

# Avera Cancer Institute

## Coping with Cancer

**TIPS AND STRATEGIES**

## THE FUTURE OF CANCER CARE

NEW HOPE THROUGH GENOMICS

## LOOKING BACK ON THE JOURNEY

THOUGHTS FROM  
SURVIVORS

Summer/Fall 2015

**Avera**   
Cancer Institute

# DEAR READERS,



Welcome to the summer/fall 2015 edition of the Avera Cancer Institute magazine.

We're all concerned (or should be concerned) about prevention and early detection. If we are not affected personally by cancer during our lifetimes, we all have close friends or family members who have.

Literally every day, medical science is making advancements in the treatment of cancer, and this is happening right here, at Avera.

I'm thinking particularly about the field of genomics. In this issue, you'll read about patients who are experiencing a great quality of life thanks to this emerging science. Members of our genomics team help our readers understand what this science offers.

Other features cover topics like what it means to be a cancer survivor, how to live well with cancer, the four-dimensional care offered to breast patients, and more.

At Avera, we have developed a service line concept so that across our whole footprint, at any of Avera's locations, patients receive the right care and have access to all resources of the Avera system.

Our interconnectedness is just one way that Avera does cancer care differently. We also care for you as a whole person – body, mind and spirit – and use the latest cutting-edge science. Please visit [Avera.org/cancer](http://Avera.org/cancer) to learn more.

Thanks for reading!  
In good health,



Tad Jacobs, DO  
Chief Medical Officer, Avera Medical Group

## ONE AVERA CANCER INSTITUTE. SIX REGIONAL CENTERS.

### **Avera Cancer Institute Aberdeen**

305 S. State St.  
Aberdeen, SD 57401  
605-622-5000

### **Avera Cancer Institute Marshall**

300 S. Bruce St.  
Marshall, MN 56258  
507-537-9000

### **Avera Cancer Institute Mitchell**

525 N. Foster  
Mitchell, SD 57301  
605-995-5756

### **Avera Cancer Institute Sioux Falls**

1000 E. 23rd St.  
Sioux Falls, SD 57105  
605-322-3000

### **Avera Cancer Institute Yankton**

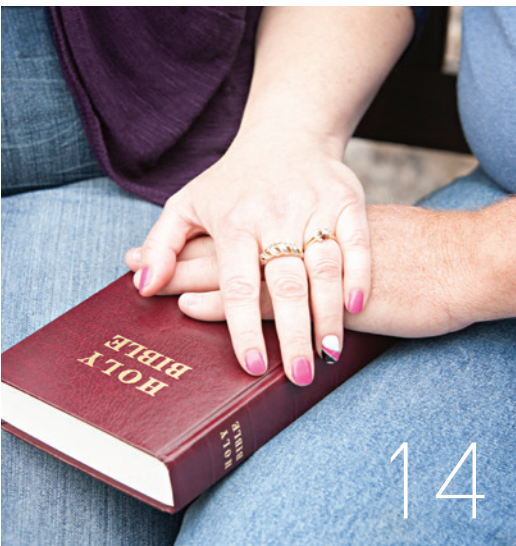
1115 W. Ninth St.  
Yankton, SD 57078  
605-668-8000

### **Avera St. Mary's Hospital**

801 E. Sioux  
Pierre, SD 57501  
605-224-3100

Several of the cancer programs and services you're reading about are supported by generous donors from across the Avera system. To learn how you can help support local cancer patients through the Avera Cancer Institute, visit [Avera.org](http://Avera.org) and click on Avera Foundations.





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Patient stories in this magazine describe the actual medical results of individual patients. These results may not be typical or expected for the disease type that is described, and all patients should not expect to experience similar results.

# WHAT'S NEW ACROSS THE SYSTEM:

## Avera Cancer Institute Aberdeen

### 3-D MAMMOGRAPHY

Avera Cancer Institute Aberdeen now offers 3-D mammography. Digital Breast Tomosynthesis (DBT) is the latest technology in digital mammography. More images from more angles provide greater detail. To learn more, see page 22.



### CENTER OF EXCELLENCE

Construction continues on the new home of Avera Cancer Institute Aberdeen – the Don and Carmen Meyer Center of Excellence. The facility will house both chemotherapy treatment and radiation therapy through the practices of Richard Conklin, MD, Medical Oncologist, and Troy Adolfson, MD, Radiation Oncologist. The institute will include enhancements such as increased research and clinical trials.

The new center will offer 23 chemotherapy stations, in a combination of private, semi-private and open group settings. A new linear accelerator, the fully digital Elekta Infinity™, offers more imaging capabilities for state-of-the-art radiation treatment. The \$13.7 million project is on track to be completed in late fall of 2015.

## Avera Cancer Institute Marshall

### GROWTH IN CANCER PROGRAM

The new Avera Cancer Institute Marshall opened in January 2015. The addition of state-of-the-art radiation therapy space, featuring the Elekta Infinity™ linear accelerator, allows radiation oncology to be offered in Marshall for the first time. Since January, Avera Cancer Institute Marshall has had nearly 50 consults for radiation therapy, and is treating an average of 15 patients per day, which is above expected projections. Nearly 30 patients have completed their radiation treatments so far at Marshall.



Avera Cancer Institute Marshall also offers enhanced space for chemotherapy, including semi-private chemotherapy bays that give patients the choice to receive infusions privately or enjoy the camaraderie of other patients.

Chemotherapy infusion numbers are up as well. Avera Cancer Institute Marshall is seeing 130 to 140 patient visits each month for chemotherapy, compared to 80 to 100 per month before the opening of the new center.

## Avera Cancer Institute Yankton

### HIGH PATIENT SATISFACTION SCORES

Avera Sacred Heart Hospital Service Excellence Committee recently recognized the Avera Cancer Institute Yankton staff for achieving the 94th percentile for patient satisfaction scores during the third quarter of Fiscal Year 2015.

Avera Cancer Institute's pursuit of excellence involves using patient input to improve care.







“No matter where patients happen to walk in the door across the Avera system, they have access to all resources offered by the Avera Cancer Institute’s six regional centers. When possible, we treat patients close to home, where they’re comfortable and near family and friends. When necessary, we refer them to other locations, such as Aberdeen, Marshall or Sioux Falls, to get the level of care needed for their specific case of cancer.”

-Dave Kapaska, DO, administrative leader of the Avera cancer service line

## Avera Cancer Institute Sioux Falls



### SINGLE-DOSE IORT

Single-dose IORT is a new option for certain patients age 60 and over with early-stage breast cancer. This is a new protocol in the electron-based intraoperative radiation therapy trial, which Avera Cancer Institute has been a part of since 2011.

The first protocol, for women age 41 and over, delivers IORT at the time of lumpectomy, which is followed by three weeks of external beam radiation therapy. Typical radiation treatment after lumpectomy is six weeks of daily radiation.

In the new protocol, women who have IORT at the time of surgery need no further radiation treatment. For women age 60 and over, the single IORT dose is all that’s needed to diminish the chance of recurrence for their remaining years.

Avera Cancer Institute Sioux Falls is one of 10 cancer centers in the United States to use electron-based IORT in the treatment of early-stage breast cancer. Using a precise and concentrated dose, electron-based IORT treats the actual tumor bed – where cancer is most likely to recur.

## Avera St. Mary’s Hospital in Pierre

### BENEFITING FUTURE CANCER PATIENTS

When Avera St. Mary’s Foundation board member Joan Deal was receiving chemotherapy in Pierre for pancreatic cancer, she noticed that the TVs were small and outdated at best. “We’re going to do something about this,” her husband Greg Deal recalls Joan telling him. “She didn’t want this for herself,” he said. “She wanted this for everyone else.” Joan passed away in March of 2015.

A friend in San Antonio, Texas, custom-designed an amethyst necklace and earring set (valued at \$2,250) for a Black Box Raffle in conjunction with Avera St. Mary’s Expecting Grape Things Gala in May 2015. The effort raised \$7,500 for new TVs. When the winner turned around and donated the jewelry for live auction, it raised an additional \$2,000 for other projects for the comfort of cancer patients.



Pictured, from left, are foundation board members and caregivers: Greg Deal; Dennis Eisnach; Jamie Hillmer, CNP; Joe Cannot; Nance Orsbon; Lee Caulkins, RN; Sarah Larson; Bonnie Bjork; Ellen Lee; Kellie Yackley; and Karmin Strohfus, RN.

## Avera Cancer Institute Mitchell

### NEW LINEAR ACCELERATOR

Avera Cancer Institute Mitchell has begun the process of replacing and upgrading its linear accelerator to the Elekta Infinity™. This short-term inconvenience is designed to bring patients long-term benefits by providing the latest in radiation technology.

In the spirit of continuity of care, patients needing certain radiation services during the upgrade can receive care at Avera Cancer Institute Yankton. If needed, lodging and transportation assistance will be provided.

During this upgrade, Avera Cancer Institute Mitchell will continue to provide many vital services to patients. These services include chemotherapy treatments and services, high-dose rate (HDR) and low-dose rate (LDR) brachytherapy, simulations, and treatment planning.



### NEW CANCER SPECIALIST

Avera Cancer Institute Mitchell welcomes Kathleen Naegele, DO, Hematologist/Oncologist. She is originally from the Chicago area and completed her hematology/oncology fellowship and internal medicine residency at Midwestern University in Chicago, and practiced in Kingman, Ariz., for four years. Naegele and her husband, Chuck, are looking forward to being back in the Midwest and closer to family in Chicago.

# LIVING WITH CANCER:

## Simple Coping Strategies



When Michael Kelley of Pierre, S.D., was diagnosed with stage IV melanoma in 2013, his initial reaction was devastation. “I took it pretty hard at the diagnosis,” he said.

Today, Mike and his wife, Laurie, refuse to let the worries of cancer consume their lives. “We take it one day at a time. We’re just going to live our lives,” he said.

Mike received chemotherapy and immune-based cancer treatment. He continues to receive immunotherapy, which has changed the landscape of melanoma treatment. This form of cancer treatment is designed to improve the body’s natural defenses to fight the cancer.

Mike credits Laurie, along with an extended support system of family and friends, for helping him cope with cancer treatment. “There are ups and downs involved with the treatment. It makes the downs come back up a little bit when your friends come over just to see how you’re doing and to be there for you,” he said.

A cancer diagnosis is a life-changing event; the diagnosis and subsequent treatment may seem insurmountable. Finding nurturing ways to cope with the emotions that often come alongside a cancer diagnosis and treatment can help ease the burden that cancer brings. “Knowing the Lord has a plan for me is also comforting. I pray every day for the safety and health of my family, and I ask the Lord to stay with me through this journey,” Mike said. ■



# COPING STRATEGIES

Here are some strategies and mantras to keep in mind during cancer treatment and recovery.

- **Take it one day at a time.**  
“Always look forward. Don’t look back,” Mike said.
- **Keep living your life as much as you can.**  
Try to maintain as close to a normal lifestyle as possible.
- **Rely on your support system.**  
Spend quality time with family and friends. “That support system is very important,” Mike said.
- **Focus on the positive.**  
“Don’t waste precious time worrying. It doesn’t do anything for your health to worry about it,” Laurie said. “There are grandchildren to go see, and ball games to go to. Life goes on,” Mike added.
- **Get to know your care team.**  
It becomes more comforting to see them when you go in for treatment, Mike said. “The care I’ve received from Avera has been almost overwhelming, in Sioux Falls and Pierre,” he said. “They have become close friends and family. You look forward to seeing those people.”
- **Learn to ask for and accept help from others.**  
You might consider keeping a list of household chores or errands that you might need help with. “And maybe most importantly, believe in the people who love you and love the people who believe in you,” Mike added.
- **Find ways to be resilient.**  
“Resilience is the ability to manage whatever might come your way. Just as a good support system is part of being resilient, so is treating yourself well,” said Charlene Berke, Director of Avera Cancer Institute Mitchell. Try to do small things to take care of yourself every day. Read a good book, watch a funny movie or listen to your favorite music.
- **Find your own coping style.**  
Think about what you have done in the past during a difficult time. Also consider developing new coping strategies. Here are a few ideas: record your thoughts in a journal, pray, practice relaxation techniques, find spiritual support or guidance, join a support group, exercise, or explore creative outlets.

“Don’t let cancer take away part of your life. Enjoy the part of your life that you have left, whatever it is. If that means visiting your kids, or going someplace you’ve always wanted to go, just do it.”

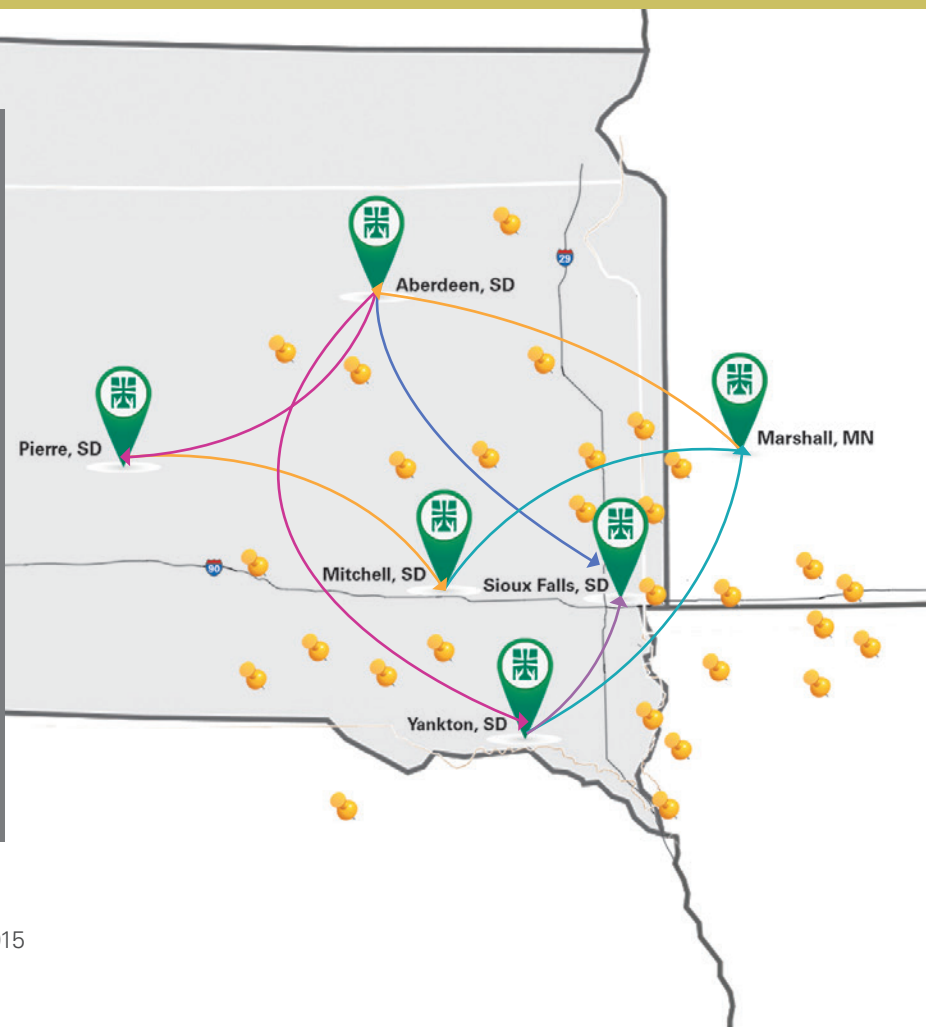
- Michael Kelley

# Connecting the Dots

## Elekta: The Latest Cancer Treatment Technology

Although one institute, Avera Cancer Institute has six regional centers and 40 outreach sites. A new software system will help connect the dots, giving cancer specialists at all locations ready access to patient records and treatment plans.

Avera collaborates with Elekta to equip its locations with advanced cancer treatment technology. This includes linear accelerators, gamma knife and brachytherapy, as well as treatment planning software and electronic patient records to tie the entire system together.





Until lately, paper flow sheets have been used to keep track of cancer care. “But in 2015, we’re living in an electronic world,” said Michael Peterson, MD, with Avera Medical Group Radiation Oncology Yankton and member of the cancer service line leadership triad.

MOSAIQ® is Elekta’s electronic medical record specially designed for cancer care. A typical electronic medical record, like the Meditech system used by Avera, does not handle the complex records needed for cancer care. “Patients are getting not only surgery, chemotherapy and radiation, but also drugs to minimize side effects, at different times throughout the disease process,” Peterson said. MOSAIQ also shares information with Meditech.

“If it’s on one system, it’s all there. This connectedness is so beneficial and rare among health systems,” said Troy Adolfson, MD, Avera Medical Group Radiation Oncology Aberdeen.

All Avera cancer registries will be tied together. “We can look at outcomes or results real time across the system,” Peterson said.

It’s also great for treatment pathways. “We’ve taken the NCCN (National Comprehensive Cancer Network) guide, and adapted it and added more detail to create an Avera way of treating various cancers,” Peterson said. “Patients can know that their treatment reflects the most current standards,” Peterson said. “We can offer the variation in treatment that’s needed, but that doesn’t mean we shouldn’t standardize as much as we can.”

The system provides good information flow between providers within the Avera system, with no need to have records sent here and there. Treatment planning for radiation oncology is the other major aspect offered through Elekta software.

“It’s so important that we deliver the exact right dosage at the exact right location for every patient, every time. We already have many checks and balances in place,” Adolfson said. “Yet having the treatment planning software tied into the machine takes the possibility of human error out of the equation.”

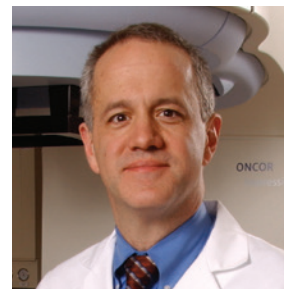
The Elekta software updates are a “behind the scenes” change that most patients won’t notice.

“We try our best to deliver seamless care, but our hope is that the whole process will be streamlined,” Adolfson said.

“Anytime you reduce pencil marks, it speeds things up for the patient,” Adolfson said. “Saving time on my end ultimately means I can spend more time with my patients.” ■

“Patients have the peace of mind that they’re getting a nationally standard, unified level of care no matter where they are – urban or rural – within the Avera system.”

- Michael Peterson, MD



MICHAEL PETERSON, MD  
RADIATION ONCOLOGIST



TROY ADOLFSON, MD  
RADIATION ONCOLOGIST



# ELEKTA RADIATION THERAPY: DICK'S STORY

“I’ve always tried to maintain a positive attitude that it will all work out for the best. If you worried about everything that might happen, you might not get out of bed in the morning.”

W

hen Dick Ericsson received radiation therapy on the Elekta Versa HD™ at Avera Cancer Institute Sioux Falls, he was among the first patients to benefit from this state-of-the-art cancer treatment tool.

Elekta models are either in use or being installed in Aberdeen and Mitchell, S.D., and Marshall, Minn., and in the future will be installed throughout the Avera system.

“The prostate moves within the body, so its location can vary from treatment to treatment,” said James Simon, MD, with Avera Medical Group Radiation Oncology Sioux Falls. “Many cases of prostate cancer are treated on the Elekta Versa HD, due to the treatment delivery and imaging capabilities.



Prostate motion can be detected with onboard imaging and corrections made to ensure the treatment is on target.”

“They told me the new machine was very precise, and only affected the area they targeted – right where the prostate bed was,” said Dick, a third-generation lawyer of Madison, S.D.

He was also pleasantly surprised at how fast the treatments were. “They asked me what kind of music I liked to listen to, and I said ‘B.B. King House of Blues,’ so they turned that on and I listened to it for five minutes and was done,” Dick said.

While his surgery for prostate cancer left Dick with side effects, the radiation therapy did not. “I’m glad I had radiation after surgery to kill off any remaining cancer cells. Hopefully that slowed or stopped the progression of cancer elsewhere in the body. It didn’t seem like a big deal – the bigger deal is having your prostate removed,” he said.

“I can look around the block and see people who are a lot worse off than me. I have a lot of good friends and support,” Dick said. ■

Each patient’s radiation oncologist will determine what type of treatment is appropriate, and answer any questions.

## Benefits of Elekta Versa HD

- Makes effective treatment a possibility for patients with inoperable tumors or who are not surgical candidates
- Noninvasive – yet as precise as surgery
- No pain
- No incision
- No anesthesia or recovery time
- Few side effects
- Immediate return to normal activities
- Reduces the treatment course, for example, a regimen of 25 treatments can be reduced in some cases to five or fewer treatments
- Reduces treatment delivery time – treatments that once took hours will take a few minutes

## Elekta Versa HD is often used to treat:

- Patients with pancreas and kidney cancers
- Patients with head and neck cancers, due to the proximity of the tumor to nearby critical structures such as the spinal cord
- Patients with inoperable tumors in the brain and lung
- Patients with prostate cancer to ensure treatment is “on target”
- Patients with left-side breast cancer after lumpectomy to minimize exposure to the heart

# Thoughts about Survivorship

## — from Survivors



"Realistically, my plans are to spend time with my family and to appreciate the things I get to do with them. I don't know that I have a greater appreciation than I did before cancer. I am very grateful for my family. It's comforting to know that through those difficult times they were all right there by my side, as I would be for them. This tested it and we passed. It makes me proud of my family."

JON GOLDTRAP, MARSHALL, MINN.  
HODGKIN'S LYMPHOMA SURVIVOR



"I spend a lot more time every day trying to find someplace to be alone and just think about how fortunate I am. When I think of a survivor, I think of a young mom in her sixth or seventh year of survivorship. They've just got a look of joy. Part of that is knowing, 'I beat this thing.'"

JIM WOSTER, SIOUX FALLS, S.D.  
PROSTATE CANCER SURVIVOR



"I'm so grateful and thankful that things have gone as smoothly as they have for me. Cancer has been a part of my family. We've walked through this before. Just the fact that I've come through it and come through it well, I'm just so thankful."

TARA HIETPAS, BROOKINGS, S.D.  
ACUTE MYELOID LEUKEMIA  
SURVIVOR



"I truly have a new appreciation of what's important in life. It gives you new eyes on the world. I was able to see my daughter get married, and that was one of the greatest things ever about being a survivor. You celebrate milestones, and little things become big things."


PAM WHITE, ABERDEEN, S.D.  
BREAST CANCER SURVIVOR



"There are peaks and valleys throughout the cancer journey. I had the support of family and friends, and coworkers who were like a second family to me. If you can look for the good, you start to find something each day to be thankful for. It's a journey of strength and courage; it's a journey of putting your trust in your physician."

CATHY NIELSON, SIOUX FALLS, S.D.  
HODGKIN'S LYMPHOMA AND BREAST CANCER SURVIVOR





Cancer invades every part of your life — your body, emotions, family, schedule, work and everything in between.

Bonnie Hoffman, Patient Navigator at Avera Cancer Institute Mitchell, and Julie VanGerpen, Exercise Specialist for patients at Avera Cancer Institute Yankton, offer suggestions on how you can feel your best during cancer.

# FEEL YOUR BEST:

## STAYING WELL DURING TREATMENT

### NAUSEA

A well-known side effect of cancer treatment is nausea. Chemotherapy, radiation therapy, or the combination of both can make some patients queasy, either right away or later at home. Ask your physician about taking an antiemetic, a drug that eases a churning stomach.

“If you’re prone to nausea, eat bland foods that are easy on the stomach, such as crackers or toast. Avoid greasy foods, which are especially hard on the stomach,” said Hoffman. “Drink plenty of liquids to prevent dehydration; sip on ginger ale, tea or water throughout the day.”

## SLEEP

As you undergo treatment and still keep up with daily activities, appointments, and interactions with family and friends, fatigue is another symptom of your body coping with cancer. “If you’re tired, you’re tired,” said Hoffman. “Don’t be afraid to take a nap during the day, but keep it under an hour.”

On the other end of the spectrum is not getting enough sleep. Anxiety, depression, stress and sometimes medications can keep you from getting enough shut-eye. In those cases, get out of bed for a little while and do something quiet, such as reading a magazine or cross-stitching, before attempting to sleep again. And avoid the stimulating light of your smartphone.

## EXERCISE

Treatment depletes energy, but exercise is invigorating both mentally and physically.

“We use resistance bands, lighter weights and chair exercises in our classes,” said VanGerpen. “They aren’t strenuous, but build up endorphins nonetheless.”

Walks, light bike riding and yoga are also healthy activities. Your doctor will determine how much exercise is appropriate for you. “Exercise helps you keep a positive mindset and maintain a higher level of energy during cancer treatment,” said VanGerpen. “Strong body, strong mind.”

## HAIR

One of the most difficult realities of some cancer treatments is possibly losing your hair. Your care team will tell you upfront which treatment plans cause hair loss. Before losing your hair, find a wig that matches your hair color, length and style. Avera Cancer Institute offers a free wig and consultation to patients who will lose their hair due to cancer treatment, thanks to proceeds from the Avera Race Against Breast Cancer.

In the meantime, treat your hair gently. Brush less, stop pulling your hair into a ponytail and avoid using curling irons or flat irons. It’s OK to use hair dryers.

Some cancer patients opt to wear hats or scarves, which also protect the head from the

harsh rays of the sun. If your scalp gets dry or itchy, lotion can provide extra moisture.

## SKIN

Chemotherapy and radiation can be hard on the skin, making it sensitive to sunlight, or causing dryness or cracking. Dry, itchy, peeling and discolored skin are possible symptoms of chemotherapy, while radiation can cause a sunburn-like effect.

To protect your skin, stay out of the sun as much as possible. If you do go outside, lather on the sunscreen and wear long pants, long-sleeve shirts and caps. Use lotion to relieve dryness.

## NAILS

Nails can become brittle, discolored and sometimes even crack due to treatment. So keep your nails short and clean, protecting them with gloves while washing dishes or gardening.

Also, wear polish to keep nails and your spirit bright. Use an oily nail polish remover when it’s time to remove the color. ■

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**By making your well-being a priority, you gain a sense of control, dignity and strength against cancer. Whether it’s a walk around the park, finding the right wig or drinking plenty of fluids, you always deserve to feel your best — before, during and after cancer treatment.**





*Thankful for*

LIFE

Patient Experiences New Hope  
Through Genomic Medicine



If looking at the statistics alone for her type and stage of cancer, few would have predicted that Dawn Timmer would experience the health and vitality she is today.

But thanks to the grace of God and the wonders of genomic medicine, her latest scans have shown her body to be clear of cancer.

“Dawn was a very sick lady, with a low possibility that she would respond to treatment. To go from that to having scans with no identifiable disease is remarkable,” said Casey Williams, PharmD, Director of the Avera’s genomic oncology team. “Not every patient has this same response, but what we’re seeing is very exciting.”



LUIS ROJAS, MD,  
GYNECOLOGIC ONCOLOGIST

Dawn, of Jackson, Minn., woke up one morning in May of 2010 with terrible pain in her left side and nausea. It was first suspected as a ruptured ovarian cyst, and then perhaps diverticulitis. “I battled the pain for two weeks, then on a Saturday morning I woke up and couldn’t stand it anymore,” she said. Her husband took her to the ER where the medical staff found fluid in her abdomen and around her liver.

Brought by ambulance to Sioux Falls, she was diagnosed with stage III ovarian cancer by Luis Rojas, MD, Gynecologic Oncologist at Avera Cancer Institute. The cancer had spread from her ovary into the peritoneum, which is the lining of

the lower abdomen. She was only 43 at the time of her diagnosis.

Dawn needed a hysterectomy, but first she needed chemotherapy to reduce the amount of disease, which would allow for a better surgical outcome. When she was able to undergo hysterectomy a few months later, things went well. “Dr. Rojas said it was amazing how much of the cancer had been killed,” Dawn said.

Follow-up chemotherapy was completed by February of 2011. Other than surgery to treat two hernias in April, she enjoyed two years of remission.

But then in February 2013, Dawn woke up with the same type of pain. “It was terrible back pain, like someone stabbing me with a knife.” A CT scan showed a growth in her abdomen, where it had all started.

She had more surgery and chemotherapy, and had been done with that round of treatment for a few months when she suffered a gallbladder attack in March 2014. “When they went in to remove my gallbladder, they found a couple spots that were suspicious, and that’s when Dr. Rojas suggested genomic testing.” In the meantime, Dawn continued to struggle, ending up with a bowel blockage last June due to a fluid pocket which had developed in scar tissue.

The test revealed that Dawn would respond best to a combination of three chemotherapy drugs typically used to treat breast cancer. “It was exciting that we could find out exactly what my tumor would respond to.”

Because genomic medicine is so new, there were some delays due to insurance coverage. Two drugs were approved, and the third





drug was provided through assistance from the pharmaceutical company.

“My treatment plan changed in July, and since then, everything has been good and my CT in December was all clear,” Dawn said. “Dr. Rojas calls me his miracle patient.”

Neither Dawn nor her doctors know if she is “cured,” or if the cancer will return. But the fact that Dawn showed this level of response beats the odds, Williams said.

In the meantime, Dawn is just thankful for the quality of life she now enjoys with her family – her husband of 25 years, Perry, and their three children, Cassidy, 19; Colton, 17; and Destiny, 11.

“Through it all, the biggest thing that’s given me peace is my faith in Christ. I know that the signs he gave me were God signs,” Dawn said, referring to the pain that alerted her to go to the ER in the first place, and also the gallbladder attack that helped doctors discover the additional spots of cancer. “Support of family and friends has been amazing, and I feel that God led us to Dr. Rojas.

“I just feel blessed that I’m still here,” Dawn says. “God has given me additional days to be here on earth. It saddens my heart to hear of people who have lost their battle, but I feel there’s something I’m supposed to be doing... that’s why I’m still here.” ■

# THE EXCITING POTENTIAL OF

Genomics at Avera is a complex science that involves multiple experts locally and across the nation and world.

Yet for patients, it’s a new glimmer of hope that begins with a blood test and tumor biopsy, and ends with a recommendation for the best possible ways to treat their particular type of tumor.

The genomics program began at Avera Cancer Institute in January 2014 when Brian Leyland-Jones, MB BS, PhD, and his team launched the Molecular and Experimental Medicine program.

“We have seen over 300 patients to date,” said Casey Williams, PharmD, BCOP, Director of Avera’s Molecular and Experimental Medicine team. Primarily, the team is working with patients with breast or gynecologic cancers.



BRIAN LEYLAND-JONES,  
MB BS, PHD, VICE PRESIDENT  
OF MOLECULAR AND  
EXPERIMENTAL MEDICINE

“We have had some outstanding results,” said Leyland-Jones, Vice President of Molecular and Experimental Medicine. It’s a program that’s continually evolving. For example, at first, only patients who had metastatic disease were referred for genomic testing. Now, genomic testing is often done earlier in the disease process.

“There are two camps. We either do genetic sequencing first, go with proven and standard treatment, and watch to see what the patient’s response is and change treatment if necessary.





# GENOMICS

Or, we sequence and see a result that's so strong that we need to intervene and alter the therapy," Williams said. "We still take the proven standard of care into strong consideration."

At the current time, there are standard therapies for the type of cancer a patient has, for example, breast cancer, ovarian cancer, lung cancer and so on. Yet in the future, treatment will not be related to the type of disease. "It will be based on how things work at the molecular level in the cell, and what drug we use to target that," Williams said.

Leyland-Jones said that some cases of cancer involve multiple cancer drivers. "We match a combination of targeted therapies, trying to close down all the cancer drivers in each patient," he said.

The team has treated patients who now have no obvious disease – termed a "complete response" to treatment. They have helped patients whose only option would have been palliative care to keep them comfortable at end of life, who are now enjoying quality time with their families.

That doesn't mean these patients are forever cured of cancer, nor does it ensure long-term survival. "None of us are promised that," Williams said.

And while genomics gives patients a better chance of responding to treatment, there are still those who do not respond as well as hoped. "We're not to the point where we can say we have cured cancer. But hopefully, we're moving the bar forward, and that's very exciting," Williams said.

## IN SUPPORT OF **LIFESAVING CARE**

Gifts to support genomic research through the Avera McKennan Foundation provide researchers and physicians the opportunity to focus on finding lifesaving treatments for patients like Dawn right here in our region.

Because genomics science is so new, 50 percent of patients do not have adequate insurance coverage for this lifesaving care. Cost of genetic sequencing is \$10,000 to \$12,000, while three months of targeted therapies can cost \$30,000 to \$90,000.

Less than 1 percent of South Dakotans diagnosed with cancer each year are able to take advantage of genomic sequencing. With help from generous donors, Avera will continue to increase the number of patients treated by the genomics team.



# COLONOSCOPY PREVENTS CANCER...

## Just Ask Dale



At age 55, Dale Dwire is no stranger to colonoscopies.

He's already had eight of them. During his last screening, his doctor found and removed eight polyps.

In fact, doctors have found and removed polyps during all of his colonoscopy screenings beginning at age 35.

That's when his doctor recommended he start getting the procedure due to a strong family history of colon cancer.

### Are you at risk?

Get a better idea of your risk for colon cancer and how to prevent it by taking our health risk assessment at [Avera.org/colon](http://Avera.org/colon)

# PREP



LIKE A PRO

**STEP 1** **STAY HOME**  
Clear your schedule 24 hours in advance.

**2** **CLEANSE**  
Take a prep to clear the bowel the night before and morning of the test. Tactics vary.

**3** **DON'T EAT**  
No solid foods the day before. No food or drink 4 hours prior to test.

**4**

## You may be at risk for colon cancer if you:

- Have a family history of precancerous colon polyps or colon cancer
- Are age 50 or older (age 45 or older if African-American)
- Are overweight
- Smoke
- Have ulcerative colitis or Crohn's colitis (IBD)

"My family doctor told me when I was 35 I should start looking, and I had polyps. There is no doubt I would have full-blown cancer by now without colonoscopy screenings."

Dale's concern stems from his father, Robert, and grandfather, Roy, who both died of colon cancer. His father found out after he started having complications with his bowels in his early 50s and died at age 59. His grandfather died in his 80s.

While colon cancer is fairly common – one in 20 people will be diagnosed within their lifetime – it's also highly preventable through regular screenings. Colonoscopy allows the physician to immediately remove polyps that could develop into cancer.

For most patients, the test is recommended every 10 years.

Dale, who farms in the Ivanhoe, Minn., area, ran the family farm with his father before he died. His grandfather also was a farmer. Losing these two men to cancer helped Dale realize that a colonoscopy every few years was the least of his worries.

"Colonoscopy is something that people laugh about and make fun of," he said. "But I'd rather catch it early before it develops into cancer than catch it too late. Both my father and grandfather found it too late and had colostomy bags."

Dale counts himself lucky that screenings every two years have caught any pre-cancerous polyps before they were able to develop. When his four sons reach 35, they'll also start getting regular colonoscopies. His two sisters and uncles also have them regularly, though they haven't had as many polyps.

Many people avoid the screening due to fear of embarrassment, pain during the procedure and the cleansing that must occur beforehand.

At this point, Dale considers his colonoscopies a non-event and said the process has changed to make it much more comfortable.

"The first one I did, I didn't have anesthesia and it was not fun," he said. "Now, the process is nothing. Drinking the liquid is the hardest part and that's very doable. The preps are getting better. Each time I do it, it seems like there's a new one." ■

### GET COMFORTABLE

Sedative medications are administered before the test. Many patients wake up after the procedure is over and don't even realize it has already taken place.

5

### THE TEST

The physician takes a peek at your colon using a long tube with a tiny camera.

6

### POLYPS BE GONE

Using a tool attached to the colonoscope, polyps are removed, if necessary.

7

### REST

You're done, and ready to have someone drive you home. Typically, the procedure itself is only about 30 minutes; time at the clinic or hospital is 3 hours or less.



BARBARA SCHLAGER, MD,  
RADIATION ONCOLOGIST,  
WITH MARIE SEEMAN.

# Leaving Cancer Treatment with a Smile

Marie Seeman of Marshall, Minn., is thankful she didn't skip her mammogram for a fourth year in a row.



“My doctor told me that because I hadn’t had a mammogram for awhile, it was a good idea to get checked,” said the newly retired special education teacher.

In January, Marie went in for a mammogram under her doctor’s recommendation. To her utter surprise, she learned she had the beginnings of breast cancer when her results came back. An “ideal” occurrence, her breast cancer was caught in stage 0 — its most treatable phase.

“If I had not gone in for my mammogram, I’m not sure how fast the cancer would have spread.” She considers herself lucky, as some people do not catch cancer that early. “That’s why I strongly urge every woman to get her mammogram every year.”

In February, Marie underwent a lumpectomy to surgically remove cancerous breast tissue, with follow-up external-beam radiation therapy.

That brought her to Barbara Schlager, MD, Radiation Oncologist at Avera Cancer Institute Marshall. Marie was drawn to Schlager’s can-do, get-down-to-business attitude.

“We had a great relationship, and she was very thorough about giving me all of the information regarding radiation therapy,” Marie said. “She was confident that radiation was the treatment plan for me, and was kind and considerate.”

At the end of April, Marie committed to her treatment plan: a total of 33 sessions, every single day, Monday through Friday. Marie looked forward to her Monday sessions when Schlager would update her on her prognosis after studying recent X-rays of her breast tissue.

“Dr. Schlager was very transparent about how the radiation process works, making sure it was targeting the exact area of the tumor,” Marie said. “She’s very passionate about what she does.”

Marie was especially thankful for her care team at Avera Cancer Institute Marshall. “Their care and positivity have a calming effect. You feel like you’re in good hands. I would go in with a smile on my face and leave with a smile on my face.”

“Be strong and courageous. Do not be afraid; do not be discouraged, for the LORD your God will be with you wherever you go.”

- JOSHUA 1:9

Another aspect that put a smile on Marie’s face was a cancer program located conveniently in her hometown. She’s glad she didn’t have to make the hour-and-15-minute drive to Willmar, Minn., daily for treatment.

“I would meet other patients in the waiting room who lived nearby,” she recalled. “They were also happy to come here rather than anywhere else.”



The newly opened Avera Cancer Institute Marshall is a 16,500-square-foot addition to the Avera Marshall Regional Medical Center campus. It offers radiation therapy, a new service in the region, and enhanced chemotherapy services. Diagnostic services, surgical care, patient navigation and supportive care are also available on site, making it an all-inclusive location for complete cancer care.

Today, Marie is living life to the fullest, and looking forward to retirement. She hopes to travel and volunteer in her community, as well as spend time with her husband, John, her daughter, Michele, and son-in-law, Doug. She also enjoys golfing, reading, camping, swimming and playing piano.

“Our faith is a lot stronger. My sister-in-law gave me many Bible verses that carried me through a lot of days,” said Marie. ■

# 4-D BREAST CARE

## AVERA OFFERS THE ENTIRE SPECTRUM OF CARE

From prevention and early detection, to treatment and survivorship, Avera offers all aspects of breast care with the latest technology.

One of the latest additions is 3-D mammography, or Digital Breast Tomosynthesis (DBT). This newest technology results in more images from more angles, providing greater detail. It is available in Aberdeen and Sioux Falls and will eventually be offered at more facilities throughout the region.

“The fourth dimension of Avera breast care is care for the whole person – body, mind and spirit,” said Jill Schultz, Director of Breast Health. “Our expert and compassionate team is here to ensure the patient’s experience is the best it can be. No matter where patients receive their care, Avera Breast Center is backed by all the technology and expertise of Avera Cancer Institute. Integrative therapies, survivorship programs and spiritual care make Avera’s care multi-dimensional.”

## ASPECTS OF AVERA’S COMPREHENSIVE BREAST PROGRAM:

### DIGITAL MAMMOGRAPHY WITH 3-D TECHNOLOGY

Digital mammography is considered the gold standard in breast imaging, and is available through all Avera mammography locations and on the mobile unit. Compared to traditional breast X-rays, digital mammography provides sharper, clearer views that help radiologists detect breast cancer earlier. As the transition to 3-D mammography takes place, the vast majority of women can continue to receive their annual screening mammograms at their community hospital or clinic.

3-D is the newest version of digital mammography technology. The mammography experience for patients is very similar. The 3-D mammography unit sweeps around part of the positioned breast. 3-D mammography takes images using nine slightly different angles, and each view shows different depths of breast tissue.





Certain women will especially benefit from 3-D mammograms – women with dense breast tissue, those who have experienced call backs for diagnostic imaging, and women at high risk: family history of breast cancer, lobular carcinoma in situ (LCIS), atypical hyperplasia, and/or difficult breast exams.

### MOBILE DIGITAL MAMMOGRAPHY

Through its state-of-the-art mobile unit, Avera takes digital mammography technology to 50 sites in South Dakota, Minnesota and Iowa.

### CESM

Contrast enhanced spectral mammography (CESM) is an imaging tool that helps evaluate suspicious areas identified on a mammogram or other breast imaging.

This tool complements Avera's suite of other breast diagnostic tools, including digital 3-D mammography, ultrasound, breast MRI and BSGI (breast-specific gamma imaging).

For this diagnostic test, patients have an injection of contrast immediately prior to a mammogram. Through a combination of low- and high-energy X-rays, the contrast agent highlights areas where there is increased blood flow – a sign that may be associated with cancer.

Avera is the first health system in the region to offer the combination of 3-D mammography and CESM.

### BIOPSY AND STEREOTACTIC BREAST BIOPSY

If diagnostic mammograms and other imaging tools do not rule out a possible malignancy, biopsy is the next step. Most biopsies are performed using a special needle instead of a surgical biopsy. Ultrasound, MRI or stereotactic guided breast needle biopsies can be performed depending on the way the area of concern was best visualized. Each of these minimally invasive procedures take about one hour. No stitches are needed and patients do not need general anesthesia making this an efficient and effective way to sample the exact tissue.





## IORT

Avera Cancer Institute is one of 10 cancer centers in the United States using electron-based intraoperative radiation therapy in the treatment of early-stage breast cancer. Using a precise and concentrated dose, electron-based IORT treats the actual tumor bed – where cancer is most likely to recur.

For certain women with early-stage breast cancer, IORT is followed by three weeks of external beam radiation therapy. Typical radiation treatment after lumpectomy is six weeks of daily radiation.

A new option for certain patients meeting study criteria who are age 60 and over is lumpectomy with a one-time IORT treatment, eliminating the need for additional radiation. This means that selected patients are completely finished with treatment once surgery is performed.

## GENETIC COUNSELING AND TESTING

Patients who may be at higher risk of breast and ovarian cancer can be referred to a genetic counselor. Testing could include tests for certain gene mutations, such as those found in the BRCA1 or BRCA2 genes.

Women who test positive for a genetic mutation in BRCA1 or BRCA2 after a breast cancer diagnosis can use that information to decide whether or not to go ahead with additional surgery to prevent future breast or ovarian cancer. Relatives of a patient who is BRCA positive can be tested as well, and decide if they wish to pursue surgical options or enhanced screening, including breast MRI, beginning at an earlier age. ■







# Genomics and Breast Cancer:

## Kathy's Story

After she had seemingly beaten breast cancer 10 years earlier, both Kathy Koerselman and her doctor hoped a lump in her neck was an infection.

Yet a biopsy revealed the breast cancer had returned in both her lymph nodes and bone, placing her in stage IV cancer.

"My cancer was stage III in 2002. I didn't worry about it through the years, but I knew a recurrence was a possibility. Still, when you go 10 years cancer free, it was still a shock," said Kathy, of Sioux Center, Iowa.

Under the care of Avera breast medical oncologist Amy Krie, MD, Kathy had various chemotherapy regimens which would work for awhile. "But nothing would totally get rid of the cancer," she said. Dr. Krie recommended genetic sequencing by Avera's genomic team, led by Brian Leyland-Jones, MB BS, PhD.

The study found five pathways on which the cancer was able to advance, and so Kathy's treatment plan was changed to include several of the same medications she was already taking, plus a drug typically used to treat kidney cancer. "I had taken most of the other meds before, but I needed them all together. We had been hitting one pathway, but not all of them."

"Dr. Leyland-Jones told us how this wasn't possible even two years ago. It's just so exciting. And the wonderful thing is, I feel great."

- Kathy Koerselman

Kathy considers it a miracle that her latest PET scan was totally clear. She remembers Krie calling her with the news. "She called me at 6 p.m. that evening and said 'I just saw your scans and they are 100 percent clear.' That was such a gift, that I didn't have to go through that night wondering."

The next day, when arriving for her appointment at Avera Cancer Institute, there were hugs all around from doctors and nurses. "That just goes to show you how much they care," Kathy said.

# PROTECT

YOUR LARGEST VITAL ORGAN:

# YOUR SKIN

ALL YEAR AROUND

While you're taking care of vital organs such as your heart, lungs or gastrointestinal tract, don't overlook your skin. The skin is the body's largest organ, covering some 20 square feet of area.



You have your skin to thank for protection from the elements and invasion of invisible microbes. Skin also regulates body temperature, and allows you to feel touch, heat and cold.

As with many types of cancer, early detection and prevention are top ways to successfully avoid or overcome skin cancer.



VALERIE FLYNN, MD  
DERMATOLOGIST

First, whatever your age, request a skin cancer exam at your annual preventive wellness exam, advises Valerie Flynn, MD, Dermatologist with Avera Medical Group Dermatology Sioux Falls. Be sure to ask your provider about any spot on the skin that is growing, changing or just isn't healing.

Basal and squamous cell skin cancers, the more common and less serious types, are usually marked by a lesion that bleeds or doesn't heal. Melanoma, the more rare yet the most dangerous type of skin cancer, is marked by a mole that continues to change in shape, size or color.

Sun exposure – as well as exposure to tanning lights and beds – is the top risk factor for developing skin cancer. Other risk factors include fair skin and hair, a family history of skin cancer, or a job that has you outdoors in the sun for many hours a day, such as farming or construction.

Don't buy into the myth that an indoor tan is safer than lying out in the sun. In fact, people who engage in indoor tanning have a 75 percent increased risk for developing melanoma, as well as basal and squamous cell skin cancer. Tanning not only contributes to skin cancer, it causes premature aging.

“No tan is a safe tan,” Flynn says.

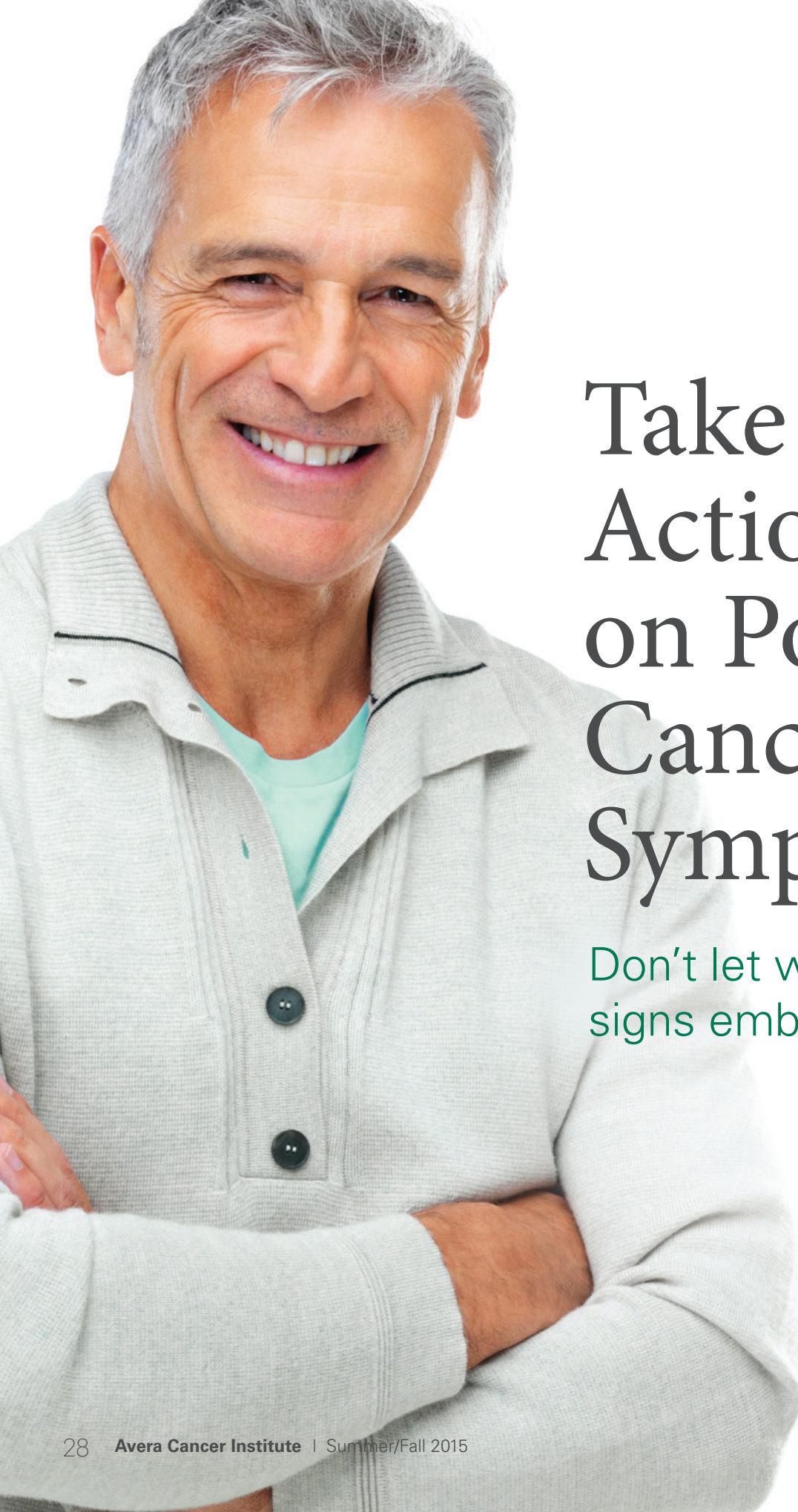
While many consider tanning to be an important part of their beauty regimen, the best long-term beauty trick available is to wear daily sunscreen on your face, neck and chest. Over time, daily sunscreen prevents wrinkles as well as discoloration and dark patches on your skin as you age.

If you want to have a tanned look, opt instead for spray tanning or self-tanning lotions, which are considered safe by dermatologists.

Better yet, embrace the skin tone you've been given. “Fair, untanned skin is as beautiful as darker skin tones. However, our society needs to come a long way to accept that tanning is not healthy as part of a beauty regimen,” Flynn said. ■

## Prevention is always the best cure for skin cancer.

- Wear a broad-spectrum sunscreen that filters UVA and UVB rays, with a sun-protection factor (SPF) of at least 30.
- Reapply sunscreen every two hours while you're out in the sun, or anytime sunscreen may have been worn off by sweating or washed away while swimming.
- Apply plenty of sunscreen – about 1 ounce, or the amount needed to fill a shot glass.
- Avoid the most intense sunlight of the day, from 10 a.m. until at least 2 p.m. – preferably until 4 p.m.
- Avoid direct sunlight by staying in the shade and by wearing a wide-brimmed hat, sunglasses and long-sleeved shirt.



# Take Action on Possible Cancer Symptoms

Don't let warning  
signs embarrass you





By Tad Jacobs, DO  
Chief Medical Officer  
Avera Medical Group

It's common for many people to minimize or dismiss their health concerns. As a physician, I've noticed that many patients decide to simply wait for their health problems to "go away," or ignore them completely.

But neglecting to address persistent health problems can have serious consequences, especially when those symptoms may be an indicator of cancer. By waiting to see your provider about your concerns, you risk not detecting cancer in its earlier stages. When cancer is found earlier, before it spreads, it may be easier to treat.

Being aware of common cancer symptoms can help you notice any possible cancer symptoms and seek earlier treatment. If you do observe any of these common cancer symptoms, don't put off a trip to your provider — the sooner you seek care, the better.

Also, don't be afraid or embarrassed to discuss any of these or other unexpected health concerns with your provider. Listen to the signs your body is giving you, and if you notice something unusual — like unusual lumps and bumps, or blood in your stool — discuss these concerns with your provider. The more details you provide about your health and past history during an exam, the better we can provide care.

Beyond taking action on possible cancer symptoms, you can also improve your chances of early detection of cancer by having cancer screenings, regular medical checkups and certain exams. Knowing your family history also is a critical part of cancer prevention. ■

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Learn more about cancer prevention at  
[Avera.org/cancer](https://www.avera.org/cancer)

## General Symptoms of Cancer

The specific symptoms of cancer can vary. If you notice any of these symptoms, it warrants a trip to your provider to be evaluated. Don't assume that it's nothing or ignore the problem altogether.

1. Unusual or unexpected fatigue or weight loss
2. Blood in the urine or stool: Don't assume that these symptoms are normal. Sometimes it's minor and may not be cancer; it may be a rectal bleed, urinary tract infection or stone.
3. Persistent pain that lasts longer than a month: In general, you should see your provider when you have ongoing pain.
4. Changes on your skin, such as a mole that has changed or become black or dark

## Symptoms of Specific Cancers

**Breast cancer:** Abnormal lumps or bumps, abnormal nipple discharge; family history is a risk factor; women who haven't been getting regular mammograms are also at risk

**Cervical cancer:** Abnormal vaginal bleeding or spotting, pain during intercourse, pelvic or back pain; family history is a risk factor

**Colon cancer:** Persistent pain, unexplained weight loss or fatigue, blood in stool; family history is a risk factor

**Lung cancer:** Coughing up blood, shortness of breath, unexplained weight loss; environmental conditions and family history are risk factors

**Prostate cancer:** Blood in the urine, problems urinating, unexplained pain

**Skin cancer:** A mole or spot on the skin that is growing, changing or doesn't heal; sun exposure and family history are risk factors. To prevent skin cancer, wear protective clothing and sunscreen.

If you notice any of these symptoms, or any other unusual, persistent health problems, be sure to relay that information to your provider.



## Surgery without the incision. Cancer care done differently.



To learn more,  
visit [Avera.org/cancer](http://Avera.org/cancer)

With six major locations and 40 outreach clinics, the physicians at Avera Cancer Institute work together to develop a treatment plan that is unique to each patient. Many cancer patients face surgery as part of their treatment plan. For patients for whom surgery is not the best option, Avera Cancer Institute offers new hope using radiosurgery, the Elekta **Versa HD™**. This non-invasive tool delivers high-dose radiation with pinpoint accuracy from hundreds of different angles that converge on the tumor while minimizing the dose to surrounding normal tissue. For certain patients, the Elekta **Versa HD** may be the best option for their cancer treatment.

Avera Cancer Institute – providing the latest technology for the best patient care.  
That's cancer care done differently.