BLADDER CANCER 101: BCAN RESOURCES TO REACH & TEACH ABOUT BLADDER CANCER



BLADDER CANCER in 2018



81,190 diagnosed in 2018 600K + living with bladder cancer

6th most common cancer



Bladder cancer affects approximately 2.7 million people globally

About 59% of bladder cancer cases occur in developed countries

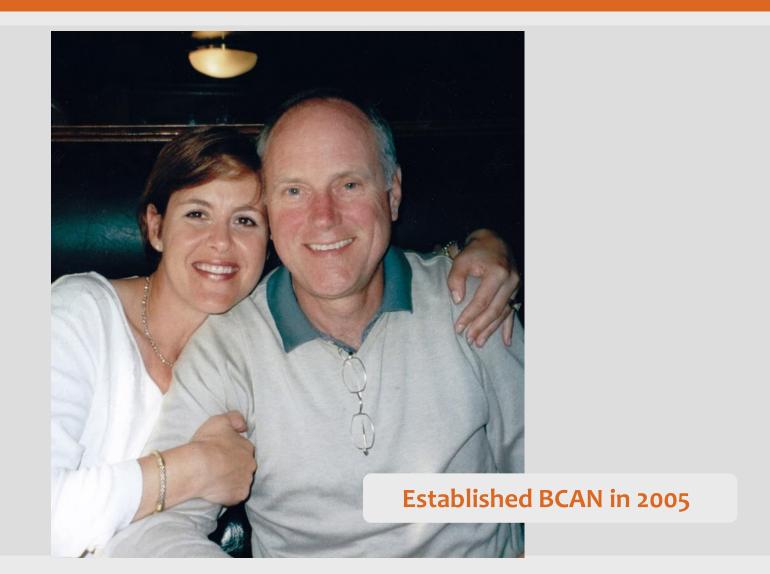




| | Developed | Developing | Developed | Developing |
|------------|-----------|------------|-----------|------------|
| Incidence* | 16.9 | 5.3 | 3.7 | 1.5 |
| Mortality* | 4.5 | 2.6 | 1.1 | 0.7 |

*Per 100,000, American Cancer Society, Surveillance Research, 2015

BCAN BEGINNINGS – DIANE & JOHN QUALE





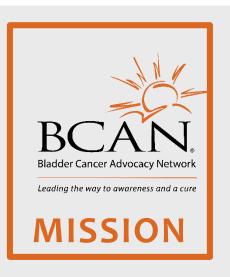
Raise Awareness



Advance Research

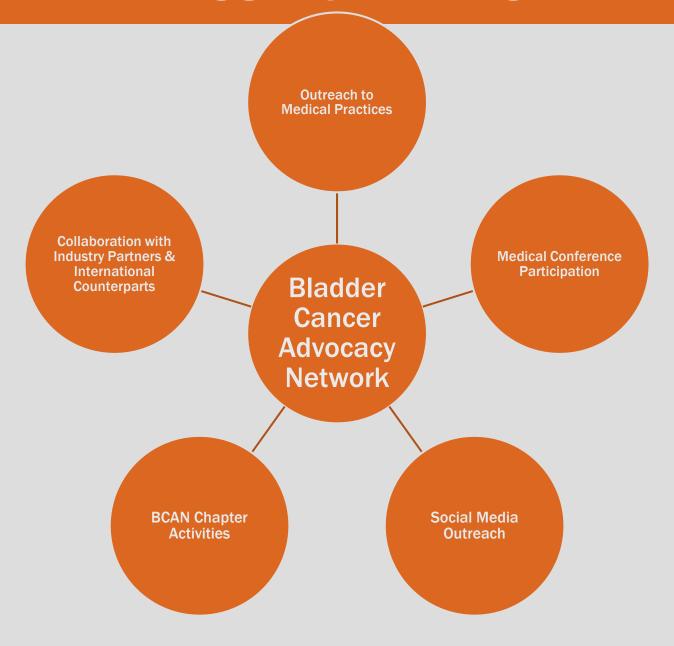


Provide Education and Support

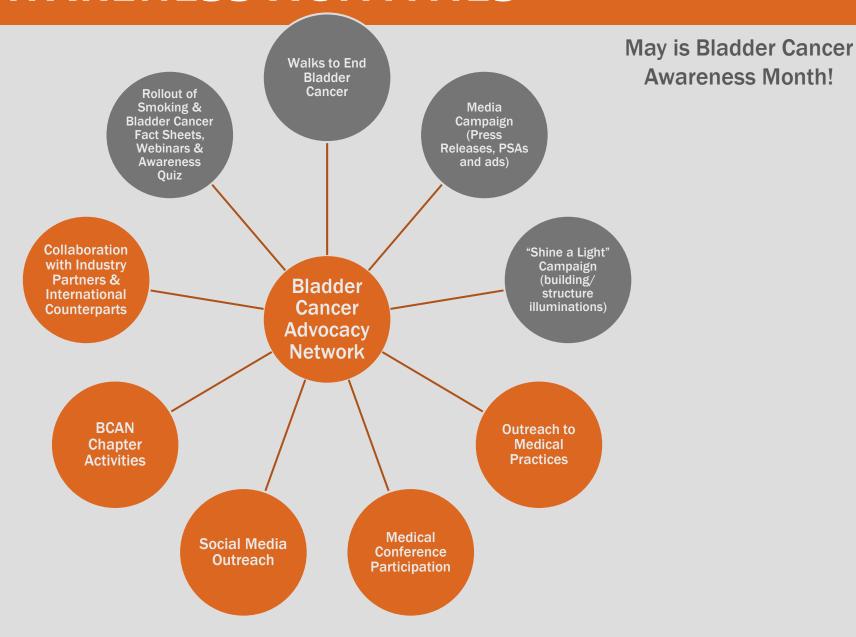


AWARENESS AND ADVOCACY

2018 BCAN AWARENESS ACTIVITIES



2018 BCAN AWARENESS ACTIVITIES



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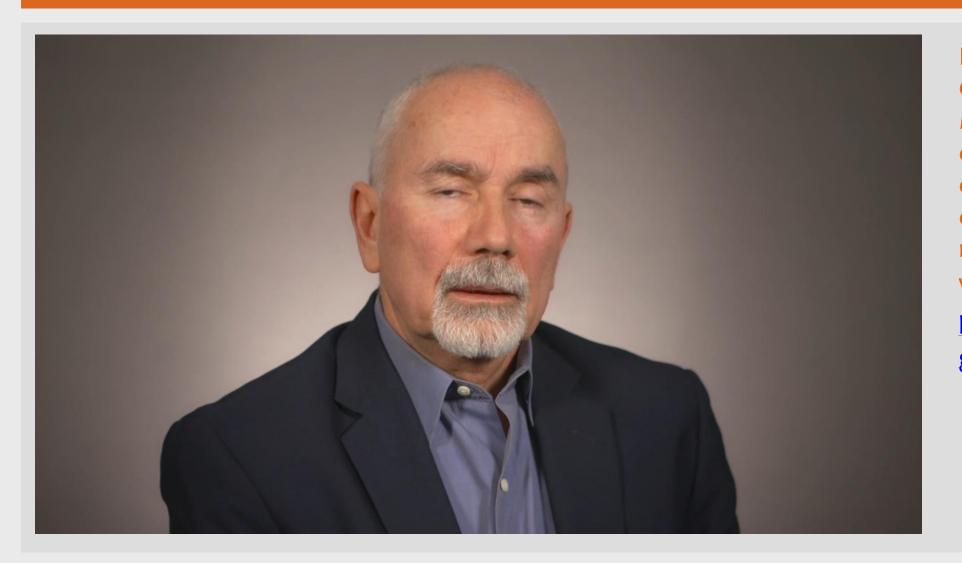


THIS FALL, LEARN ABOUT THE SIGNS AND RISK FACTORS FOR BLADDER CANCER.

Share where you live, work, play and pray so others don't learn about bladder cancer when they are diagnosed.

https://www.bcan.org
/signs-risk-factors/

2018 PUBLIC SERVICE ANNOUNCEMENT



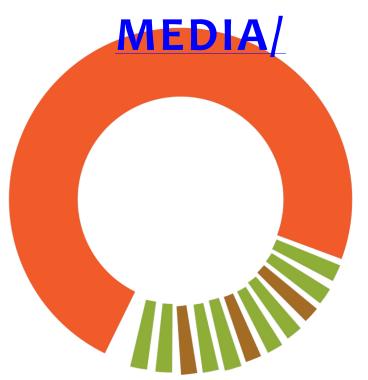
For the 2018 Bladder Cancer Awareness Month PSA for distribution to media outlets as well as doctors offices nationwide.

Watch the PSA on https://www.bcan.org/press-media/

BCAN WALK TO END BLADDER CANCER



WALK TO END BLADDER CANCER RECAP VIDEO WATCH NOW AT HTTPS://WWW.BCAN.ORG/PRESS-



Raising Awareness with International Counterparts

BCAN also partners with Bladder Cancer Canada and organizations in the UK (Fight Bladder Cancer) to recognize May as Bladder Cancer Awareness Month. Together, we sounded the global alarm about bladder cancer risks, signs and symptoms.

Now BCAN is working with international groups to start the World Bladder Cancer Patient Coalition



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ADVOCACY

BCAN brings advocates to Capitol Hill in Washington DC and works with patient advocates to support Federal legislation.



Rally for Medical Research, September 2018

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RESEARCH*

*Named one of America's 10 Best Medical Research Organizations by Charity Navigator!



*BCAN was recognized for our commitment to funding cutting-edge research and finding breakthroughs for bladder cancer and we are dedicated to using donors funds wisely in our journey to find a cure.

For more details visit https://www.bcan.org/bcan-named-one-of-charitynavigators-americas-10-best-medical-research-organizations/

2018 Bladder Cancer Research Innovation Award and BCAN Young Investigator Awards



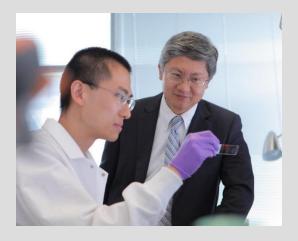
David Oh, MD, PhD Univ. California, SF



Philip Abbosh, MD, PhD Fox Chase Cancer Center



Eugene Lee, MD University of Kansas



Michael M. Shen, PhD Columbia University

https://www.bcan.org/research-grants/

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SCIENTIFIC ADVISORY BOARD

66

Nationally Recognized Multidisciplinary Experts









BCAN has built a culture of collaboration and excitement around bladder cancer- a disease that was all too often ignored before BCAN came along. Thank you for all that you- and the amazing folks on your team- have done over the years and continue to do every day. I am so proud to be a part of this amazing organization.

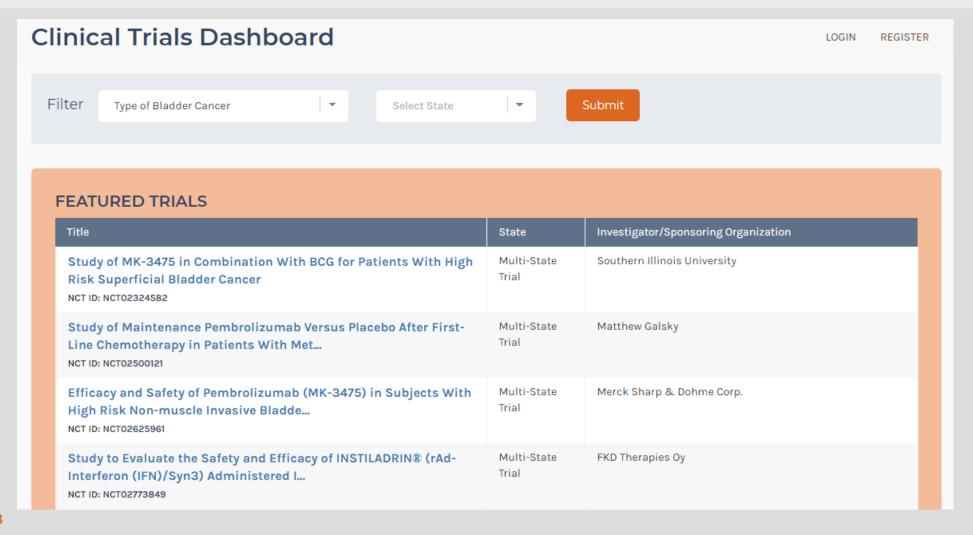
-Elizabeth R. Plimack, MD, MS Chief, Division of Genitourinary Medical Oncology Fox Chase Cancer Center

BLADDER CANCER THINK TANK - Scientific Meeting

Collaborating to move research forward.

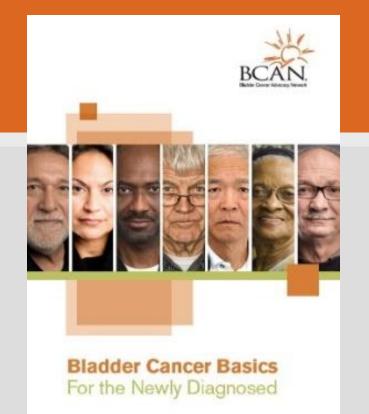


CLINICAL TRIALS DASHBOARD - HTTP://CLINICALTRIALS.BCAN.ORG/



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EDUCATION



Bladder Cancer Advocacy Network

Patient Handbook

EDUCATION

"From the beginning, BCAN has always been focused on all of the survivors, not just the patient survivor, but also the caregivers, the partners, the family, and the friends."

Rick Bangs, Patient Advocate

www.BCAN.org

EDUCATION - ONLINE



- Website
- Fact Sheets
- Expert Explanations
- Patient Insight Webinars
- Conversations
 What you need, when you
 need it. 24/7
 Multi-faceted resources

EDUCATION



BLADDER CANCER GET THE FACT

Cancer Immunotherapy

- What is Coses Insurantherapy?

bromanoflerage is a tigge of source treatment that is designed to help a jamest's timesen quitous recognise and attack concer cells.

The immune option femals and protests the body from agetting it presents as foreign, such as areas. because, and reas infly flow on adminish because they are commons, blumone; cancer has easy to make the treasure option. Cancer interestingly may help the treasure option. Cancer interestingly may help the treasure option recognize cancer with and activate specific annual with the treasure option. As a potential with affect, interestingly could cause the treasure species in other foreign given and times in the help.

Intermediate app with ISCS administrated make the fidelihebut long from used to interfect min month income histolihesamer. Symmet through with constructed magcon once he need to must be By wheelend or materials are desired continents, the most comment type of fideliher returntation. Specifiedly, it is not be used after your bladder returnhas special (instinction), and/or for returned by surgery. Committy, systems, remeasoftenage is agreed for use in patients with have had potencer-based deresoftenage and it has either our austration recognised acritical.

What happens during treatment with a causer immunotherapy!

Casser inconstitutings is typically selections used as on streamwest (FF) others through a methy planel or a senseles under-conduct super-sent. The providing of streets have recept restreamly personal, and FS reportant to long off year appointments.

ALE TOUR HEALTHCARE TEAM

- What steps is no binder cover and have then it offers my maximum agrees.
- " A sense towaresterapy a good against the me!"
- What are the patential broughts are sain effects of two-continuously?
- New after shiftmen to get instrumental copy montened?
- . Her long will the instrumenturage insurance leaf
- Are there any problems, other residual conditions or senderate (including procedure, see the scales conditions, plannin and lacked application) you send to know about before I receive interpretability.
- Are there any problems i might have during inequalificacy; that i desaid self-pix-alread
- What can I do so projecte? Can I not so detelinform the procedure?



TERMS TO KNOW

- Cancer frommeroffserapy! A type of cancer treatment that helps a person's recesses system rangeres and attack cancer calls.
- Oscalogisti A doctor who specializes in the prowreton, diagrams and transvent of cause
- Stage: The enters of concer within the body, expectably whether the disease his quied from the original and to other parts of the body.
- Unatherial concreme. A type of Maline correct that accessors for 90 persent of all cases of the disease and use also be found in the result public, until and unather.
- Renal polition The area or the present of the body where order inflicts and then intenseled into the present.
- · United The late that curves area from the hallony to the urrany bladder.
- Unathra: The tube drough which price exprise from the Maddin:

- Cystoscopy
- Transurethral Resection of Bladder Tumor (TURBT)
- Bacille Calmette-Guerin (BCG)
- Radical Cystectomy
- Ileal Conduit
- Indiana Pouch
- Neobladder
- Immunotherapy
- Palliative Care

"Bladder Cancer: Get the Facts" Tip Sheets

EDUCATION

Expert Explanations



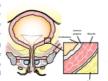
Bladder Preservation with Combined Modality Therapy:

An Expert Explanation by Dr. William Shipley

Curing Patients with Invasive Bladder Cancer Without Surgical Removal of the Bladder

Introduction

Nearly 70 percent of patients diagnosed with bladder cancer have disease at a very early stage affecting only the bladder lining and not yet invading the muscular layer of the bladder wall. These patients are almost always managed by transurethral resection of bladder tumor (TURBT)



perhaps with the addition of immunotherapy or chemotherapy instilled in the bladder to treat its inner surface.

60 percent of patients managed with radical cystectomy are still microscopic cells, a much easier prospect. alive five years later.

surgery, with radiation, and chemotherapy, all in lower doses than cisplatin chemotherapy. if used alone. Modern Combined-Modality Therapy (CMT)



for bladder cancer

the remaining tumor more sensitive to the radiation. When patients are well selected for this approach it can offer equal cure rates to treating with a cystectomy while still preserving a functioning bladder. This approach is favored for patients who are strongly motivated to maintain their bladder or in patients who have so many other medical problems that a radical cystectomy is simply

Who is suitable for bladder preserving therapy by CMT and how are they to be followed?

Many factors play into the determining which patients with a muscle invading bladder cancer are suitable for CMT. Ideally these patients would have cancers with the usual urothelial histology (a small proportion have different appearance down the The remaining 30 percent of bladder cancer patients have, at microscope). They would have clinical stage T2 to T3a disease, diagnosis, a more deeply, muscle-invasive cancer that needs and the absence of hydronephrosis (the partial obstruction by more aggressive treatment for cure. This treatment may be the the tumor of the ureter that transmits the urine from the kidney surgical removal of the bladder (called radical cystectomy), to the bladder). In addition, the best candidates are those with including a pelvic lymph node dissection, and reconstruction of tumors small enough to have been visibly completely resected a urine collecting pouch. The long-term outcomes of cystectomy, at TURBT. If a visibly complete resection is performed then the and its complications, are well documented. Between 40 and radiation and chemotherapy have only to mop up the remaining

For patients who are candidates for bladder preservation, we For all the sites in the body where cancer may arise our modern recommend concurrent chemo-radiation follows the TURBT rather therapies are increasingly looking towards eradicating the than just RT alone or chemotherapy alone. Chemotherapy that cancer while at the same time preserving the affected organ includes the drug cisplatin is preferred, although the combination and giving the patient the best possible functional outcome and of fluorouracil plus Mitomycin C is a good alternative, especially for thus quality of life. This is achieved by the combination of lesser patients whose kidneys do not work well enough for them to receive

> Radiation is given daily. 5 days per week, for up to 7 weeks. The side effects are principally of inflammation to the bladder and adjacent bowel (frequent urination and bowel movements) and usually subside once the radiation is



Following treatment patients must be followed closely with (RT) given together cystoscopy surveillance to detect any cancer recurrence or with chemotherapy. development of a new primary tumor in the bladder or elsewhere The latter makes within the urogenital tract (ureters, bladder, urethra).



Intravesical Immunotherapy with BCG

Introduction

A large majority of patients who develop bladder cancer have what is known as "non muscle invasive bladder cancer" or 'NMIBC'. This terminology comes from the fact that the tumor has not yet invaded into the true muscle layer of the



bladder. When detected at this relatively early stage it is often possible, with the appropriate combination of treatments, to save the patient's bladder.

The first step is complete removal of all visible disease within the bladder. This is achieved with a transurethral resection of the tumor, also called TURBT. For some patients, this may require more than one surgery, especially if the tumor is high grade and involving more than the very first layer of the bladder. After this has been achieved and the bladder has healed, the appropriate treatment may be with intravesical instillation of Bacillus Calmette-Guerin or BCG. BCG is a form In general, bladder cancer tumors can be law grade and high it works best when used appropriately – i.e for the right patient recurrence but especially to prevent progression. in the right manner.

(intravesical) in the office for several treatments. BCG works immunotherapy with BCG. However, based on individualized



in the bladder. Because it stimulates the immune system, it is considered an immunotherapy (as opposed to BCG is relatively non-invasive and used to directly treat the chemotherapy). It works to activate the body's immune system to kill cancer cells without harming the normal cells. In addition, BCG is reach other cells in the body.

Who is eligibile for BCG?

Intravesical immunotherapy with BCG is effective if the tumor is non-muscle invasive. These tumors are often divided into risk groups (low-risk, intermediate-risk and high-risk) based on the risk of recurrence (the likelihood the tumor will return) and the risk of progression (the likelihood the tumor will get worse

> and potentially become invasive or spread) [1] There are various factors that your

rologist will consider when making this risk assessment – such as on how big the tumor is, if it is a first time tumor or a tumor that has

regrown, the length of time it took for the tumor to regrow, if the bladder cancer is pure urothelial cancer, as well as as the location of the tumor and the grade of the tumor.

of the tuberculosis bacteria and originated as a vaccination grade. Low grade cancers can recur often, but are less likely to against tuberculosis. After decades of detailed investigation progress. Thus the goal of therapy with these tumors is mainly including large trials in multiple countries that have tested BCG to reduce the frequency of recurrence. The high grade tumors against various after agents, it currently remains the most can progress and become muscle invasive or metastasize. effective therapy for NMIBC. However, as with any treatment, In treating this type of tumor the goal is to not only prevent

Most patients with the intermediate-risk and high-risk non-It is instilled into the bladder with a urethral catheter muscle invasive bladder concers will be candidates for locally in the bladder to stimulate the body's own immune risk assessment, other intravesical treatments or even bladder system to fight off the cancer cells removal (cystectomy) may be recommended.

What are the benefits of BCG for patients?

bladder lining. BCG intravesical treatment for non-muscle invasive bladder cancer is the most effective treatment that exists for reducing the recurrence and progression of bladder tumors. [1] In patients who respond appropriately, BCG can instilled locally in the bladder cannot be a life-saving treatment that reduces death from bladder cancer. Over half of patients have a complete response to BCG

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Dr. Debra Silverman, Lynn Thorp & Dr. Polly Hoppin

Environmental & Occupational Risk Factors

Highlighting Bladder Cancer Clinical Trials Advanced/Metastatic Bladder Cancer

Dr. Andrea Apolo, Dr. Arjun Balar & Rick Bangs

Advanced/Metastatic Bladder Cancer Clinical Trials



Dr. Peter Black, Dr. Parminder Singh & Rick Bangs

Muscle Invasive Bladder Cancer Clinical Trials

Patient Insight Webinars



Neoadjuvant & Adjuvant Chemotherapy

Matthew Galsky, MD Ichan School of Medicine at Mount Sinai

> Neoadjuvant & Adjuvant Chemotherapy



Knowing the Risks & Warning Signs

Lambros Stamatakis, MD

MedStar Washington Hospital Center & Georgetown University

Risks & Warning Signs







Pathology Driving Decisions
What is your diagnosis & what are your options?

Drs. Matthew Mossanen, Guru Sonpavde & Kent Mouw

Pathology Driving Decisions



Ashish Kamat, MD, MBBS, FACS MD Anderson Cancer Center Janet Kukreja, MD MD Anderson Cancer Center

Bacillus Calmette-Guérin (BCG)



Precision Medicine & Bladder Cancer

Gopa Iyer, MD Memorial Sloan Kettering Concer Center Seth Lerner, MD Baylor College of Medicine

Precision Medicine







Highlighting Bladder Cancer Clinical Trials Non-Muscle Invasive Bladder Cancer

Dr. Robert Svatek, Dr. Parminder Singh & Rick Bangs

Non-Muscle Invasive Bladder Cancer Clinical Trials

EDUCATION

Conversations | Let's Talk about Bladder Cancer

with Diane Zipursky Quale



- Sexuality after Bladder Cancer
- Biomarkers
- Personalized Medicine and Immunotherapy
- The Multidisciplinary Approach
- Spotlight on Recurrence
- Spotlight on BCG

PATIENT SUPPORT

BCAN Chapters

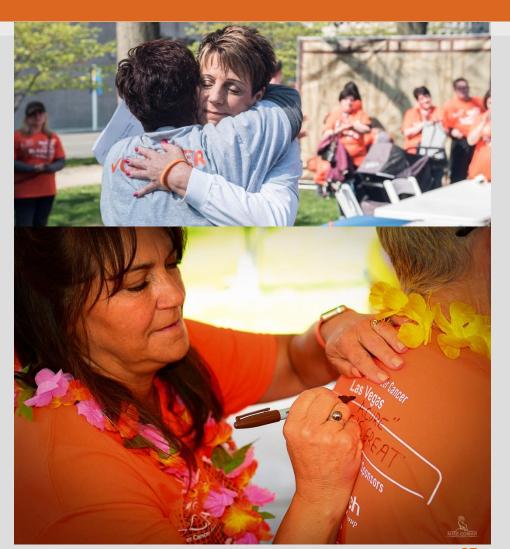
Online Support Community

Survivor 2 Survivor

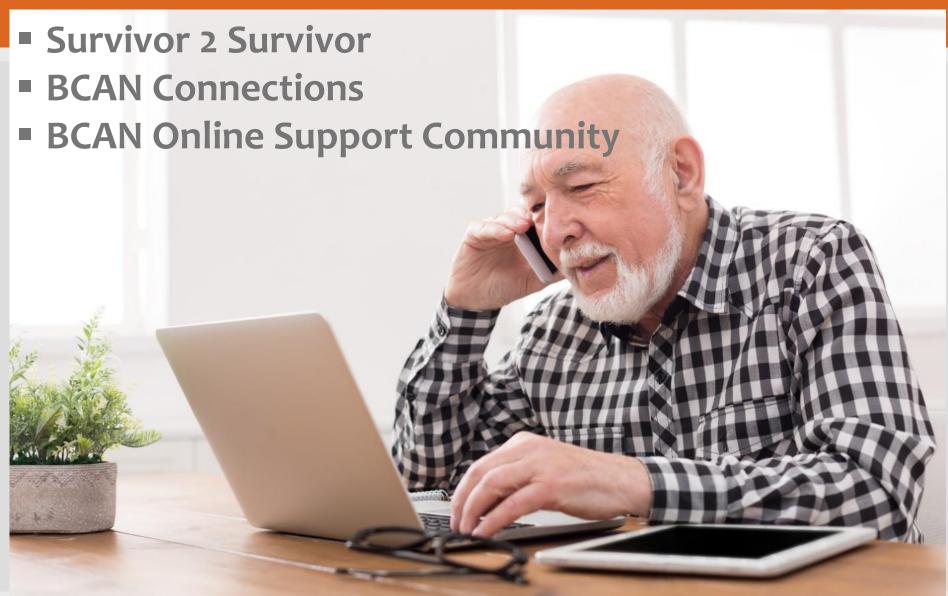
BCAN Connections

BCAN CHAPTERS

- Albany, NY
- Corpus Christi, TX
- Chattanooga, TN
- Las Vegas, NV
- New Jersey
- NC Coastal Chapter
- North Carolina Triangle
- Richmond, VA
- Pennsylvania
- San Diego, CA



SUPPORT



QUESTIONS?



Bladder Cancer Advocacy Network

Leading the way to awareness and a cure

ANSWERS! Visit WWW.BCAN.ORG



Bladder Cancer Advocacy Network

Leading the way to awareness and a cure

ONE MORE THING. Your thoughts and opinions matter!

GET FREE BCAN SWAG! #BCANorange!

- ■Important feedback evaluation form
- ■Strengthen the community get to know each other in *person*. What's your "Inspire" handle?
- ■Forms in your packets turn them in at the end of the Summit and pick your swag!

Your Support is Critical to Our Success

Thank you for helping us in our mission to increase public awareness, advance bladder cancer research, and provide education and support services for the bladder cancer community.

