiation oncologist with Avera Medical Group Radiation Oncology. Patients will be followed for seven years after IOeRT treatment to track any incidence of recurrence.

“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,” said Dr. Reiland.

Technology spans the miles in cancer care consults

eConsult allows patients to connect with specialists without driving long distances

Complex cancer treatments require frequent visits with the oncologist, hematologist, gynecologic oncologist or radiation oncologist. Patients in distant locations are able to connect to their physicians through telemedicine technology or through eConsult.

These visits are offered through state-of-the-art interactive video in South Dakota, Iowa and Minnesota. Patients are very grateful for the ability to be seen closer to home while receiving care from specialists.
**Program overview**

- **Precision treatment**
  A matched pair of ARTISTE™ linear accelerators provides the most advanced technology in radiation therapy. A key benefit of these machines is they allow the most basic to the most elegant treatment plans to be carried out. Use of 180 leaves to sculpt around the tumor spares normal tissue, and the machine delivers Adaptive Radiation Therapy (ART) to tailor treatments according to each patient’s needs.

- **Brachytherapy Suite**
  - Region's only dedicated Brachytherapy Suite—offers imaging, applicator placement and treatment in one location
  - This translates into more accurate treatment and quality outcomes for the patient
  - Brachytherapy is offered for:
    - Prostate cancer
    - Breast cancer
    - Gynecologic cancers
    - Cancer of the head and neck
    - Lung cancers
    - Hepatobiliary cancers
    - Skin cancer

- **Radiosurgery**
  A treatment option for tumors which cannot be removed with surgery.

- **Prostate seed therapy**
  This therapy is offered by the region's most experienced radiation oncologists. A partnership with urologists ensures the highest level of care for men with this disease is available at the Avera Cancer Institute.

- **Clinical trials**
  Both treatment and symptom control studies available:
  - Radiological Physics Center (RPC)
  - National Surgical Adjuvant Breast and Bowel Project (NSABP)
  - Gynecologic Oncology Group (GOG)
  - North Central Cancer Treatment Group (NCCCTG)

- **Patient education website**
  A unique patient education website, www.Avera.org/BeASurvivor, combines informative text by Dr. Vladimir Lange, with 3-D graphics and video interviews with Avera physicians, staff and patients, to help patients and their families cope with a breast cancer diagnosis.

- **Breast Health Professional Advisory Board**
  This group of physicians leads developments in programs and standards of care, and strategically plans for future initiatives.
  - Dr. Josie Alpers, Radiology
  - Dr. James Breit, Reconstructive Surgery
  - Dr. Wade Dosch, Breast Surgery
  - Dr. Karen Helling, Family Medicine
  - Dr. Brenda Kalkemeyer, Obstetrics/Gynecology
  - Dr. Amy Krie, Breast Cancer Medical Oncology
  - Dr. Patrick Miller, Reconstructive Surgery
  - Dr. Courtney Moore, Family Medicine
  - Dr. Karla Murphy, Pathology
  - Dr. Patrick Nelson, Radiology
  - Dr. Julie Reiland, Breast Surgery
  - Dr. Amal Salama, Obstetrics/Gynecology
  - Dr. Kathleen Schneekloth, Radiation Oncology
  - Dr. Diane Sneed, Pathology

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**Lisa’s story of hope**

Cancer survivorship gives Lisa a new direction in life

Grateful for early detection and the support of others, Lisa Ladenburger of Sioux Falls looks back on her journey through breast cancer as a difficult time, but one that changed her life for the better.

“Going through breast cancer makes you evaluate your life, and the experience has changed my life in so many ways. I had gotten so distracted from what is really important – my husband, my kids and my family.”

Lisa’s cancer was found during a routine mammogram. “If I had not gone in for my annual mammogram, the cancer would have been found later, probably at a stage or two further along.” She says she’s grateful that radiologist Dr. Josie Alpers ordered further testing, although the suspicious lesion was very small.

Lisa was treated by oncologist Dr. Amy Krie and surgeon Dr. Julie Reiland. “I only have good things to say about Avera, my physicians, and all the people I worked with. It meant a lot that there were people there to hold my hand through the emotional times.”

As a breast cancer survivor, Lisa is an honorary co-chair of the annual Avera Race Against Breast Cancer. “I feel passionately about the cause, and I have the hope that someday young women will not have to go through what I have.”

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**Breast Cancer Cases, 2006 - 2011**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>193</td>
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<tr>
<td>2007</td>
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<td>262</td>
</tr>
<tr>
<td>2010</td>
<td>271</td>
</tr>
<tr>
<td>2011</td>
<td>327</td>
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</table>

Source: Avera Cancer Institute Cancer Registry
Digestive Disease Institute

Program overview

Our dedicated team of health professionals provides comprehensive care, education and support services for patients diagnosed with cancer and other complex diseases of the digestive tract.

From screening to diagnosis to treatment and follow-up care, a multidisciplinary team of physicians and other medical professionals are committed to helping patients experience a seamless continuum of care, compassionate services, and best possible outcomes.

Our weekly GI conference brings together a multidisciplinary team of GI specialists who develop and recommend an individualized plan of care specific for each patient case presented.

- Plans of care follow guidelines set by the National Comprehensive Cancer Network (NCCN), a national alliance dedicated to improving the quality and effectiveness of cancer care.
- Referring physicians are welcome to attend the conference when their patient’s case is presented.

Our dedicated multidisciplinary team brings together:

- Colorectal Surgery
- Gastroenterology
- Genetics
- Medical Oncology
- Radiation Oncology
- Cancer Research
- Patient Navigation
- Social Work
- Colorectal fellowship trained surgeon
- General Surgery
- Hepatobiliary
- Pathology
- Radiology
- Transplant
- Chaplain
- Dietician
- Urogynecology

- Scott Baker, MD, surgeon with Surgical Institute of South Dakota, is fellowship trained in colorectal surgery. Dr. Baker offers the latest minimally invasive techniques, which help patients experience less pain and recover faster.

Endometrial cancer patient is thankful for partnership of the Avera team

As a patient under the care of Dr. Luis Rojas and his staff, Rennae Petersen said she felt like members of her care team were like friends and family. But more important, she felt like a partner in her care. “I was given choices, and was informed about those choices. I knew what was going on, and what to expect. That made the acceptance of living with cancer easier.”

Rennae, a piano teacher in Marshall, Minn., was diagnosed with endometrial cancer at age 65, in September 2011. “It came as a bit of a shock.” She was referred to Dr. Rojas at the Avera Cancer Institute. “That match was God-directed. I immediately felt comfortable with him. I was impressed with the speed at which we moved ahead.”

Rennae said Dr. Rojas was always so confident and reassuring that she hated to see her regular appointments end. He suggested she take the “A Time to Heal” 12-week program, which helped Rennae transition from cancer patient to cancer survivor. Rennae says, “I say now that I don’t have cancer, and I try to be grateful every day.”

- Brachytherapy Suite
  - The Avera Cancer Institute’s dedicated suite for brachytherapy provides the highest quality of care and state-of-the-art treatment planning to create the most sophisticated treatment plans for those women with gynecologic cancers.

- Survivorship care
  - When patients complete their course of treatment they receive a survivorship visit. Patients meet with a social worker and nurse practitioners who cover:
    - Social, emotional and safety concerns
    - Support services
    - Support resources
    - Diagnosis and treatment summary and clarification
  - A treatment summary document is provided to the patient and primary care provider, as well as a survivorship plan of care and additional resources to take home.

Gynecologic Oncology - 2011

Source: Avera Cancer Institute Cancer Registry

Endometrium 66
Ovary 20
Vulva 10
Cervix 11
Peritoneum 5
Other Female Organs 3

Rennae’s story of hope

I don’t have cancer, and I try to be grateful every day. ”
• Differences in the genetic outcomes.

Genetic

Gynecologic Oncology Program

• Robotic surgery

Avera McKennan Hospital & University Health Center has added a second da Vinci® Surgical System - the da Vinci Si™, the next generation in this technology. “The new system accommodates the latest surgical techniques, as well as growing numbers of patients who choose robotic procedures,” says Dr. Luis Rojas, gynecologic oncologist and surgeon. Robotics are used for gynecologic procedures, including hysterectomy, as well as several other surgical applications. The da Vinci Si™ offers new technology including blood vessel mapping, tumor mapping, and single port incision surgery. “Robotics has significantly changed minimally-invasive surgery at Avera McKennan. Our surgeons and patients have been extremely pleased with the outcomes,” said Dr. Rojas.

• Clinical trials

The Avera Cancer Institute participates in Gynecologic Oncology Group (GOG) studies through an affiliation with Cleveland Clinic. The GOG has approximately 45 individual active clinical trials for cancers of the ovary, uterus, cervix, vagina, and vulva.

• Genetic screening through pathology

Digestive Disease Institute specialists have adopted the Revised Bethesda Criteria as a means of screening for hereditary colon cancer syndromes. When the criteria are met, tissue from the tumor is sent for a genetic screening test (mismatch repair [MMR] by immunohistochemical stain [IHC]). If the test results are suggestive of MMR absence, the patient is referred to the certified genetic counselor for additional definitive testing for hereditary colon cancer syndrome.

• Endoscopic ultrasound

Endoscopic Ultrasound (EUS), is one of the most significant developments in endoscopy over the past 20 years. This highly technical procedure is the integration of endoscopy and ultrasonography which aids in the diagnosing and staging of the cancers listed below:

- Luminal Cancers (Esophageal, Gastric, Colorectal)
- Extraluminal Cancers (Pancreatic, Liver, Lung)
- Metastases (Lymph Nodes, Vessels)

• Digestive Disease Professional Advisory Board

This group of physicians leads developments in programs and standards of care, and strategically plans for future initiatives.

- Dr. Scott Baker, Colorectal Surgery
- Dr. Steven Condron, Gastroenterology & Hepatology
- Dr. Wade Dosch, Surgery
- Dr. Christopher Hurley, Gastroenterology & Hepatology
- Dr. Bath Schlag, Radiation Oncology
- Dr. Kathleen Schneekloth, Radiation Oncology
- Dr. Dany Shamoun, Gastroenterology & Hepatology
- Dr. Raed Sulaiman, Pathology
- Dr. Addison Tolentino, Medical Oncology & Hematology
- Dr. Sabina Choudhry, Radiology
- Dr. Andrew Burchett, Family Medicine
- Dr. Hesham Elgohairi, Hepatology
- Dr. Matthew Barker, Urogynecology

Continuous innovation

An estimated 88,000 new cases of gynecologic cancer are diagnosed each year nationwide, including cancer of the cervix, uterus, ovary, vulva and vaginal area. This comprises about 11 percent of all cancers in women. There are nearly 29,600 cancer deaths from gynecologic cancer, comprising about 11 percent of all cancer deaths in women. Avera’s gynecologic oncology program offers the latest treatment options and personalized plans of care for the best possible outcomes.

• Genetic bio-banking

With the Avera Research Institute, tissue samples are collected during surgical procedures for patients with ovarian, uterine, cervical or other gynecologic cancers. Researchers are able to study:

- Differences between tumors in patients
- Differences in tumors from the same patient
- Genetic markers or mutations

From these findings, physicians can create personalized treatment regimens.

Laura’s story of hope

Facing pancreatic cancer, Laura chooses to be “better” instead of “bitter”

While many would view stage 4 pancreatic cancer as a discouraging diagnosis, Laura Hanisch of Brandon, S.D., chooses not to go there. “You have two choices — you can be bitter, or you can be better. I’m choosing to be better.”

Laura, 61, was diagnosed in August 2011. “I was aware of the symptoms of pancreatic cancer, so when I became jaundiced, I called my family doctor.” Blood work and a CT scan indicated that Laura did indeed have pancreatic cancer. She was not a candidate for surgery, and began chemotherapy and radiation.

By January, the cancer had metastasized to her liver. Under the treatment of Dr. Addison Tolentino, Laura is trying a more aggressive chemotherapy regimen.

“So many people at Avera are five-star people. They have been so kind and compassionate to me.”

Laura enjoys a good quality of life, including frequent fishing trips with her husband, Lee, as well as trips to visit her children and grandchildren in Phoenix, Ariz. “When I have a good day, I do what I can. When I have a bad day, I rest.”

She’s become an advocate for pancreatic cancer research, and has been blessed by becoming part of cancer support groups. She also meets with newly-diagnosed patients.

“I’ve made so many friends. Some I’ve just met in the waiting room. When you’re both going through cancer, you develop a bond.”

Women’s Men’s Digestive System Cases, 2011

<table>
<thead>
<tr>
<th>System</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
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<tbody>
<tr>
<td>Esophagus</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Other Gastrointestinal Tract</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Liver</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Pancreas</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Stomach</td>
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<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Colon</td>
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<td>4</td>
<td>8</td>
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<tr>
<td>Small Intestines</td>
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<td>2</td>
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<tr>
<td>Rectum</td>
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<td>1</td>
<td>2</td>
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<tr>
<td>Urinary</td>
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<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>19</td>
<td>38</td>
</tr>
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</table>

Source: Avera Cancer Institute Cancer Registry
Comprehensive Lung Program

Program overview

Development of this comprehensive lung program began with the multidisciplinary Professional Advisory Board. This board meets to set priorities and discuss best practices and standards of care. Two key components of the lung program have been launched:

- Multidisciplinary conference
- Lung patient navigation

Multidisciplinary Lung Conference

A weekly conference is held to review lung disease and lung cancer cases. The multidisciplinary team includes:

- Medical Oncologists
- Pulmonologists
- General Surgeons
- Thoracic Surgeons
- Social Worker
- Dietician
- Chaplain
- Radiation Oncologists
- Radiologists
- Pathologists
- Research Coordinator
- Lung Patient Navigator
- Palliative Care Medicine

- Genetic testing on tumor tissue for the EGFR (epidermal growth factor receptor) gene can determine if a patient would benefit from drugs that inhibit EGFR, including Erlotinib. Testing for the EML4/ALK genetic mutation can determine if the drug Crizotinib would be effective.
- Stereotactic Body Radiation Therapy is a treatment that can improve survival for patients with early-stage, inoperable lung cancer. Using sophisticated imaging with multiple radiation beams, this therapy delivers a high dose of concentrated and precisely focused radiation to the tumor in three to five treatments.
- Endobronchial High Dose Rate Brachytherapy is used when a lung tumor is located near the bronchial tubes. This treatment allows radiation to be delivered at the tumor site.

Lung navigation

Navigation for lung cancer patients involves contact with patients at the time of diagnosis, and providing one-on-one education and support throughout treatment.

State-of-the-art treatment

Clinical trials give patients access to cutting-edge treatment

Bone Marrow Transplant

<table>
<thead>
<tr>
<th>Year</th>
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<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
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<td>4%</td>
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<td>2%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Patient says bone marrow transplant was difficult, yet well worth it

After no other treatments curbed the spread of lymphoma, Duane “Mick” Konz of Hospers, Iowa, was referred to the Avera Cancer Institute for a bone marrow transplant. “My kids were all there to see me be reborn,” says Mick, 68.

In May 2006, Mick was diagnosed with non-Hodgkin’s lymphoma. After the results of the biopsy came back, Mick remembers sitting down with his wife, Mary, and the doctor. The doctor said, “you have cancer, and it will change your life forever” – and it did. Mick had two rounds of chemotherapy, but the cancer kept coming back.

In December 2006, he was referred to the Avera Cancer Institute, and first had 18 radiation treatments, which also did not stop the spread of his cancer. Dr. Vinod Parameswaran at Avera Medical Group Hematology & Bone Marrow Transplant recommended an autologous bone marrow transplant. In September 2007, Mick’s bone marrow transplant took place.

Mick remembers his bone marrow transplant as a difficult journey. “But it was well worth it,” he said. Mick realizes that he has numerous “guardian angels.”

“I would do anything for those doctors and nurses. I just love all those people and Dr. Vinod became like family to us.”

Care Connection helps lighten the burdens that cancer patients carry

The physicians at the Avera Cancer Institute are aware that there are emotional, psychological and mental burdens that patients carry, as well as concerns for how their medical bills will be covered and arranging for any needed time off work. The Care Connection is a time when a patient meets with a patient advocate and social worker to discuss these concerns.

Patient advocate

- Help patients understand their health insurance coverage and assist with co-payments and pre-authorizations
- Help patients apply for assistance programs and resources to help with co-payments or other uncovered medical expenses

Social workers

- Help patients to cope with their illness through education and support
- Link patients with resources to help with needs such as transportation, lodging or in-home help
- Help patients work with their employers in applying for Family Medical Leave, or disability coverage
Program overview

South Dakota's only physicians dedicated to hematological care and bone marrow transplant.

- **Treatment of malignant disorders of the blood:**
  - Acute and chronic leukemia
  - Myelodysplastic syndromes
  - Hodgkin's and non-Hodgkin's lymphoma
  - Aplastic Anemia
  - Multiple Myeloma

- **Treatment of non-malignant disorders of the blood:**
  - Coagulation disorders

- **Bone marrow transplant**
  Bone marrow transplant has become a standard of care, as it offers disease-free survival for cancers of the blood (listed above). Avera's program provides both autologous transplants, in which the patient uses his or her own stem cells, and allogeneic transplant, in which sibling or unrelated donor cells or cord blood are used.
  - FACT accreditation: The Avera Transplant Institute's bone marrow transplant program holds accreditation from the Foundation for the Accreditation of Cellular Therapy (FACT) for autologous and allogeneic adult transplantation, donor collection and lab processing of cellular products.

- **Clinical trials**
  Hematological patients are offered the opportunity to participate in clinical drug trials sponsored by the National Cancer Institute and pharmaceutical companies. Trials are currently open for patients diagnosed with:
  - Myelodysplastic Syndrome
  - Leukemia
  - Multiple Myeloma
  - Lymphoma
  - Myelofibrosis

- **Lymphoma and Leukemia Service**
  Avera's hematologist specialists have the most experience in the region caring for those with lymphoma and leukemia. Comprehensive services ensure the most advanced care for those with these diagnoses.

- **Lung Professional Advisory Board**
  This group of physicians leads the development of programs and standards of care and strategically plans for future initiatives.
  - Dr. Peter Andreone, Thoracic Surgeon
  - Dr. Michael Bauer, General Surgeon
  - Dr. Joann Bennett, Palliative Care Medicine
  - Dr. Mark Huber, Medical Oncologist
  - Dr. Fady Jamous, Pulmonary Medicine
  - Dr. Paul Meyer, Thoracic Surgeon
  - Dr. Brad Paulson, Radiologist
  - Dr. Bruce Prouse, Pathology
  - Dr. Barb Schlager, Radiation Oncology

Donor for navigation

A new lung navigator position at the Avera Cancer Institute was made possible thanks to a generous donation from Howard and Christine Hellekson. Diagnosed with lung cancer, Howard underwent treatment at the Avera Cancer Institute in 2010.

Christine Hellekson states, “A cancer diagnosis propels the patient and family into a confusing and sometimes paralyzing world. Going through the journey with my husband, we both knew we wanted to do something to help others dealing with the same difficult journey. It is our hope that the navigator will be an advocate for the patient as well as a liaison with the patient’s medical team.” Howard passed away in November 2010, but his legacy lives on through an endowment which supports the lung navigator position at the Avera Cancer Institute.

<table>
<thead>
<tr>
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<tr>
<td>Myelodysplastic Syndrome</td>
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<tr>
<td>Multiple Myeloma</td>
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<td>Hodgkin Lymphoma</td>
<td>4</td>
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Source: Avera Cancer Institute Cancer Registry

Support of family and caregivers gives hope for patient facing lung cancer treatment

In October 2011, Carrie Knutson of Volga, S.D., began coughing up blood. “At first I thought it was due to a dry throat.” As the symptoms got worse, she went to her doctor, and a CT scan showed a mass on her right lung. It was diagnosed as small cell carcinoma.

Carrie, her husband, and three adult children knew it was a very serious diagnosis. “What could I do but fight it?” I have a lot of family support, and the nursing staff was wonderful.”

Carrie had four rounds of chemotherapy and 30 radiation treatments. She completed her treatment in December, just days before her Dec. 24 birthday. “A chest X-ray came back perfect - with no signs of cancer.” Carrie’s next round of treatment was 15 low-dose radiation treatments to prevent a recurrence of cancer in the brain. “Instead of a 20 percent chance of recurrence in the brain, I’ll have a 5 percent chance.”

“My journey was not easy but I’m here. I was here for my birthday, and I’m here for my family, and there’s no value I could place on the time that was given back to me – God bless them all. I’m hoping to pay it forward by encouraging someone else at the end of my journey, with a story of my positive experience.”

Christine Hellekson, Donor for navigation Matt Ellefson, Lung Cancer Survivor
Prostate Cancer Program

Program overview
Over 240,000 new cases of prostate cancer are diagnosed each year, making it the most frequently diagnosed cancer in men. The Avera Cancer Institute ensures that comprehensive treatment options are available to men diagnosed with prostate cancer through a strong collaboration among:
- Urologists
- Radiation Oncologists
- Medical Oncologists

Treatment options for prostate cancer
- Robotic prostate procedures
  Since 2007, robotic procedures have been performed at Avera McKennan using the da Vinci® surgical systems. Robotic procedures offer these benefits:
  - Allow surgeons to spare nerves in the pelvic region, helping to preserve urinary continence and sexual function
  - Less blood loss and pain
  - Shorter hospital stay and quicker recovery

- PROVENGE® Therapy
  The Avera Cancer Institute offers men living with advanced prostate cancer an innovative treatment option. PROVENGE® is the only prostate cancer immunotherapy to be approved by the Food and Drug Administration.

Each dose of PROVENGE® is completely personalized to consist of the individual’s own immune cells that have been activated to identify and attack prostate cancer cells. “There’s a good survival benefit with few side effects or risks,” said Dr. Mark Huber, medical oncologist. Qualifying patients are:
- Those with prostate cancer that has spread beyond the prostate
- Those with prostate cancer that is resistant to hormonal treatment
- Those who are free of severe pain or symptoms due to prostate cancer

“Our goal is to delay progression of the cancer, and maintain a good quality of life,” Dr. Huber said.

- Intensity Modulated Radiation Therapy (IMRT) with fiducial marker placement, and Image Guided Radiation Therapy (IGRT).
- High Dose Rate Brachytherapy
  This therapy delivers a high dose of radiation through implants delivered via catheters placed close to or inside the tumor or tumor bed.
- Low-dose seed implants
  Selected patients can be treated for prostate cancer with low-dose radioactive seed implants, offered by the region’s most experienced radiation oncologists.
- Prostate Cancer Support Group
  Led by radiation oncologists and urologists, the Prostate Support Group is a place for men and their support person to find education and support. This group welcomes men who are:
  - Newly diagnosed
  - In active treatment
  - Post treatment

Prostate cancer patient is thankful for extended life
Roy Ehlen of Sioux Falls was troubled with prostate problems for several years, as his PSA level steadily climbed. So when prostate cancer was diagnosed in 2011, he couldn’t duck the issue. “At that point, I either needed to have it excised surgically, or have radiation.”

He opted for low-dose seed implants based on the favorable experience of a long-time friend, and received treatments through Avera Medical Group Radiation Oncology. At first, his case was diagnosed as stage 1 cancer, but then was upgraded to stage 2. For that reason, his physicians also recommended external radiation therapy.

Roy, 76, is thankful that his cancer was stopped in its tracks, and he can go forward to enjoy life and benefit others. Still involved in the aluminum recycling business he built from the ground up after serving in the Army stateside during the Korean War, Roy is now launching a project to benefit the Wounded Warriors Project.

“Roy’s story of hope isn’t unique. Avera McKennan was recently named a National Wounded Warrior Project Project Hero, for its ongoing commitment to helping military veterans through its Comprehensive Wounded Warrior Program.”

Source: Avera Cancer Institute Cancer Registry

Genitourinary System - 2011

Roy's story of hope

Prostate Cancer Surgery

2011 1% 4% 95%
2010 1% 3% 92%
2009 2% 77%
2008 4% 61% 8%

Robotic converted to Open Open Robotic

Source: Avera Cancer Institute Cancer Registry
Program overview

Over 240,000 new cases of prostate cancer are diagnosed each year, making it the most frequently diagnosed cancer in men. The Avera Cancer Institute ensures that comprehensive treatment options are available to men diagnosed with prostate cancer through a strong collaboration among:

- Urologists
- Radiation Oncologists
- Medical Oncologists

Treatment options for prostate cancer

- Robotic prostate procedures
  Since 2007, robotic procedures have been performed at Avera McKennan using the da Vinci® surgical systems. Robotic procedures offer these benefits:
  - Allow surgeons to spare nerves in the pelvic region, helping to preserve urinary continence and sexual function
  - Less blood loss and pain
  - Shorter hospital stay and quicker recovery

- PROVENGE® Therapy
  The Avera Cancer Institute offers men living with advanced prostate cancer an innovative treatment option. PROVENGE® is the only prostate cancer immunotherapy to be approved by the Food and Drug Administration.

Each dose of PROVENGE® is completely personalized to consist of the individual’s own immune cells that have been activated to identify and attack prostate cancer cells. “There’s a good survival benefit with few side effects or risks,” said Dr. Mark Huber, medical oncologist. Qualifying patients are:

- Those with prostate cancer that has spread beyond the prostate
- Those with prostate cancer that is resistant to hormonal treatment
- Those who are free of severe pain or symptoms due to prostate cancer

“Our goal is to delay progression of the cancer, and maintain a good quality of life,” Dr. Huber said.

- Intensity Modulated Radiation Therapy
  (IMRT) with fiducial marker placement, and Image Guided Radiation Therapy (IGRT).

- High Dose Rate Brachytherapy
  This therapy delivers a high dose of radiation through implants delivered via catheters placed close to or inside the tumor or tumor bed.

- Low-dose seed implants
  Selected patients can be treated for prostate cancer with low-dose radioactive seed implants, offered by the region’s most experienced radiation oncologists.

- Prostate Cancer Support Group
  Led by radiation oncologists and urologists, the Prostate Support Group is a place for men and their support person to find education and support. This group welcomes men who are:
  - Newly diagnosed
  - In active treatment
  - Post treatment

Prostate cancer patient is thankful for extended life

Roy Ehlen of Sioux Falls was troubled with prostate problems for several years, as his PSA level steadily climbed. So when prostate cancer was diagnosed in 2011, it wasn’t a huge surprise. “At that point, I couldn’t duck the issue. I either needed to have it excised surgically, or have radiation.”

He opted for low-dose seed implants based on the favorable experience of a long-time friend, and received treatments through Avera Medical Group Radiation Oncology. At first, his case was diagnosed as stage 1 cancer, but then was upgraded to stage 2. For that reason, his physicians also recommended external radiation therapy.

“There is an alpha and an omega – a beginning and an end. But this treatment extended my life, and I’m deeply grateful. Everything was taken care of with unbelievable ease.”

Genitourinary System - 2011

Women Men

0 161 Prostate
12 40 Urinary Bladder
17 26 Kidney & Renal Pelvis
1 0 Ureter
0 1 Testis
0 2 Other Urinary Organs

Source: Avera Cancer Institute Cancer Registry

Roy, 75, is thankful that his cancer was stopped in its tracks, and he can go forward to enjoy life and benefit others. Still involved in the aluminum recycling business he built from the ground up after serving in the Army stateside during the Korean War, Roy is now launching a project to benefit the Wounded Warriors Project.

Roy’s story of hope
Carrie’s story of hope

Support of family and caregivers gives hope for patient facing lung cancer treatment

In October 2011, Carrie Knutson of Volga, S.D., began coughing up blood. “At first I thought it was due to a dry throat.” As the symptoms got worse, she went to her doctor, and a CT scan showed a mass on her right lung. It was diagnosed as small cell carcinoma.

Carrie, her husband, and three adult children knew it was a very serious diagnosis. “What could I do but fight it?” I have a lot of family support, and the nursing staff was wonderful.”

Carrie had four rounds of chemotherapy and 30 radiation treatments. She completed her treatment in December, just days before her Dec. 24 birthday. “A chest X-ray came back perfect – with no signs of cancer.” Carrie’s next round of treatment was 15 low-dose radiation treatments to prevent a recurrence of cancer in the brain. “Instead of a 20 percent chance of recurrence in the brain, I’ll have a 5 percent chance.”

“My journey was not easy but I’m here. I was here for my birthday, and I’m here for my family, and there’s no value I could place on the time that was given back to me – God bless them all. I’m hoping to pay it forward by encouraging someone else at the end of my journey, with a story of my positive experience.”

Donor for navigation

A new lung navigator position at the Avera Cancer Institute was made possible thanks to a generous donation from Howard and Christine Hellekson. Diagnosed with lung cancer, Howard underwent treatment at the Avera Cancer Institute in 2010.

Christine Hellekson states, “A cancer diagnosis propels the patient and family into a confusing and sometimes paralyzing world. Going through the journey with my husband, we both knew we wanted to do something to help others dealing with the same difficult journey. It is our hope that the navigator will be an advocate for the patient as well as a liaison with the patient’s medical team.” Howard passed away in November 2010, but his legacy lives on through an endowment which supports the lung navigator position at the Avera Cancer Institute.
Comprehensive Lung Program

Program overview

Development of this comprehensive lung program began with the multidisciplinary Professional Advisory Board. This board meets to set priorities, and discuss best practices and standards of care. Two key components of the lung program have been launched:

- Multidisciplinary conference
- Lung patient navigation

Multidisciplinary Lung Conference

A weekly conference is held to review lung disease and lung cancer cases. The multidisciplinary team includes:

- Medical Oncologists
- Pulmonologists
- General Surgeons
- Thoracic Surgeons
- Social Worker
- Dietician
- Chaplain
- Radiation Oncologists
- Pathologists
- Research Coordinator
- Lung Patient Navigator
- Palliative Care Medicine

- Genetic testing on tumor tissue for the EGFR (epidermal growth factor receptor) gene can determine if a patient would benefit from drugs that inhibit EGFR, including Erlotinib. Testing for the EML4/ALK genetic mutation can determine if the drug Crizotinib would be effective.
- Stereotactic Body Radiation Therapy is a treatment that can improve survival for patients with early-stage, inoperable lung cancer. Using sophisticated imaging with multiple radiation beams, this therapy delivers a high dose of concentrated and precisely focused radiation to the tumor in three to five treatments.
- Endobronchial High Dose Rate Brachytherapy is used when a lung tumor is located near the bronchial tubes. This treatment allows radiation to be delivered at the tumor site.

Bone Marrow Transplant

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Patient says bone marrow transplant was difficult, yet well worth it

After no other treatments curbed the spread of lymphoma, Duane “Mick” Konz of Hospers, Iowa, was referred to the Avera Cancer Institute for a bone marrow transplant. “My kids were all there to see me be reborn,” says Mick, 69.

In May 2006, Mick was diagnosed with non-Hodgkin’s lymphoma. After the results of the biopsy came back, Mick remembers sitting down with his wife, Mary, and the doctor. The doctor said, “you have cancer, and it will change your life forever” – and it did. Mick had two rounds of chemotherapy, but the cancer kept coming back.

In December 2006, he was referred to the Avera Cancer Institute, and first had 18 radiation treatments, which also did not stop the spread of his cancer. Dr. Vinod Parameswaran at Avera Medical Group Hematology & Bone Marrow Transplant recommended an autologous bone marrow transplant. In September 2007, Mick’s bone marrow transplant took place.

Mick remembers his bone marrow transplant as a difficult journey. “But it was well worth it,” he said. Mick realizes that he has numerous “guardian angels.” “I would do anything for those doctors and nurses. I just love all those people and Dr. Vinod became like family to us.”

Care Connection helps lighten the burdens that cancer patients carry

The physicians at the Avera Cancer Institute are aware that there are emotional, psychological and mental burdens that patients carry, as well as concerns for how their medical bills will be covered and arranging for any needed time off work. The Care Connection is a time when a patient meets with a patient advocate and social worker to discuss these concerns.

Patient advocates
- Help patients understand their health insurance coverage and assist with co-payments and pre-authorizations
- Help patients apply for assistance programs and resources to help with co-payments or other uncovered medical expenses

Social workers
- Help patients cope with their illness through education and support
- Link patients with resources to help with needs such as transportation, lodging or in-home help
- Help patients work with their employers in applying for Family Medical Leave, or disability coverage

Program overview

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- Pathologists
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- Lung Patient Navigator
- Palliative Care Medicine

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- Endobronchial High Dose Rate Brachytherapy is used when a lung tumor is located near the bronchial tubes. This treatment allows radiation to be delivered at the tumor site.
An estimated 88,000 new cases of gynecologic cancer are diagnosed each year nationwide, including cancer of the cervix, uterus, ovary, vulva and vaginal area. This comprises about 11 percent of all cancers in women. There are nearly 29,600 cancer deaths from gynecologic cancer, comprising about 11 percent of all cancer deaths in women. Avera’s gynecologic oncology program offers the latest treatment options and personalized plans of care for the best possible outcomes.

**Genetic bio-banking**
With the Avera Research Institute, tissue samples are collected during surgical procedures for patients with ovarian, uterine, cervical or other gynecologic cancers. Researchers are able to study:
- Differences between tumors in patients
- Differences in tumors from the same patient
- Genetic markers or mutations
From these findings, physicians can create personalized treatment regimens.

**Continuous innovation**

**Robotic surgery**
Avera McKennan Hospital & University Health Center has added a second da Vinci® Surgical System - the da Vinci Si™, the next generation in this technology. “The new system accommodates the latest surgical techniques, as well as growing numbers of patients who choose robotic procedures,” says Dr. Luis Rojas, gynecologic oncologist and surgeon. Robotics are used for gynecologic procedures, including hysterectomy, as well as several other surgical applications. The da Vinci Si™ offers new technology including blood vessel mapping, tumor mapping, and single port incision surgery. “Robotics has significantly changed minimally-invasive surgery at Avera McKennan. Our surgeons and patients have been extremely pleased with the outcomes,” said Dr. Rojas.

**Clinical trials**
The Avera Cancer Institute participates in Gynecologic Oncology Group (GOG) studies through an affiliation with Cleveland Clinic. The GOG has approximately 45 individual active clinical trials for cancers of the ovary, uterus, cervix, vagina, and vulva.

**Digestive Disease Professional Advisory Board**
This group of physicians leads developments in programs and standards of care, and strategically plans for future initiatives.
- Dr. Scott Baker, Colorectal Surgery
- Dr. Steven Condron, Gastroenterology & Hepatology
- Dr. Wade Douch, Surgery
- Dr. Christopher Hurley, Gastroenterology & Hepatology
- Dr. Bath Schlagler, Radiation Oncology
- Dr. Kathleen Schneekloth, Radiation Oncology
- Dr. Dany Shamoun, Gastroenterology & Hepatology
- Dr. Raed Sulaiman, Pathology
- Dr. Addison Tolentino, Medical Oncology & Hematology
- Dr. Sabina Choudhry, Radiology
- Dr. Andrew Burchett, Family Medicine
- Dr. Hesham Elgouhari, Hepatology
- Dr. Matthew Barker, Urogynecology

**Genetic screening through pathology**
Digestive Disease Institute specialists have adopted the Revised Bethesda Criteria as a means of screening for hereditary colon cancer syndromes. When the criteria are met, tissue from the tumor is sent for a genetic screening test (mismatch repair [MMR] by immunohistochemical stain [IHC]). If the test results are suggestive of MMR absence, the patient is referred to the certified genetic counselor for additional definitive testing for hereditary colon cancer syndrome.

**Endoscopic ultrasound**
Endoscopic Ultrasound (EUS), is one of the most significant developments in endoscopy over the past 20 years. This highly technical procedure is the integration of endoscopy and ultrasonography which aids in the diagnosing and staging of the cancers listed below:
- Luminal Cancers (Esophageal, Gastric, Colorectal)
- Extraluminal Cancers (Pancreatic, Liver, Lung)
- Metastases (Lymph Nodes, Vessels)

**Facing pancreatic cancer, Laura chooses to be “better” instead of “bitter”**
While many would view stage 4 pancreatic cancer as a discouraging diagnosis, Laura Hanisch of Brandon, S.D., chooses not to go there. “You have two choices — you can be bitter, or you can be better. I’m choosing to be better.”

Laura, 61, was diagnosed in August 2011. “I was aware of the symptoms of pancreatic cancer, so when I became jaundiced, I called my family doctor.”

Blood work and a CT scan indicated that Laura did indeed have pancreatic cancer. She was not a candidate for surgery, and began chemotherapy and radiation.

By January, the cancer had metastasized to her liver.

Under the treatment of Dr. Addison Tolentino, Laura is trying a more aggressive chemotherapy regimen. “So many people at Avera are five-star people. They have been so kind and compassionate to me.”

Laura enjoys a good quality of life, including frequent fishing trips with her husband, Lee, as well as trips to visit her children and grandchildren in Phoenix, Ariz. “When I have a good day, I do what I can. When I have a bad day, I rest.”

She’s become an advocate for pancreatic cancer research, and has been blessed by becoming part of cancer support groups. She also meets with newly-diagnosed patients.

“I’ve made so many friends. Some I’ve just met in the waiting room. When you’re both going through cancer, you develop a bond.”
Digestive Disease Institute

Program overview
Our dedicated team of health professionals provides comprehensive care, education and support services for patients diagnosed with cancer and other complex diseases of the digestive tract.

From screening to diagnosis to treatment and follow-up care, a multidisciplinary team of physicians and other medical professionals are committed to helping patients experience a seamless continuum of care, compassionate services, and best possible outcomes.

Our weekly GI conference brings together a multidisciplinary team of GI specialists who develop and recommend an individualized plan of care specific for each patient case presented.

- Plans of care follow guidelines set by the National Comprehensive Cancer Network (NCCN), a national alliance dedicated to improving the quality and effectiveness of cancer care.
- Referring physicians are welcome to attend the conference when their patient’s case is presented.

Our dedicated multidisciplinary team brings together:
- Colorectal Surgery
- Gastroenterology
- Genetics
- Medical Oncology
- Radiation Oncology
- Cancer Research
- Patient Navigation
- Social Work
- Colorectal fellowship trained surgeon
- Scott Baker, MD, surgeon with Surgical Institute of South Dakota, is fellowship trained in colorectal surgery. Dr. Baker offers the latest minimally invasive techniques, which help patients experience less pain and recover faster.

- General Surgery
- Hepatobiliary
- Pathology
- Radiology
- Transplant
- Chaplain
- Dietician
- Urology

Endometrial cancer patient is thankful for partnership of the Avera team
As a patient under the care of Dr. Luis Rojas and his staff, Rennae Petersen said she felt like members of her care team were like friends and family. But more important, she felt like a partner in her care. “I was given choices, and was informed about those choices. I knew what was going on, and what to expect. That made the acceptance of living with cancer easier.”

Rennae, a piano teacher in Marshall, Minn., was diagnosed with endometrial cancer at age 65, in September 2011. “It came as a bit of a shock.” She was referred to Dr. Rojas at the Avera Cancer Institute. “That match was God-directed. I immediately felt comfortable with him. I was impressed with the speed at which we moved ahead.”

Rennae said Dr. Rojas was always so confident and reassuring that she hated to see her regular appointments end. He suggested she take the “A Time to Heal” 12-week program, which helped Rennae transition from cancer patient to cancer survivor. Rennae says, “I say now that I don’t have cancer, and I try to be grateful every day.”

- Brachytherapy Suite
  The Avera Cancer Institute’s dedicated suite for brachytherapy provides the highest quality of care and state-of-the-art treatment planning to create the most sophisticated treatment plans for those women with gynecologic cancers.

- Survivorship care
  When patients complete their course of treatment they receive a survivorship visit. Patients meet with a social worker and nurse practitioner who cover:
- Social, emotional and safety concerns
- Support services
- Support resources
- Diagnosis and treatment summary and clarification

A treatment summary document is provided to the patient and primary care provider, as well as a survivorship plan of care and additional resources to take home.

Rennae’s story of hope

Gynecologic Oncology - 2011
Source: Avera Cancer Institute Cancer Registry

Endometrium 66
Ovary 20
Vulva 10
Cervix 11
Peritoneum 5
Other Female Organs 3

Source: Avera Cancer Institute Cancer Registry
Program overview

- **Precision treatment**
  A matched pair of ARTISTE™ linear accelerators provides the most advanced technology in radiation therapy. A key benefit of these machines is they allow the most basic to the most elegant treatment plans to be carried out. Use of 180 leaves to sculpt around the tumor spares normal tissue, and the machine delivers Adaptive Radiation Therapy (ART) to tailor treatments according to each patient’s needs.

- **Brachytherapy Suite**
  - Region’s only dedicated Brachytherapy Suite—offers imaging, applicator placement and treatment in one location
  - This translates into more accurate treatment and quality outcomes for the patient
  - Brachytherapy is offered for:
    - Prostate cancer
    - Breast cancer
    - Gynecologic cancers
    - Cancer of the head and neck
    - Lung cancers
    - Hepatobiliary cancers
    - Skin cancer

- **Radiosurgery**
  A treatment option for tumors which cannot be removed with surgery.

- **Prostate seed therapy**
  This therapy is offered by the region’s most experienced radiation oncologists. A partnership with urologists ensures the highest level of care for men with this disease is available at the Avera Cancer Institute.

- **Clinical trials**
  Both treatment and symptom control studies available:
  - Radiological Physics Center (RPC)
  - National Surgical Adjuvant Breast and Bowel Project (NSABP)
  - Gynecologic Oncology Group (GOG)
  - North Central Cancer Treatment Group (NCC/TG)
  - Patient education website
    A unique patient education website, www.Avera.org/BeASurvivor, combines informative text by Dr. Vladimir Lange, with 3-D graphics and video interviews with Avera physicians, staff and patients, to help patients and their families cope with a breast cancer diagnosis.

- **Breast Health Professional Advisory Board**
  This group of physicians leads developments in programs and standards of care, and strategically plans for future initiatives.
  - Dr. Josie Alpers, Radiology
  - Dr. James Breit, Reconstructive Surgery
  - Dr. Wade Dosch, Breast Surgery
  - Dr. Karen Heiling, Family Medicine
  - Dr. Brenda Kalkemesen, Obstetrics/Gynecology
  - Dr. Amy Krie, Breast Cancer Medical Oncology
  - Dr. Patrick Miller, Reconstructive Surgery
  - Dr. Courtney Moose, Family Medicine
  - Dr. Karla Murphy, Pathology
  - Dr. Patrick Nelson, Radiology
  - Dr. Julie Reiland, Breast Surgery
  - Dr. Amal Salama, Obstetrics/Gynecology
  - Dr. Kathleen Schneidloth, Radiation Oncology
  - Dr. Diane Sneed, Pathology

Breast Cancer Cases, 2006 - 2011

- **Lisa’s story of hope**
  Cancer survivorship gives Lisa a new direction in life

  Grateful for early detection and the support of others, Lisa Ladenburger of Sioux Falls looks back on her journey through breast cancer as a difficult time, but one that changed her life for the better.

  “Going through breast cancer makes you evaluate your life, and the experience has changed my life in so many ways. I had gotten so distracted from what is really important – my husband, my kids and my family.”

  Lisa’s cancer was found during a routine mammogram. “If I had not gone in for my annual mammogram, the cancer would have been found later, probably at a stage or two further along.” She says she’s grateful that radiologist Dr. Josie Alpers ordered further testing, although the suspicious lesion was very small.

  Lisa was treated by oncologist Dr. Amy Krie and surgeon Dr. Julie Reiland. “I only have good things to say about Avera, my physicians, and all the people I worked with. It meant a lot that there were people there to hold my hand through the emotional times.”

  As a breast cancer survivor, Lisa is an honorary co-chair of the annual Avera Race Against Breast Cancer. “I feel passionately about the cause, and I have the hope that someday young women will not have to go through what I have.”
Groundbreaking research: IOeRT/Hypofractionation

The Avera Cancer Institute is conducting groundbreaking research in the use of IntraOperative Electron Radiation Therapy (IOeRT) in the treatment of breast cancer.

Thanks to a $2,492,032 grant from the Leona M. and Harry B. Helmsley Charitable Trust, a research-based project is allowing early-stage breast cancer patients to receive IOeRT at the time of surgery, and a shorter course of treatment of breast irradiation after breast-conserving surgery, or lumpectomy.

IOeRT is a high-dose radiation “boost” which shortens the course of post-surgery radiation treatments by weeks. In combination with hypofractionation, the overall treatment course for external beam radiation is cut in half, from six weeks to three weeks. “It is hoped the study will show that outcomes are just as high, or higher, than standard treatments,” said Dr. Julie Reiland, Avera breast surgeon and co-principal investigator in the IOeRT study.

The study is comparing outcomes between patients treated with lumpectomy, IOeRT and three weeks of external beam radiation treatments to patients treated with surgery and six weeks of standard external beam radiation treatments. “Our thought is that lumpectomy with IOeRT and three weeks of radiation will be just as effective as the existing standard of care, if not better,” said Dr. Barbara Schlager, radiation oncologist with Avera Medical Group Radiation Oncology.

Patients will be followed for seven years after IOeRT treatment to track any incidence of recurrence.

“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,” said Dr. Reiland.
Avera Research Institute offers 100 clinical trials

The Avera Research Institute, in collaboration with the Avera Cancer Institute, currently has approximately 100 open clinical studies through the National Cancer Institute, and industry sponsors. Patients may also participate in investigator-initiated trials – studies in which our physician proposes his or her own idea to research.

Seven research nurses, a research pharmacist and additional support staff coordinate trials in their area of expertise. Avera’s focus is to offer patients cutting-edge treatment options through national clinical trials, as well as to find new prevention, diagnosis, and treatment strategies.

Research Programs

• Cancer Research Committee supports research process and spurs new ideas

Avera’s Cancer Research Committee brings together professionals from the Avera Cancer Institute and Avera Research Institute to:
  • Support the cancer research process
  • Generate ideas for research development
  • Encourage investigator-initiated studies – those studies based on an idea of Avera physicians

• Avera selected for ENACCT research project

The Avera Research Institute is one of five sites nationwide selected by ENACCT, the Education Network to Advance Cancer Clinical Trials, to help develop best practices for community-based cancer centers when participating in clinical trials.

Currently, best practices for enrolling patients into clinical trials at community cancer centers have not been formally identified. “We’re looking at the entire continuum of care, and critical pathways from the point of diagnosis or entry into the clinic, through follow-up care to identify best practices in research,” said Janna Binder, oncology research nurse with the Avera Research Institute.
Research confirms clinic environment makes a difference for patients

The Environmental Study surveyed patients to measure their perceptions between care received in a traditional clinic design – in the former Avera Cancer Institute, and a patient-centered care environment – in the new Avera Cancer Institute housed in the Prairie Center.

- A total of 545 patients were surveyed – 299 who received care in the former Avera Cancer Institute, and 246 who received care in the new.
- The Avera Cancer Institute collaborated with research staff at the University of Vermont to develop the Physical Environment Questionnaire, surveying patients concerning:
  - Cleanliness
  - Air quality
  - Way-finding
  - Navigation ease
  - Lighting
  - Natural elements
  - Spaces for social activities, privacy, healing, sound and art
  - Overall look and design

Results showed:
- Higher patient satisfaction with the new clinic environment
- Significant associations between the clinic’s environment and patients’ emotional and behavioral functioning, and spiritual well-being

Existing research on this topic is limited, and this was the largest study of this kind to date. “We are grateful for the willingness of our patients and family members who took time to share their insight into how the environment impacts their well-being,” said Jarra Binder, oncology research nurse at the Avera Cancer Institute and coordinator of the project.

“Our results validate that all the measures we took to create a patient-centered design are making a difference in the lives of our patients,”

~ Fred Slunecka
COO, Avera Health


- Avera selected for ENACCT research project (cont.)
Goals of this program are to:
- Develop standard best practices
- Ensure that all patients who could potentially benefit from participating in a study are identified
- Clear up any public misconceptions about medical research

“By participating in the ENACCT project, the Avera Research Institute will be on the ground floor of developing best practices that will be utilized by cancer centers across the United States,” added Ryan Hansen, executive director of the Avera Research Institute.

- Avera research study evaluates effect of weight loss on cancer survival
Medical researchers have determined that obesity increases the risk of breast cancer, and the risk of recurrence of breast cancer and other estrogen-dependent cancers. What’s more, obesity increases the risk of dying from estrogen-receptor positive cancers, including breast and endometrial cancer. Due to this link, Dr. Amy Krie, medical oncologist with Avera Medical Group Oncology & Hematology who specializes in breast cancer, has instigated a study through the Avera Research Institute to find the impact of targeted weight loss upon survival of estrogen-positive cancer patients.

Estrogen in the body fuels tumor growth for estrogen-dependent cancer, and obesity increases levels of estrogen in the body. Obesity also provides other factors that fuel tumor growth. In addition to estrogen levels and obesity, increased levels of insulin increase the risk of dying from breast cancer.

Through this study:
- Approximately 30 cancer patients have been placed on a commercial diet plan, which provides adequate protein and decreased carbohydrates. Patients are monitored to ensure their health remains strong.
- Patients will be followed for 10 years, when the chance of recurrence is the highest.

If results of this small pilot study are positive, future studies may be expanded to a wider scope.

Genetics

In collaboration with the Avera Institute for Human Genetics, genetics is a growing focus of cancer research through the Avera Research Institute. One aspect is banking of specimens, in which researchers can look for genetic markers or mutations, which vary by tissue type and cancer type. “With today’s growing emphasis on personalized medicine, virtually all research projects have a genetics component,” said Krista Bohlen, research pharmacist with the Avera Research Institute. “Overall goals of genetic research are to uncover opportunities for prevention and earlier detection – perhaps at pre-cancerous stages through blood or urine samples, and to match genetic response with treatment for greater effectiveness of medications and chemotherapy.”

Krista Bohlen
Research Pharmacist
Avera Research Institute
From the patient’s perspective, a cancer diagnosis is difficult and even overwhelming.

A navigator is that person who comes alongside patients and their families to help guide them through the process of diagnosis, treatment, and survivorship. The navigator is a constant presence for the patient and family throughout the cancer care journey. Navigators:

- Provide answers to questions
- Provide education to help patients understand their diagnosis and pathology report
- Help patients focus on treatment decisions
- Expedite appointments
- Inform patients of all the resources and support services available to them

In furthering our mission, we are grateful to the community for making these services possible. Through private gifts and funds from the Avera Race Against Breast Cancer, we continue to provide vital navigation services to our patients and families.

“Cancer patients receive multi-modality treatment. As one constant in their treatment, navigators can answer questions at the patient’s level and interpret what’s being said by the medical community,” says Carole Chell.

- **Breast**
  The breast health navigator program was the first to be established at the Avera Cancer Institute. If a breast cancer diagnosis is confirmed, Nancy Terveen, CNP, provides navigation from diagnosis to completion of treatment.

- **Gastrointestinal**
  GI navigation services are provided by Liz Harden, CNP, who is available to all patients who have a diagnosis of gastrointestinal cancer or serious non-cancerous digestive disease.

- **Lung**
  Carole Chell, CNP, is the navigator for all patients diagnosed with lung cancer. Carole pioneered the navigation concept at Avera McKennan through the breast program, and is now taking her expertise to begin a navigation program for lung cancer patients.

- **Prostate**
  A generous gift from Doug and Mary Bowden in honor of their fathers who both had prostate cancer will fund a prostate navigator position. This navigator will assist in guiding men newly diagnosed with prostate cancer through their journey by providing education, support and assistance with other services.
Comments from CoC Liaison physician Dr. Wade Dosch

As the Cancer Liaison Physician (CLP) for Avera McKennan via the Commission on Cancer (CoC), my role is to provide leadership and direction in supporting the cancer program as well as helping maintain and comply with the CoC’s standards.

The Commission on Cancer is a consortium of professional organizations dedicated to improving survival and quality of life for cancer patients. The CoC accreditation program is voluntary and only granted to programs which provide the best cancer care and comply with established cancer care standards.

The cancer program at Avera McKennan has been accredited for the past 25 years, and we received the CoC’s Outstanding Achievement Award in 2009. Accreditation ensures that comprehensive care including a complete range of state-of-the-art equipment and services is available, and that data analysis, ongoing cancer clinical trials, cancer registry and prevention/early detection programs are in place. Our program also participates in the National Cancer Data Base (NCDB) to follow benchmark standards and enhance quality of care.

The CoC’s recognition validates that Avera McKennan’s cancer program is on par with the best cancer centers in the country, and reflects the high level of dedication of our physicians and staff, as well as the outstanding quality of our programs.

Dr. Wade Dosch
Surgeon and Cancer Liaison Physician to the CoC

Summary by Body System and Sex Report

### Males

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Count</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Oral Cavity &amp; Pharynx</td>
<td>12</td>
<td>2%</td>
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<tr>
<td>Lung &amp; Bronchus</td>
<td>94</td>
<td>13%</td>
</tr>
<tr>
<td>Pancreas</td>
<td>26</td>
<td>4%</td>
</tr>
<tr>
<td>Kidney &amp; Renal Pelvis</td>
<td>26</td>
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</tr>
<tr>
<td>Urinary Bladder</td>
<td>40</td>
<td>6%</td>
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<tr>
<td>Colon &amp; Rectum</td>
<td>73</td>
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</tr>
<tr>
<td>Prostate</td>
<td>161</td>
<td>22%</td>
</tr>
<tr>
<td>Non-Hodgkin Lymphoma</td>
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</tr>
<tr>
<td>Melanoma of the Skin</td>
<td>29</td>
<td>4%</td>
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<tr>
<td>Leukemia</td>
<td>34</td>
<td>5%</td>
</tr>
<tr>
<td>All Other Sites</td>
<td>182</td>
<td>25%</td>
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### Females

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Cancer care near your community

The Avera Cancer Institute – bringing care, hope and healing to your community with physicians seeing cancer patients at these locations:

- Aberdeen, S.D.
- Brookings, S.D.
- Huron, S.D.
- Jackson, Minn.
- Marshall, Minn.
- Pierre, S.D.
- Rock Valley, Iowa
- Spirit Lake, Iowa
- Watertown, S.D.
- Worthington, Minn.
- Armour, S.D.
- Estherville, Iowa
- Luverne, Minn.
- Parkston, S.D.
- Pipestone, Minn.
- Sibley, Iowa
- Spencer, Iowa
- Tyler, Minn.
- Windom, Minn.

Avera Regional Cancer Centers also include:
- Avera Queen of Peace Hospital, Mitchell, S.D.
- Avera Sacred Heart Hospital, Yankton, S.D.
- Avera St. Luke’s Hospital, Aberdeen, S.D.
Holistic health, treating the body, mind and spirit

“The Avera Cancer Institute recognizes that along with a physical body, each individual has emotional, mental and spiritual aspects to his or her being. Holistic health is a healing philosophy that treats not only the physical body, but also the mind and spirit,” says Marcia Jones, Integrative Medicine supervisor at the Avera Cancer Institute.

Research shows that some 80 percent of cancer patients seek out therapies which complement their traditional medical treatment.

Cancer patients and non-cancer patients alike can benefit from Integrative Medicine offered at the Avera Cancer Institute. “Medications are often important for a person’s health and healing, but many patients seek out additional natural and holistic therapies as well. Quality of life is an important consideration. People are investing more time in themselves in order to feel well and get the most out of their days,” said Jones.

Integrative Medicine therapies complement traditional medical treatments, and address symptoms such as pain or nausea, as well as anxiety, stress and insomnia.

• Integrative therapies
  • Acupuncture
  Acupuncture is a therapy typically associated with pain relief, but it can also be used to treat a range of conditions. Acupuncture is provided by Dr. Dawn Flickema, family practitioner with Avera Medical Group McGreevy 69th & Western, who has received additional specialized training in medical acupuncture. While the patient relaxes, meridian points are stimulated by the placement of very thin needles for 12 to 20 minutes. Dr. Flickema performs 20-40 acupuncture treatments a week with the Integrative Medicine program in the Avera Cancer Institute.
  • Aromatherapy
  Inhaling the aroma of essential oils can help relieve pain, nausea, anxiety, insomnia and more. Some beneficial essential oils used to address these symptoms are:
  • Peppermint
  • Lavender
  • Mandarin
  • Ginger
  • Frankincense

An institute designed for cancer patients

The newly-constructed Prairie Center on the Avera McKennan campus in Sioux Falls is home to the Avera Cancer Institute. With 260,000 square feet of usable space, this building is unmatched as an environment of healing, designed for patients by patients.

The Prairie Center’s architectural design reflects our home on the Northern Plains of South Dakota. As a "green" building, the facility is friendly to our environment. Free of potentially toxic building materials, the building is also friendly to the people who come inside our doors for healing. Indoor and outdoor landscaping provides beauty as well as a vital connection to nature. The Prairie Center welcomes the community with public meeting space, a café with delicious menu choices, and continually changing art exhibits. In a setting of empowerment and healing, the Avera Cancer Institute offers a dedicated and experienced team of cancer experts, and the most advanced cancer treatment technology.
Virtually everyone is touched by cancer. Those who are not cancer survivors themselves have someone very close to them who has experienced cancer. One of every two men, and one of every three women will be diagnosed with cancer at some point within their lifetime.

Because of this far-reaching impact, Avera McKennan has made a strong commitment to world-class cancer care. In addition to a new state-of-the-art facility, we continue to develop state-of-the-art programs, for example, tumor specific navigation services, case conferences, Integrative Medicine and enhanced survivorship care. We have purposefully put every piece in place in order to offer a destination cancer center, right here in Sioux Falls.

Our cancer care team is working tirelessly to provide personalized service. Through multidisciplinary collaboration, our goal is to develop the very best possible plan of care for each and every patient; whether that approach includes surgery, medical or gynecologic oncology, transplant, radiation oncology or participation in a clinical trial. We’re proud to be involved in research that offers cutting-edge options, including IntraOperative Electron Radiation Therapy in the treatment of breast cancer. And the whole time, our team is there alongside patients, offering a hand to hold and guiding them through their cancer journey.

We are also proud of our loyal partners and donors who have made gifts to support programs and services that help us carry out our mission. Your gifts have made a difference in the lives of our patients and their families by providing compassionate support and innovative care.

What patients experience at the Avera Cancer Institute, in a word, can be described as comprehensive. Our expert medical professionals work in partnership to achieve outcomes that meet or exceed those of national cancer centers. We’re delivering expert, comprehensive care to bring healing not only to the body, but to the mind and spirit as well.

Dr. David Kapaska
Regional President and CEO
Avera McKennan Hospital & University Health Center

• Integrative therapies (cont.)
  • Massage therapy
    • Promotes relaxation
    • Relieves pain
    • Improves depression
    • Builds muscle tone
  • Decreases fatigue
  • Treats insomnia
  • Clears toxins
  • Enhances circulation

Each treatment room in the Integrative Medicine area is equipped with a specialized massage table designed for the comfort of cancer patients.

• Mind-body movement
  Movement is not only therapeutic physically, but also emotionally and mentally.
  Therapeutic movement classes include:
  • Tai Chi
  • Yoga
  • Pilates & core exercises
  • Guided exercises after cancer
  • And other specialty classes

• Arts in Healing program
  Patients engage in these artistic activities that provide therapeutic benefits:
  • Painting
  • Drawing
  • Beadwork
  • Needlework
  • Pottery
  • Music

Artistic endeavors can take a patient’s focus off symptoms, and provide a positive emotional outlet.

• Nutrition counseling
  A full-time dietician dedicated to cancer care helps patients with:
  • Weight gain or loss
  • Nausea
  • Choosing foods that enhance health during treatment

These services would not have been made possible without the generosity of our donors. We are grateful to have the region’s largest Integrative Medicine program and continue to offer these enhanced services to further our mission in treating the whole person; body, mind and spirit.

Survivorship
An important phase of cancer care

From the moment a person is diagnosed with cancer, that person is considered a cancer survivor. “Survivorship is seen as another phase of cancer care,” said Julie Dixen, ACI outpatient cancer program manager.

• A survivorship plan of care is a document that is built throughout cancer care and treatment, listing the specific diagnosis and stage of the cancer, and all treatment modes.
• Upon completion of treatment, patients sit down with a social worker and navigator and discuss the survivorship plan. This includes
  • Understanding what patients may expect in the long term
  • Recommendations for preventative health care, such as regular mammograms, pap smears or colonoscopies
• If patients move to a new community or travel, they can take their survivorship plan with them, and have all the documentation of the cancer care they received at the Avera Cancer Institute.
• Patients are also informed of any support programs that exist, including “A Time to Heal,” the cancer fitness program, support groups, and more.
• This process is currently “hard wired” into the breast cancer program, and also takes place for patients with other types of cancer, such as gynecologic, lung and GI cancers.

The transition between life as a patient and life as a cancer survivor can be a time of anxiety and uncertainty, said Lynne Hunter, social worker at the Avera Cancer Institute. “Cancer treatment is a time of meeting and overcoming new challenges day to day. Survivorship is all about returning to life.”
Cancer network and registry brings together cancer experts and data

A new regional Breast Cancer Network & Collaborative Registry (BCCR), launched with the National Cancer Institute Academic Center, and the Eppey Cancer Center at the University of Nebraska Medical Center in collaboration with the Avera Cancer Institute, is designed to bring cancer experts together, and gather patient information and tissue samples in order to develop improved prevention and treatment strategies in the fight against breast cancer.

This network and BCCR are designed to unite cancer centers with expertise in breast cancer epidemiology, genetics, biology, early detection and patient care to facilitate rapid and uniform collection of critical information and biological samples to be used in developing prevention and treatment strategies against breast cancer. One of the major goals of the network and the BCCR is to help researchers and clinicians identify factors that influence the risk of developing breast cancer, key factors that influence survival, and how the disease and different treatments affect the quality of life of breast cancer survivors.

Initiatives of the BCCR:

- Whole genome analysis to assist physicians in making the best treatment recommendations for their individual patients
- An e-Breast Cancer Registry to provide patients with personalized cancer prevention and control information
- An e-Breast Cancer Conference, in which patient cases are reviewed by a multidisciplinary team that collaborates on best treatment protocols
- e-Breast Cancer Consultation in which breast cancer specialists review cases submitted by oncologists

The purpose of this collaborative oncology network is to develop a national breast cancer resource and database in order to impact and influence diagnosis and treatment, and identify therapies which are specific and customized for each patient and offer less toxicity and improved survival.
For the past three decades, Avera has been building a progressive, state-of-the-art cancer program. With expanded space and the latest cancer care technology, the Avera Cancer Institute offers the region’s most comprehensive, patient-centered cancer program.

The new Avera Cancer Institute has been designed by patients, for patients to be a place of hope, dignity, inspiration, courage and healing.

Patients shared with us that they would like a facility which offers:

- Personal choice
- A healing environment
- A connection to nature
- Privacy
- A welcoming atmosphere that displays confidence

The new Avera Cancer Institute facility now offers all this and more thanks to generous contributions from the community.

We have a dedicated team of physicians and staff who offer the latest in cancer care including:

- National Cancer Institute clinical trials
- The region’s most comprehensive and first NAPBC-accredited breast center, the Avera Breast Center
- The state’s only bone marrow transplant program
- Patient navigators in breast, gastrointestinal, lung and soon prostate
- Multidisciplinary teams of physicians and staff who meet weekly to design individualized plans of care for our patients
- The region’s largest Integrative Medicine program
- State-of-the-art surgical procedures such as robotics for gynecologic oncology and prostate and IntraOperative Electron Radiation Therapy for breast cancer surgery
- Comprehensive survivorship services

All this is offered in one location to help patients on their journey towards healing. I welcome you to read this publication to learn more about the region’s most comprehensive cancer program and how support from partners like you have made it possible.

Kris Gaster
Assistant Vice President for Outpatient Cancer Clinics

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