



Society for Immunotherapy of Cancer

Advances in Cancer Immunotherapy™

Education and Resources

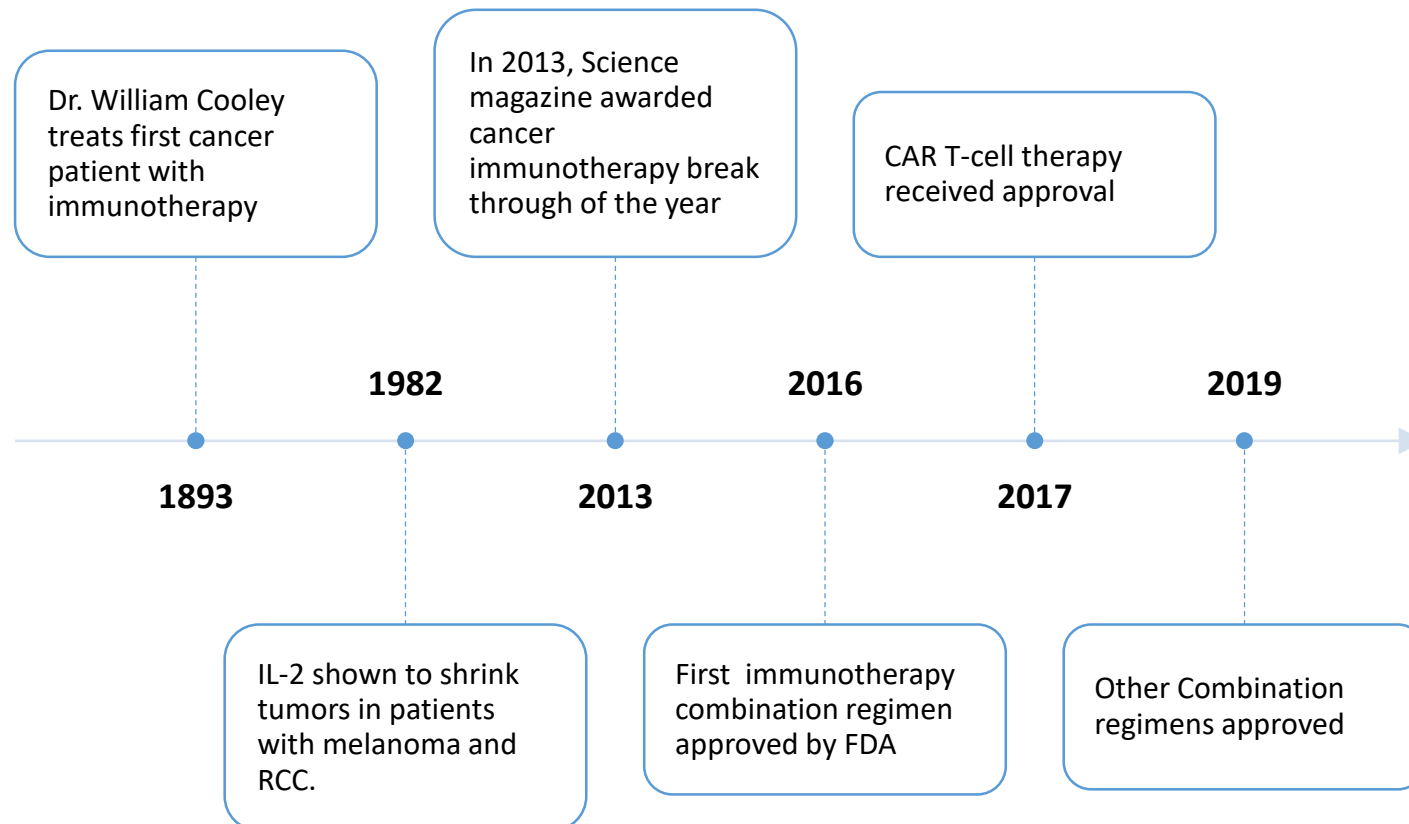
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#LearnACI

Disclosures

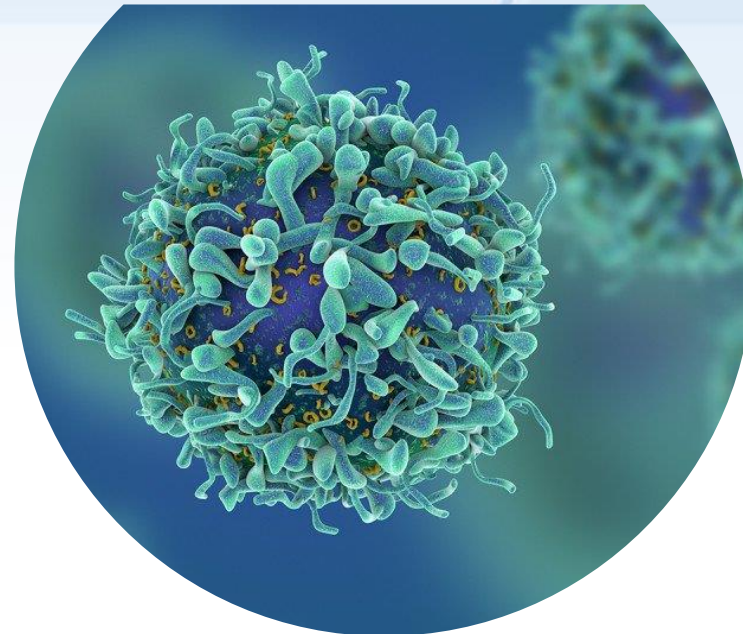
- Consulting Fees: Pfizer Advisory Nursing board, 2018
- Fees for Non CE Services: Speaker for Exelixis 2021
- Other: ASCO Bladder Program Panel Member and Faculty 2019, 2021 , Pfizer Learning Day Speaker 2019, BCAN Webinar Faculty 11/2020
- I will be discussing non-FDA approved indications during my presentation.

Immunotherapy Timeline



Side Effect Profile

- T-cells are the “ignition switch” to immune responses
- “Press on the gas pedal” to accelerate and stimulate the immune system
- “Step on the break” to avoid unnecessary immune stimulation
- Checkpoint Inhibitors “lift foot of the break” for an enhanced and sustained immune response



Education

Patients and Caregivers

- Understand difference between IO and chemotherapy
- Recognize potential side effects
- Know who to contact to report symptoms 24/7

Providers

- Identify patients on IO
- Recognize subtle symptoms
- Use practical guidelines, attend lectures, engage with non-oncology providers and subspecialists

Institutions

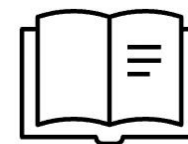
- Set standardized guidelines and order sets for managing iRAEs
- Identify immunotherapy specialists or teams
- Tumor Boards

Patients and Caregivers

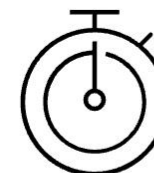
Barriers to learning



Cognitive



Literacy



Time

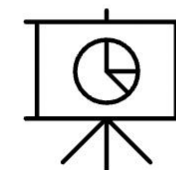
Education strategies



Communication

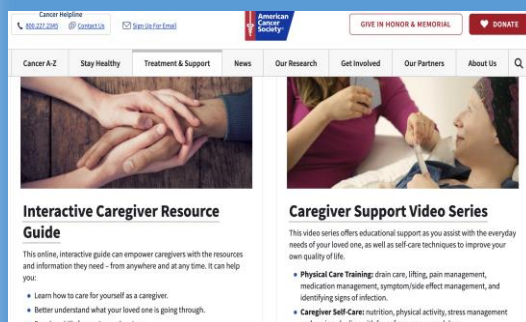
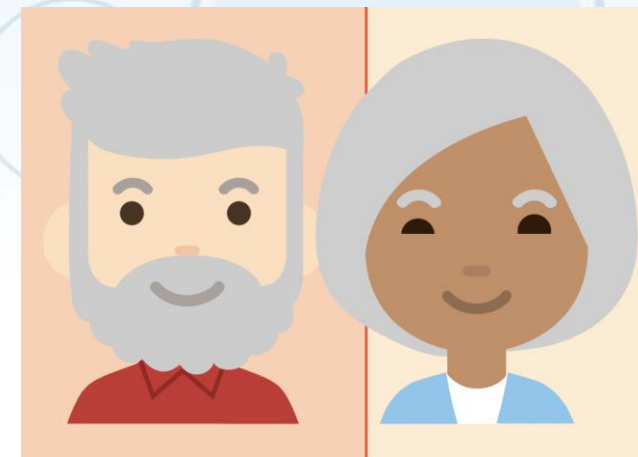


Videos

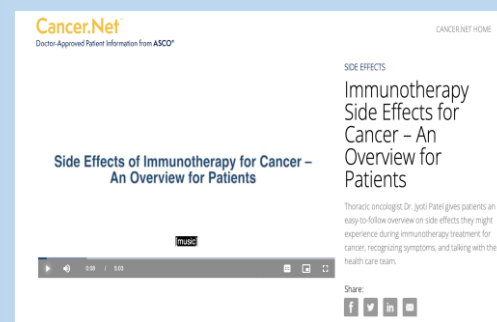


Demonstrations

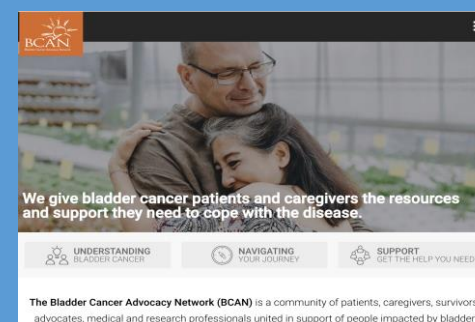
Patient Resources



American Cancer Society



ASCO Cancer.NET]



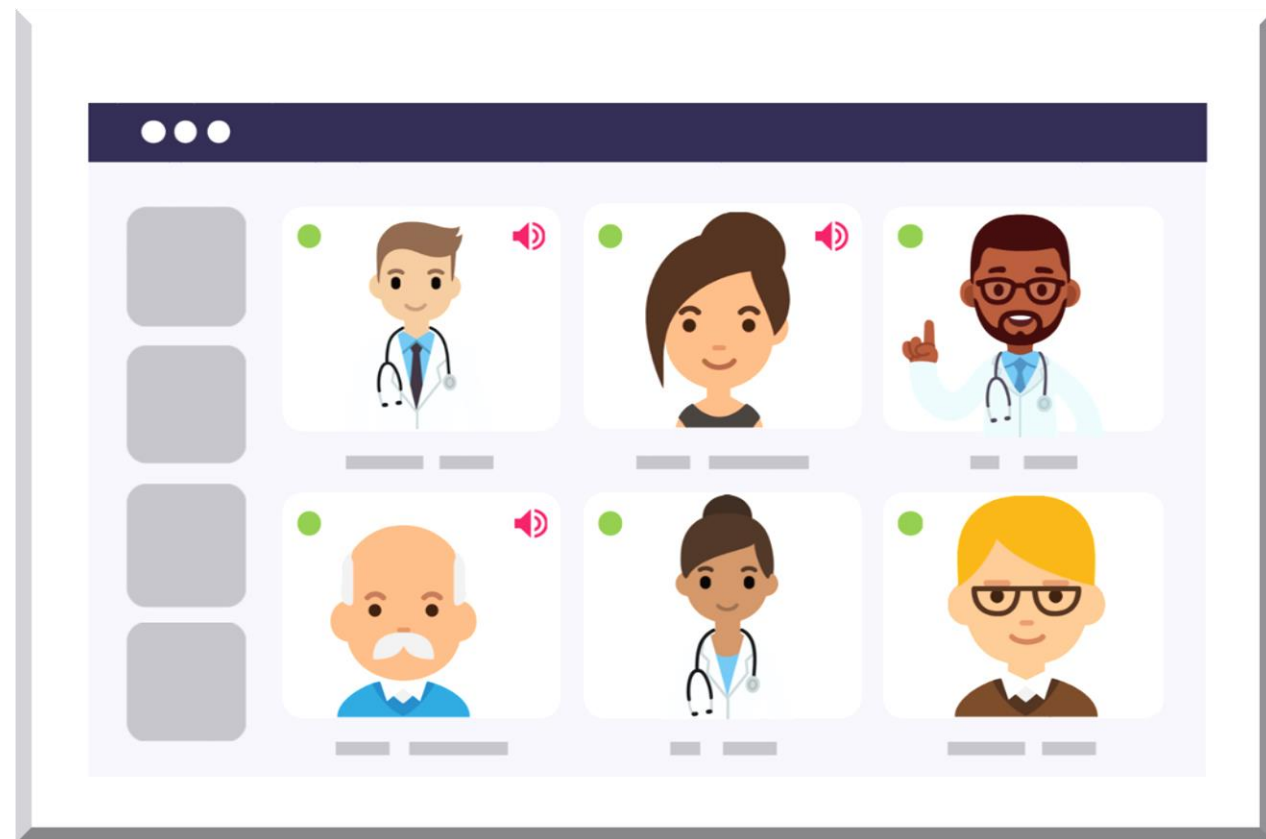
Bladder Cancer Advocacy Network



Society for Immunotherapy of Cancer

Multidisciplinary

- Online tumor boards
- Lecture Series
- Immunotherapy tox teams
- Engage community oncology practices



Symptom Reporting Technology



Original Investigation | Oncology

Evaluation of Technology-Enabled Monitoring of Patient-Reported Outcomes to Detect and Treat Toxic Effects Linked to Immune Checkpoint Inhibitors

Pavlos Msaouel, MD, PhD; Clara Oromendia, PhD; Arlene O. Siefker-Radtke, MD; Nizar M. Tannir, MD; Sumit K. Subudhi, MD, PhD; Jianjun Gao, MD, PhD; Yinghong Wang, MD, PhD, MS; Bilal A. Siddiqui, MD; Amishi Y. Shah, MD; Ana M. Aparicio, MD; Matthew T. Campbell, MD, MS; Amado J. Zurita, MD; Leah K. Shaw, MSN, RN; Lidia P. Lopez, MSN, RN; Heather McCord, RN, BSN; Sandip N. Chakraborty, MS, MBA; Jacqueline Perales, MPH; Cong Lu, PhD; Michael L. Van Alstine, BSE; Michael Elashoff, PhD; Christopher Logothetis, MD



Practice Guidelines

- NCCN
- ASCO
- SITC

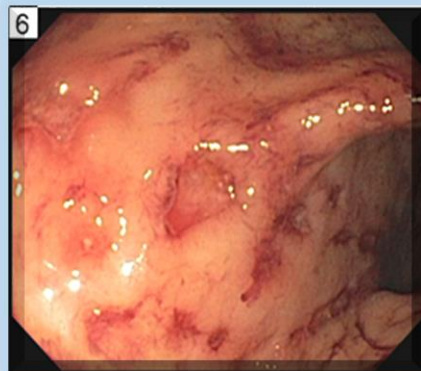
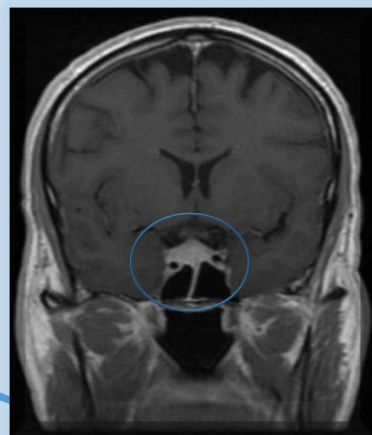
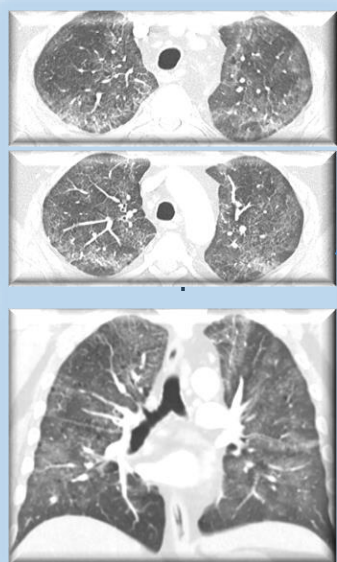
<div> <div>NCCN</div> <div>National Comprehensive Cancer Network®</div> </div> <div>NCCN Guidelines Version 4.2021</div> <div>Management of Immune Checkpoint Inhibitor-Related Toxicities</div> <div> NCCN Guidelines Index Table of Contents Discussion </div>		
HEPATIC ADVERSE EVENT(S)	ASSESSMENT	MANAGEMENT ^h
Grade >1 transaminitis ^s with elevated bilirubin (unless Gilbert syndrome)	<ul style="list-style-type: none"> Rule out viral etiology, disease-related hepatic dysfunction, other drug-induced transaminase elevations Consider GI/hepatology evaluation Limit/discontinue hepatotoxic medications (assess acetaminophen, dietary supplements, and alcohol use) Consider abdominal imaging for symptomatic patients to rule out complications 	<div> <div>Bilirubin 1–2 x ULN</div> <ul style="list-style-type: none"> Hold immunotherapyⁱ Initiate prednisone/methylprednisolone 1–2 mg/kg/day^w Consider inpatient care Monitor liver enzymes and LFTs every 2–3 days^z Hepatology consultation If steroid refractory or no improvement after 3 days, consider adding mycophenolate^y Infliximab should not be used for hepatitis </div> <div> <div>Bilirubin 3–4 x ULN</div> <ul style="list-style-type: none"> Permanently discontinue immunotherapyⁱ Initiate prednisone/methylprednisolone 1–2 mg/kg/day^w Inpatient care Monitor liver enzymes daily Hepatology consultation If steroid refractory or no improvement after 3 days, consider adding mycophenolate^y Infliximab should not be used for hepatitis </div>
<p>^h See Principles of Immunosuppression (IMMUNO-A). ⁱ See Principles of Immunotherapy Rechallenge (IMMUNO-C). ^s Elevated ALT and AST. ^w When liver enzymes show sustained improvement or return to ≤ G1, initiate steroid tapering and continue to taper over at least 1 month. Re-escalate as needed. ^y Mycophenolate mofetil treatment (0.5–1 g every 12 h) can be considered in patients who have persistent severe hepatitis despite high-dose corticosteroids. When LFTs improve to grade 1 or less and after completion of a steroid taper, consider discontinuation of mycophenolate at the same time. ^z AST, ALT, bilirubin, CMV, CBC, and coagulation factors.</p> <p>Note: All recommendations are category 2A unless otherwise indicated. Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.</p>		

Grading Side Effects CTCAE

- Example: Diarrhea

Gastrointestinal disorders					
CTCAE Term	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Diarrhea	Increase of <4 stools per day over baseline; mild increase in ostomy output compared to baseline	Increase of 4 - 6 stools per day over baseline; moderate increase in ostomy output compared to baseline; limiting instrumental ADL	Increase of ≥7 stools per day over baseline; hospitalization indicated; severe increase in ostomy output compared to baseline; limiting self care ADL	Life-threatening consequences; urgent intervention indicated	Death
Definition: A disorder characterized by an increase in frequency and/or loose or watery bowel movements. Navigational Note: -					
Dry mouth	Symptomatic (e.g., dry or thick saliva) without significant dietary alteration; unstimulated saliva flow >0.2 ml/min	Moderate symptoms; oral intake alterations (e.g., copious water, other lubricants, diet limited to purees and/or soft, moist foods); unstimulated saliva 0.1 to 0.2 ml/min	Inability to adequately aliment orally; tube feeding or TPN indicated; unstimulated saliva <0.1 ml/min	-	-
Definition: A disorder characterized by reduced salivary flow in the oral cavity. Navigational Note: -					

Diagnostic Tox Tool



Immunotherapy Labs and Diagnostic Tests

1. All patients on immune checkpoint therapy

CBC with diff and full chemistry panel

- TSH, Free T4, Total T3
- Amylase/Lipase
- LFTs
- ESR, CRP, CK,
- T-spot
- PFTs with DLCO

2. Endocrinopathy (*Plus labs in section 1*)

- Cortisol, ACTH, FSH, LH, Testosterone-M; Estradiol-F
- MRI brain with sella/hypopituitary focus

3. Diarrhea/colitis (*Plus labs in section 1*)

- Stool culture
- C. Diff DNA PCR
- Stool ova and parasites
- Occult blood
- Fecal leukocytes
- CT A/P

4. Pneumonitis (*Plus labs in section 1*)

- Sputum culture, gram stain, AFB
- Respiratory panel PCR
- Cardiac panel
- EKG
- 2-D TTE
- 6-minute walk
- Complete PFT
- CXR 2 view
- High resolution chest CT

Summary

- Immuno-oncology treatments represent the new frontier for cancer therapy.
- Cancer immune therapies can be associated with significant toxicities.
- Timely treatment is important for the management of these toxicities.
- Education and resources are available to provide swift intervention and avoid potentially fatal toxicities

Thank You

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