



2023

H.O.P.E.

President/Co-Founder

Barb Titanish

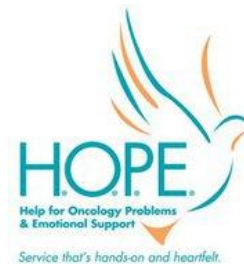
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H.O.P.E. LIFELINE



H.O.P.E. (Help for Oncology Problems & Emotional Support) is an all volunteer cancer support network that provides free assistance to cancer patients and their families facing the challenges of cancer. H.O.P.E. is a 501 (C)(3) non-profit funded through donations. Our office is located at 13275 Blymire Hollow Road, Stewartstown, PA. The official registration and financial information of Help for Oncology Problems and Emotional Support may be obtained from the Pennsylvania Department of State by calling toll free, within Pennsylvania, 1 (800) 732-0999. Registration does not imply endorsement.

H.O.P.E. does not receive funding and is not affiliated with the American Cancer Society. Funding comes from donations made by private individuals and the civic/business community. Phone: 717-244-2174 or 717-244-2161.

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H.O.P.E.'s Office Hours are Monday through Friday, 9:30—3.

Please call in advance to set up an appointment for:

- Intake
- Wigs/hats/scarves
- Pantry

Please direct all calls to the H.O.P.E. office at

Support Group Mtg.

Date: Wednesday, August 9
 Time: 7:00 p.m.
 Location: H.O.P.E. Haven
 Speaker: Everyone

Take a Swing at Cancer!
 15th Annual Golf Classic
 Tournament

Saturday, August 19
 Hickory Heights Golf
 Course

Spring Grove, PA

Continental Breakfast,
 Lunch, Lots of Prizes

Hole-In-One on #17 Wins
 \$5,000 for you/\$5,000 for
 H.O.P.E.

Call 717-244-2174 For information.

Shrimp and Bull Roast

Saturday, September 30

7—11 p.m.



Jarrettsville Gardens,
 Jarrettsville Fire Hall

3825 Federal Hill Road
 Jarrettsville, MD 21084

All You Can Eat Buffet
 Shrimp, Pit Beef, Pit Turkey,
 Sides

Beer and Wine

Silent Auction * Door Prizes
 Sponsored by W. Dale
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H.O.P.E.'S NEW ADDRESS

Physical Address:

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*"A disease
known is half
cured."*

~ Thomas Fuller

If you would prefer to receive our newsletter by email (and help us save postage), please send a note to our Assistant Director Carol Nelson, at assitant@hopeforcancerfamilies.org, and she'll put you on our list. (And it will have color!) Thanks!

FROM THE EDITOR'S DESK

A new term has entered our lexicon: heat dome. We may not technically be under one here on the East Coast (it occurs when the atmosphere traps hot ocean air like a lid or cap), but the temperatures and humidity are breaking records and there appears to be little solace in sight. Fortunately our **golf tournament** next month will start early and the course provides lots of shade. There are still a few spots left for serious and not-so-serious players to enjoy a day of golf and good food and fun and prizes galore. See the front page for details.

As you know, many of Barb's favorite people ride motorcycles. (Our own Carol being foremost!) The **Twin Rose Lady Riders** are sponsoring a **self-guided poker run** and charity road run to benefit HOPE on Saturday, September 23, from 10-1. Riders and drivers (all 2, 3, and 4-wheel vehicles are welcome!) will meet at Eisenhower's York-Harley Davidson on 100 Arsenal Road, rain or shine.

A week later is our **annual Bull Roast**, held as usual at Jarrettsville Gardens, where you can enjoy all-you-can-eat pit beef, shrimp, ham, turkey, and sides. You won't leave hungry! And we know you won't forget **Fall Bingo**, on Sunday, November 5, at our usual spot, the New Freedom Community Center.

The Haven is seeing some traffic. Last month we hosted a meeting of the Senior Outreach Services. This group is composed of social workers from a wide variety of organizations including funeral homes, hospice care, home healthcare companies, retirement communities, and other healthcare outfits. Later this month we will welcome three sets of guests to take a 'vacation from cancer.' These guests are from Pennsylvania, Maryland, and Tennessee. It's a safe bet the pool will get a workout during their visits. We're up and running and welcoming guests, just go on the hopelife.org site (click on HAVEN Application) to see how you can plan your vacation from cancer.

As you will see in Barb's Angel Corner below, the 'theme' is motorcycles. You could say the theme for the articles in this newsletter is **advances in cancer treatment**. On the next three pages we've given information about a variety of different immunotherapy drug treatments with a brief explanation of how they work, updates on new cancer vaccines, and information about how artificial intelligence is being used to advance cancer diagnosis and treatment.

H.O.P.E.'S ANGEL CORNER

BY BARB TITANISH, PRESIDENT & CO-FOUNDER H.O.P.E.

Summer is such a busy time of year but a few organizations took time out of the busy schedules to fundraise for HOPE. First, I would like to thank **Battlefield HOG Chapter Gettysburg** for doing a 50/50 raffle to benefit HOPE, raising \$886.



The gals attending **MAWMR** (Mid Atlantic Women's Motorcycle Rally) raised a whopping \$16,142.50 during their fun-filled three day event in June. Of that, \$4,000 was donated in memory of **Crystal McDermott**, a long-time member and someone Carol and I were honored to call our friend. Crystal was one of the first to welcome me to this event.

We can't forget the **West York Memorial Post 8951's** motorcycle group, which raised \$4,000 in memory of our dear friend and HOPE member **Abi Miller**. Abi was a sweet gal who gave her all even when she was sick; you could always count on her to brighten up the room when she attended the support group with her sense of humor.

Are you seeing the theme here? Summer is a great time for motorcycles. Please, if you see a large group of bikers together. Respect their space and realize they are probably doing a charity run. Maybe now you realize why I post so many warnings about motorcycle safety on my Facebook page. HOPE and I are blessed to have so many **biker friends!**

Here are Some Advances in Cancer's Quest to 'Reach the Moon'

The **Cancer Moonshot**, a multibillion-dollar initiative championed by President Biden, aims to cut the cancer death rate by 50 percent in the next quarter century. Recent progress against cancer means this goal is now less far-fetched than it might once have seemed.

Metastatic Cancer—A Chronic Condition?

Some major developments have occurred in the treatments for patients with metastatic cancer that has spread inside their bodies. Many of these patients are able to stay alive much longer than previously predicted, and some are even cured by new drugs. In a growing number of cases patients may not be cured but have access to so many treatment options that they are able to leap from one to the next, changing course whenever their cancer becomes resistant to a drug, and always staying ahead of their disease.

Right now, **two relatively new classes of cancer drugs** are displacing traditional chemotherapy for many types of cancer and giving metastatic patients in particular more time. Many of these advances employ a person's own immune system to eliminate cancer cells, rather than using chemotherapy or radiation to do the extinguishing. These are modern immunotherapy drugs and antibody-drug conjugates, or ADCs.

President Carter's Immunotherapy Drug Miracle

The job of the immune system is to fight off harmful invaders, and it has checkpoints that stop it from attacking healthy cells. Cancer cells can disguise themselves as healthy cells and evade an attack by the immune system. '**Checkpoint inhibitor**,' a kind of immunotherapy, helps the immune system to recognize cancer cells for what they are. The first blockbuster immunotherapy cancer drug, for melanoma, was approved by the FDA in 2011 and was followed by more new immunotherapy cancer drugs and combinations designed to treat many types of cancer. One well-known example of an effective immunotherapy drug is former President Jimmy Carter, who announced in 2015 that he had metastatic melanoma that had spread to his brain. A decade ago, he might have been expected to die in less than a year. He was treated with an immunotherapy drug called **Keytruda** which was approved in 2014. It is one of the most successful immunotherapy treatments on the market and is useful for more than a dozen types of cancer. Mr. Carter, who turned 98 in October, entered hospice care earlier this year, eight years after his diagnosis of Stage IV disease.

ADC Drugs, the 'Smart Bombs' of Therapy

ADCs, the other newer class of cancer drugs, work by combining antibodies that can find cancer cells with very strong chemotherapy drugs. An ADC is like a smart bomb that knows how to home in on a target without causing very much collateral damage. Patients can often stay on ADCs for a long time, even years or decades, unlike regular chemotherapy, which can often only be given for a short period because it's too harsh on the body. At least nine ADCs have been approved by the FDA in the past five years, including one granted approval early last year after researchers published a trial showing that the drug could increase survival by nearly 50 percent for a large population of patients with metastatic breast cancer. Between 2017 and 2021, the FDA approved about three times as many new cancer drugs and cancer drug uses as it did between 2007 and 2011.

Clinical Trials May Soon Become More Accessible

Clinical trials are key in the development of new cancer treatments, and yet have trouble being filled because they aren't easily accessible to many patients. They also have a lack of diversity as far as enrolling patients over 65, patients with disabilities, and patients of color. To attempt to combat these problems a federal law called the **Clinical Treatment Act** was passed in January 2022 requiring Medicaid, the public insurance program for low-income Americans, to cover routine medical expenses for clinical trial enrollees. Another bill, called the DIVERSE Trials Act, was introduced in 2021 that would provide incentives to diversify trials and circumvent a federal ban on compensating people for participating in trials so that people who may not be able to afford the transportation and child care required to travel to study sites can be reimbursed. The bill's original sponsors plan to reintroduce it in the current congressional term.

More Cancer Vaccines Are Being Tested in Clinical Trials

The next big advance in cancer treatment could be a vaccine, which scientists say could be available in five years. These aren't traditional vaccines that prevent disease, but shots to shrink tumors and stop cancer from coming back. Targets for these experimental treatments include breast and lung cancer, with gains reported this year for melanoma and pancreatic cancer.

More than ever, scientists understand how cancer hides from the body's immune system. Cancer vaccines, like other immunotherapies, boost the immune system to find and kill cancer cells. And some new ones use mRNA, which was developed for cancer but first used for Covid-19 vaccines.

For a vaccine to work, it needs to teach the immune system's **T cells** (white blood cells called lymphocytes that focus on specific foreign particles) to recognize cancer as dangerous. Once trained, T cells can travel anywhere in the body to hunt down danger.

Medical personnel all over the country are finding willing volunteers for vaccine trials. One such trial is taking place in Philadelphia, where a doctor is recruiting 28 healthy people with **BRCA mutations** for a vaccine test. The idea is to kill very early abnormal cells, before they cause problems. Other trials are focused on developing vaccines to prevent cancer in people with precancerous lung nodules and other inherited conditions that raise cancer risk.

How Artificial Intelligence is Being Used to Fight Cancer

Artificial intelligence (AI) is transforming the healthcare industry in numerous ways, from drug development to personalized medicine. One area where AI has shown particular promise is in the **early diagnosis** of cancer. Artificial intelligence refers to computer programs, or **algorithms**, that use data to make decisions or predictions that imitate human intelligence. To build an algorithm, scientists might create a set of rules, or instructions, for the computer to follow so it can analyze data and make a decision.

To detect cancer cells, doctors use various imaging methods and tools, from x-rays to microscopic images of cancer cells. Scanning is essential for finding cancer in its early stages, determining the proper treatment, and checking whether the cancer has returned. Researchers have applied AI by using data from thousands of MRI and other scans to teach a computer how to search images to spot cancer cells. AI can also help doctors differentiate cancer cells from benign masses, aid in diagnoses, and determine how fast the cancer is growing. Furthermore, AI tools speed up the imaging process, make it possible to identify cancer cells earlier, and produce more accurate results.

AI algorithms can analyze large amounts of data quickly and accurately, making them ideal for detecting patterns in medical imaging, such as x-rays and CT scans. AI algorithms can identify small tumors that may be missed by human radiologists. This is particularly useful in **breast cancer screening**, where mammography can miss up to 20% of cancers, especially in women with dense breast tissue. AI algorithms can improve the accuracy of breast cancer screening and reduce the number of missed diagnoses.

AI can also be used to **analyze patient data**, such as medical records, to identify patients who are at high risk for developing cancer. By analyzing large amounts of patient data, AI can identify patterns that may indicate an increased risk of cancer, such as family history or lifestyle factors. This can help healthcare providers to identify patients who need further screening or monitoring, potentially leading to earlier cancer diagnosis.

In addition to the benefits of early cancer detection, AI also has the potential to **improve healthcare efficiency** and reduce costs. By automating certain tasks, such as image analysis, AI can reduce the workload of healthcare providers, allowing them to focus on more complex cases. This can also lead to faster diagnoses and treatment, which can improve patient outcomes.

However, there are also some **challenges** to the widespread adoption of AI in early cancer diagnosis. One challenge is the need for large amounts of high-quality data for AI algorithms to learn from. Healthcare providers must ensure that patient data is collected and stored in a secure and standardized way to ensure the accuracy and reliability of AI algorithms.

Another challenge is the need for healthcare providers to understand and trust the output of AI algorithms. While AI can provide valuable insights, it is important that healthcare providers have the necessary knowledge and training to interpret and use this information effectively.

A Few More New Therapies

On January 12, 2023, the American Cancer Society released its annual compilation of cancer facts and trends, which reported that since its peak in 1991, cancer mortality in the U.S. has dropped 33 percent. Much of that has to do with new therapies.

In the five years since the FDA's initial approval of chimeric antigen receptor (CAR) T cell therapy, 20 additional approvals related to drugs and techniques have been developed and approved to treat or detect cancer. **CAR T cell therapy** is a type of **cancer immunotherapy treatment** that uses immune cells called T cells that are genetically altered in a lab to enable them in locating and destroying cancer cells more effectively. Currently, CAR T therapy is FDA-approved to treat several types of hematological malignancies, including leukemia, lymphoma, and multiple myeloma.

How CAR T Cell Therapy Works


T cells are white blood cells that find and fight illness and infection throughout the body. Each T cell has a receptor that can recognize antigens (proteins or molecules that are recognizable by the immune system). When the immune system recognizes foreign or abnormal antigens, it can work to destroy them. But cancer cells sometimes have antigens that the body doesn't recognize as abnormal. As a result, the immune system may not send T cells to fight cancer cells. In other cases, the T cells may not be able to clear the cancer cells. In CAR T, scientists take some of a patient's T cells and generically engineer them, training the T cells to recognize a different antigen on the cancer and latch onto it. Then the medical team injects the revamped T cells back into the patient, where they can track down the cancer cell much more easily than before. Each kind of CAR T cell therapy is made to fight a specific kind of cancer antigen. So a CAR T cell therapy made for one type of cancer won't work against another type of cancer.

Two Other New Treatments

Another new drug is olaparib (marketed as Lunparza), which is used in ovarian cancer and breast cancer, most commonly tumors involving an inherited BRCA gene mutation. The oral medication works by targeting PARP, an enzyme in the body that helps to repair damaged cells – including cancer cells. By inhibiting PARP, the drug stops the repair of cancerous cells to prevent them from growing. There's also pafolacianine (marketed as Cytalux), the first FDA-approved agent that illuminates ovarian cancer and lung cancer lesions during surgery, enabling surgeons to find and remove cancerous tissue.

A New Method of Administering Chemotherapy

Chemotherapy and radiation work by stopping cancer cells from replicating so rapidly. Unfortunately they have wide-ranging and sometimes even toxic side effects. In a new approach for some cancers, for example abdominal cancer, surgeons are removing obvious tumors and then pumping chemotherapy right back into the abdomen and then draining it out. Surgeons are also implanting pumps during operations for cancer that's spread to the liver. Another potential breakthrough is tiny, silicone-based implants that deliver steady doses of a drug. Clinical trials for the implants are underway for prostate cancer patients at the National Cancer Institute, with plans to develop a similar initiative for breast cancer.


 Our newsletters don't usually generate much feedback (good thing?), but last month's elicited several accolades for our **scholarship recipient updates**. One caller commented that HOPE "Sure picked some winners!" So attention scholarship winners, we would love to hear from all of you. In these crazy times it's heartening to learn about your lives and achievements and to think we had a small hand in them.

ATTENTION SAUBEL'S SHOPPERS
 H.O.P.E. is collecting the stamps for the cutlery.
 Please save them and send them into H.O.P.E.'s office! Thank you!

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“Of all the forces that make for a better world, none is so powerful as hope. With hope, one can think, one can work, one can dream. If you have hope, you have everything.”



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