



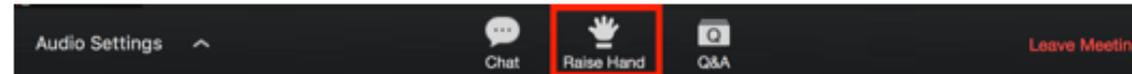
SETS

Student Educational Talks

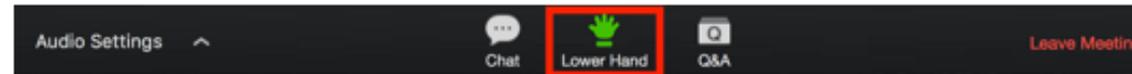
November 6th, 2019

Zoom Controls

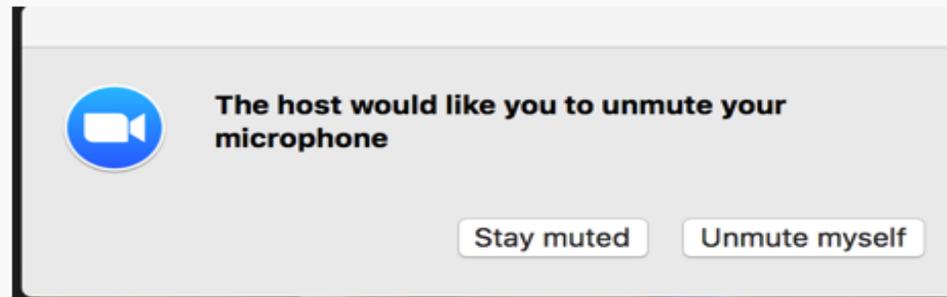
1. Click **Raise Hand** in the Webinar Controls.



2. The host will be notified that you've raised your hand.
3. Click **Lower Hand** to lower it if needed.



1. If the host allows you to talk, you will receive a notification.



2. Your audio settings will now change to a **Mute/Unmute** button. You can still access the audio settings by click on the ^ arrow next to the Unmute/Mute button.

Student Educational Talks Agenda

- **NCODA Mission and Vision Statements**
 - Tara Magallon, PharmD Candidate 2021, UNT
- **Immune Checkpoint Inhibitors – Class Overview**
 - Kirollos Hanna, PharmD, BCPS, BCOP, Mayo Clinic
- **Chemotherapy Induced Nausea/Vomiting**
 - Kristie Fox, PharmD, Cancer Specialists of North Florida
- **NCODA National Meetings – Fall Summit 2019**
 - Madison Motzner, PharmD Candidate 2022, Washington State University
- **NCODA Professional Student Organization Update**
 - Rebecca Corvese, PharmD, NCODA



Thank you to all of our speakers
from across the country!

Mission Statement

Our focus is to advance the value of dispensing practices for oncology physicians.

We will provide leadership, expertise, quality standards, and sharing of best practices with all members.

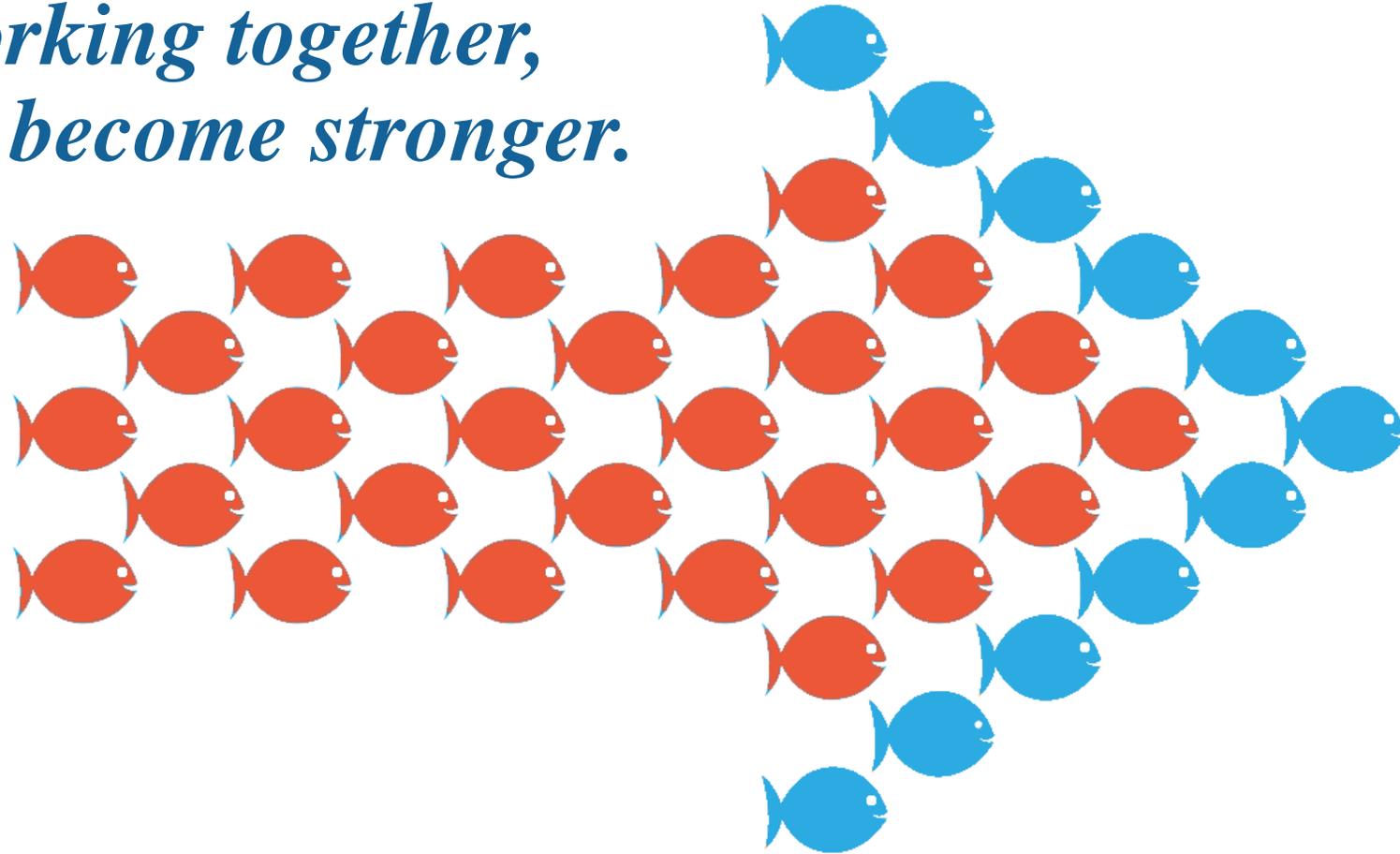
We will deliver positive outcomes through collaboration with all stakeholders involved in the care of oncology patients.

Vision Statement

Our vision is to be the world leader in oral oncology by building a patient-centered medically integrated community whose focus is to innovate the continuity of cancer care so every patient receives the maximum benefit from their cancer treatment.

1,800 + Members and 440 + Practices Strong!

*Working together,
we become stronger.*



Immune Checkpoint Inhibitors: An Overview

Kirollos S. Hanna, PharmD, BCPS, BCOP

Assistant Professor of Pharmacy

Mayo Clinic College of Medicine

Hematology/Oncology Clinical Pharmacist

University of Minnesota Medical Center

Disclaimer

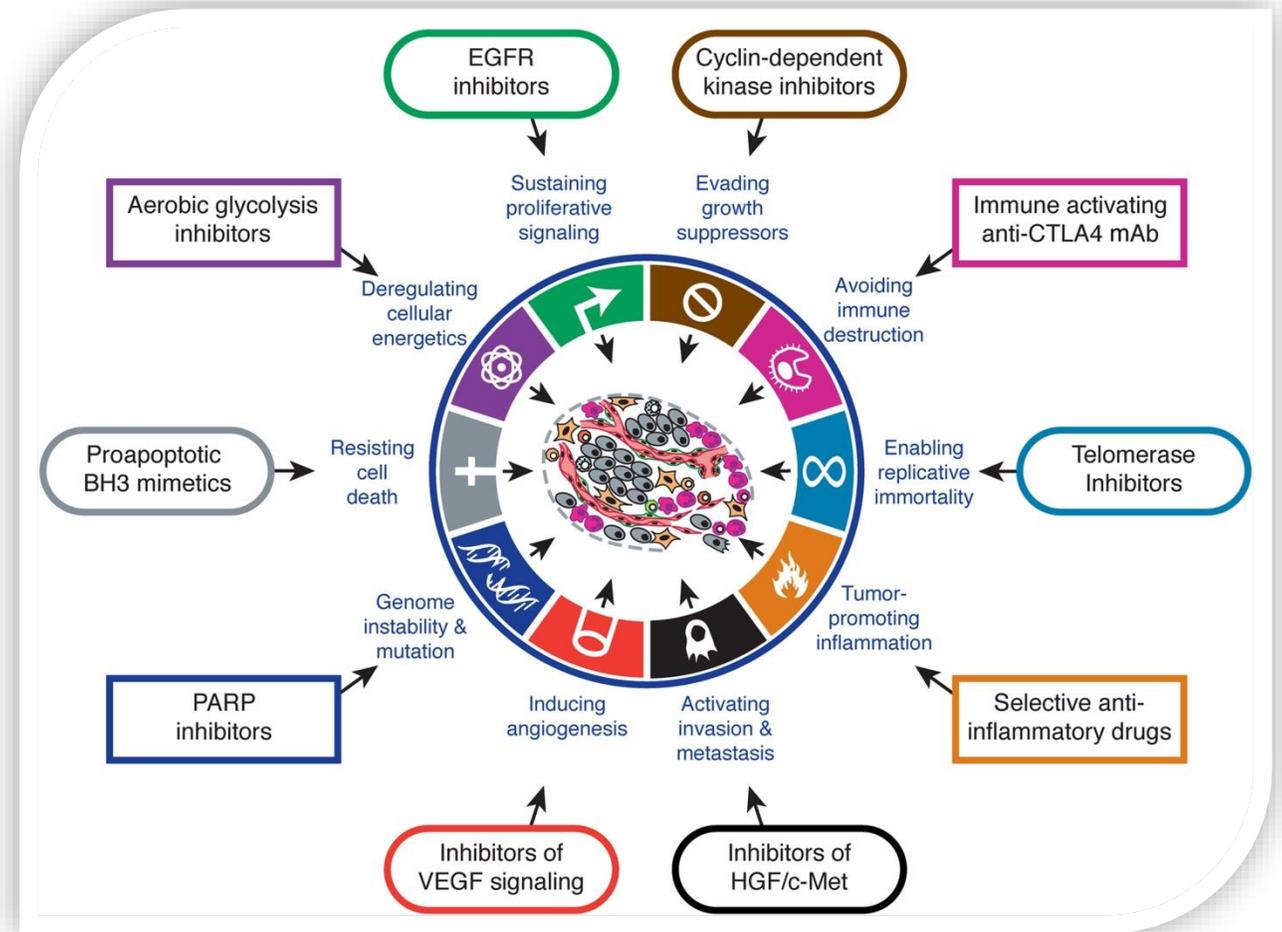
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Introduction

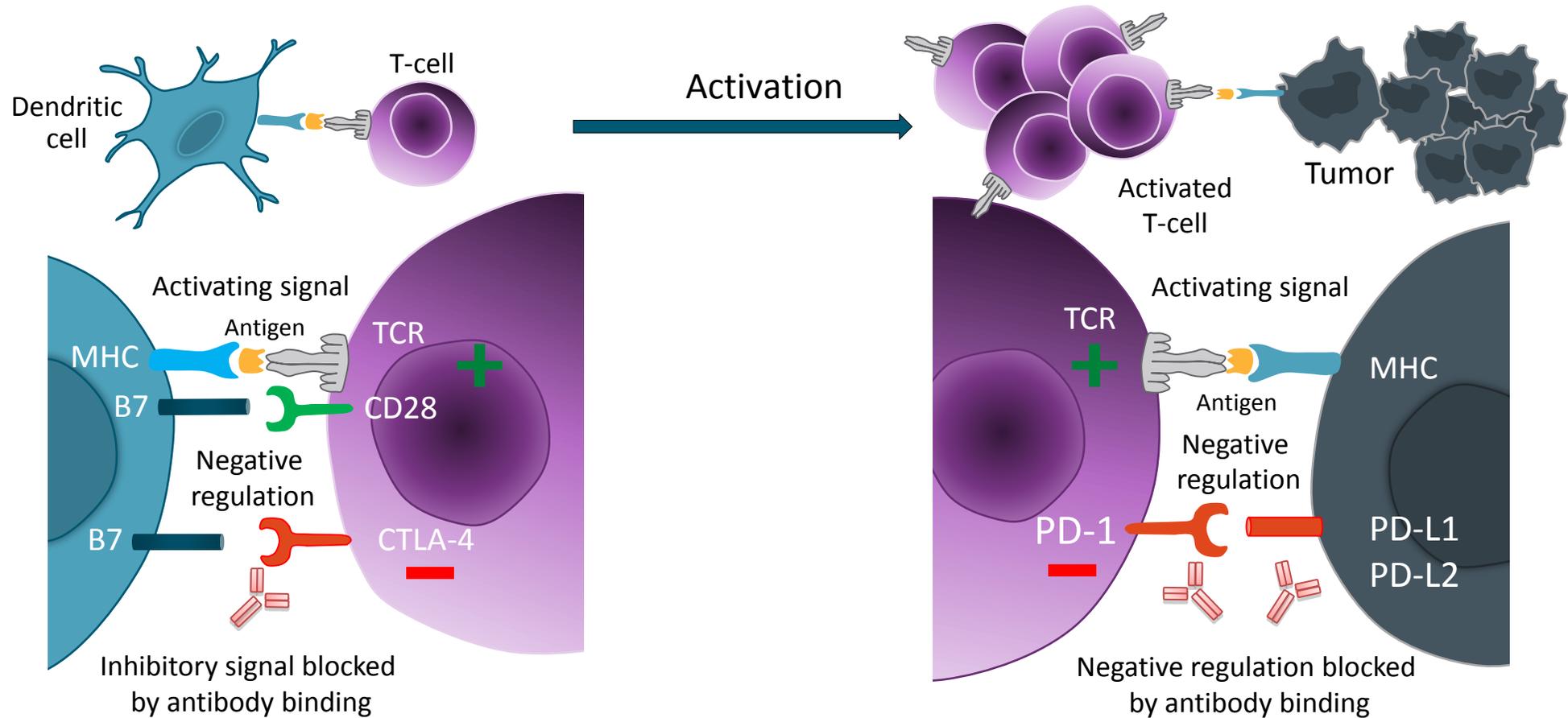
- “Immunotherapy for cancer treatment” is named by Science magazine “Breakthrough of the Year” 2013
- American Society of Clinical Oncology (ASCO) annual report 2016 and 2017
 - Cancer immunotherapy was the “Advance of the Year”
- Immunotherapeutic agents have broad and robust activity across many tumor types
 - Unique FDA approvals now for greater than 20 cancer indications since 2011
- Essential for multidisciplinary approach in the continuum of care of the patient receiving immunotherapeutic agents

Pathogenesis of Cancer

- Tumor cells are eliminated by the immune system under normal conditions
 - Cancer evades immune destruction
 - “Hide” or prevent T-cell invasion
 - Downregulates expression of surface antigens
 - Overexpression of surface proteins designed to induce immune deactivation
 - Changes in microenvironment around tumor
- Aim of immunotherapy
 - Activation of the immune system directly or by inhibiting mechanisms of suppression by tumors
 - Innate and adaptive arms of the immune system work in tandem to enable the immune system to attack cancer cells



Biologic Rationale for Immune Checkpoint Inhibition as Cancer Therapy



PD-L1 Indications and Testing Requirements

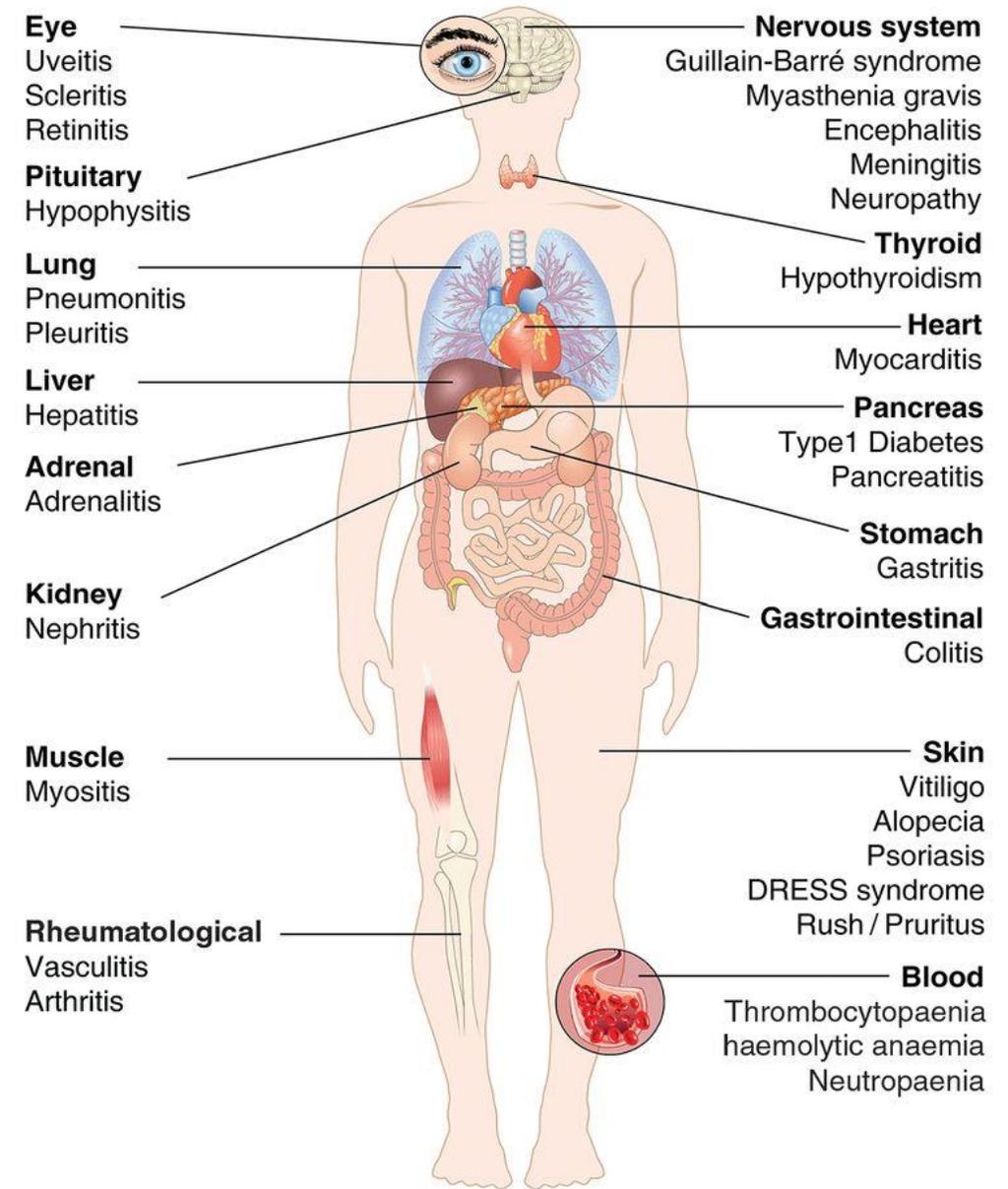
Checkpoint Inhibitor	PD-L1 Testing Required	PD-L1 Testing NOT Required
Pembrolizumab	NSCLC: First-line, single agent NSCLC: Second-line, single agent Gastric cancer Cervical cancer HNSCC: Front-line UC: Front-line select patients	Melanoma, Hodgkin lymphoma, MSI-H tumors, urothelial carcinoma, recurrent HNSCC, hepatocellular carcinoma, Merkel cell carcinoma, PMBCL, RCC, NSCLC: First-line, with chemotherapy, esophageal cancer
Nivolumab		Melanoma, Hodgkin lymphoma, NSCLC, HNSCC, RCC, urothelial carcinoma, HCC, SCLC
Atezolizumab	Breast cancer UC: Front-line select patients	Urothelial carcinoma, NSCLC, SCLC
Avelumab		Merkel cell carcinoma, urothelial carcinoma
Durvalumab		NSCLC, urothelial carcinoma
Cemiplimab		Cutaneous squamous cell carcinoma

Gaps in Optimizing Efficacy of Checkpoint Inhibitors

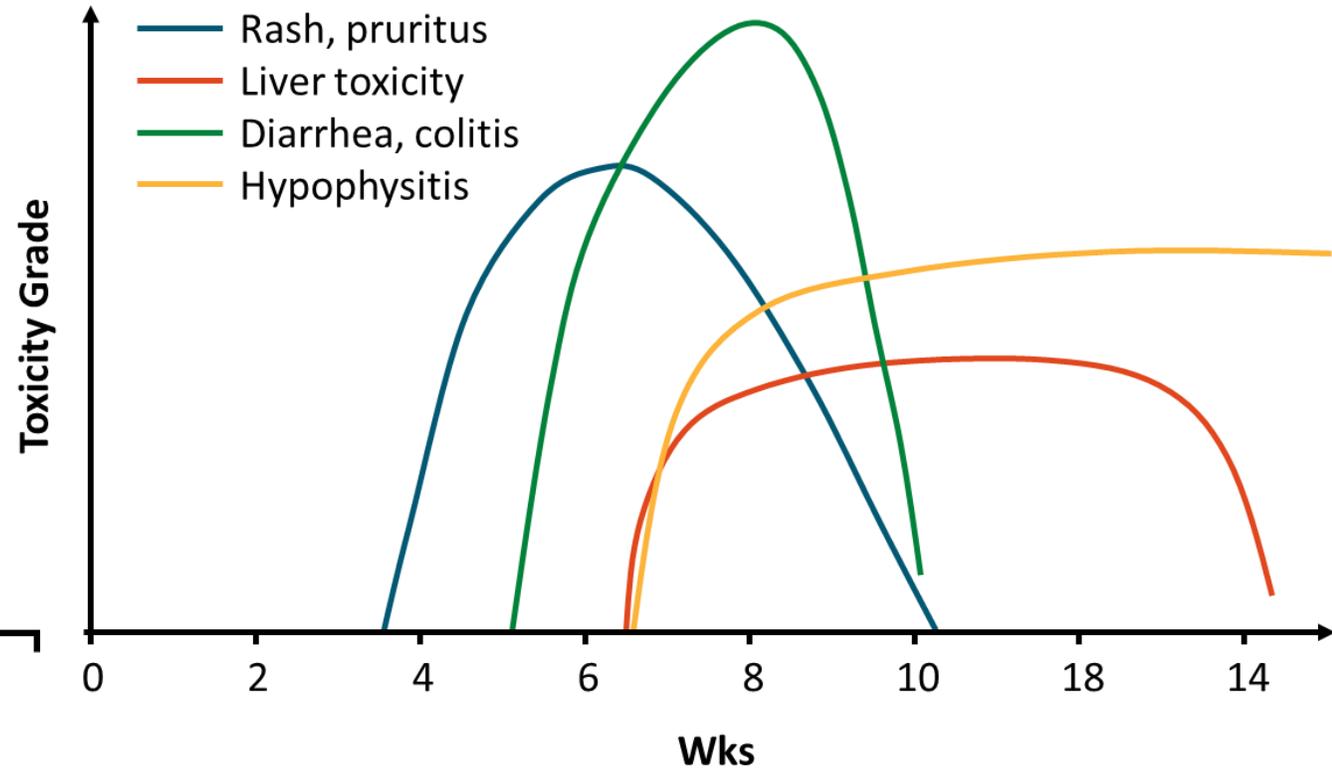
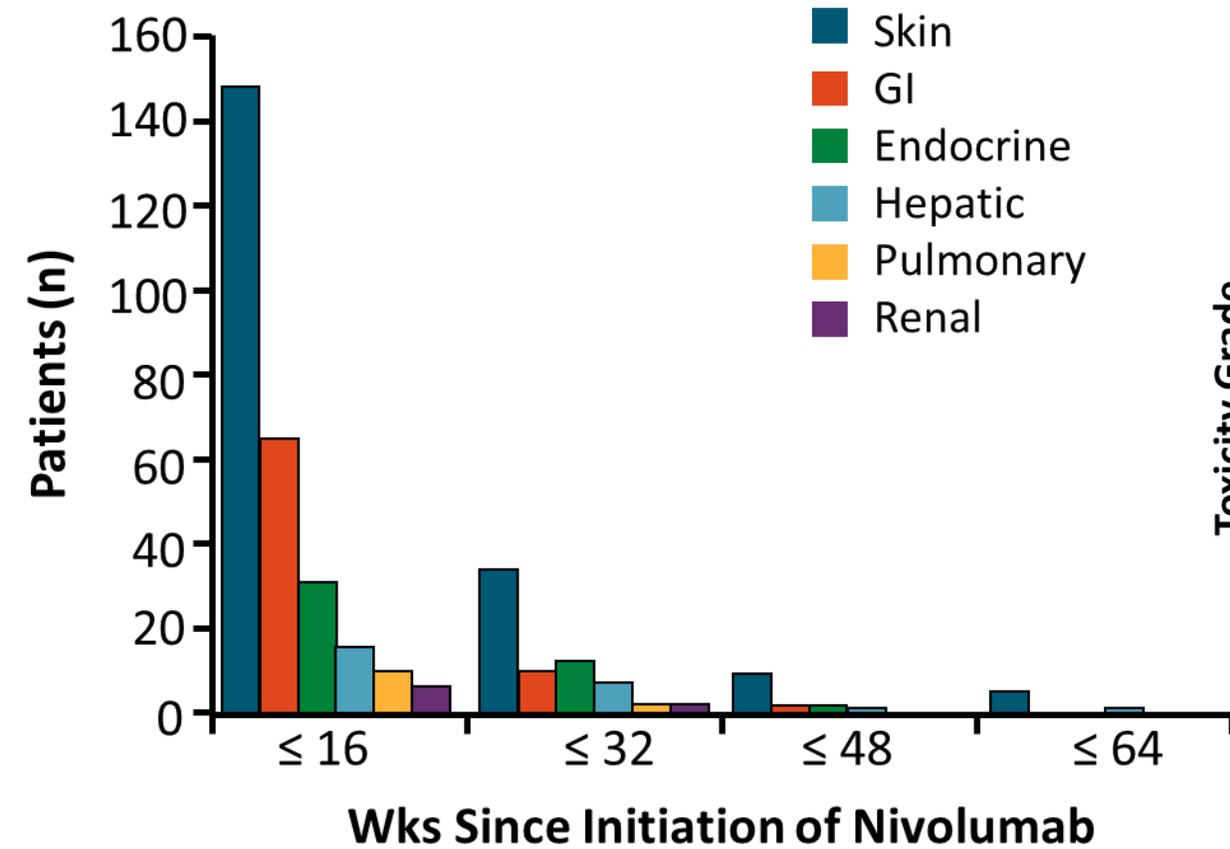
- Identify potential biomarkers to predict which patients will benefit from checkpoint inhibitors
- Combination therapy
 - Chemotherapy + checkpoint inhibitor
 - Tyrosine kinase inhibitors + checkpoint inhibitor
 - Dual checkpoint inhibitors
- PD-L1 testing is broadly available; multiple assays
- Expression by IHC may vary by biopsy technique and location
- Inconsistent correlation with IO benefit across multiple tumor settings
- Currently required biomarker for FDA approved use in select cancers

Immune-Related AEs

- ICIs introduce the potential for transformative, durable responses in multiple malignancies
- ICIs also introduce the potential for toxicity
- irAEs
 - Activation of immune system that can “target” host tissues/organs
 - Can mimic (or flare) pre-existing autoimmune conditions
 - Pathophysiology is not well understood
 - Treatment involves immunosuppressive agents



Onset of irAEs



PD-1/PD-L1 Education Principles

Prior to start

- Document underlying conditions
- History of autoimmune diseases
- Medication history / allergies
- Performance status
- Reproductive status
- Breastfeeding status
- Provide wallet card or other identification

Patient Instructions

- Notify HCPs of new signs and symptoms
 - Fatigue, rash, cough, SOB, muscle pain, weight loss, etc.
- Symptoms should be monitored for a long time even after therapy completion
- Medication changes, vaccines, etc.

Toxicity Management

- Review medications for DDIs
- Symptomatic management for mild to moderate irAEs
 - Best supportive care & work up
 - Steroids may be needed
 - Hormone substitution as needed
 - May delay Tx until recovery / improvement
- Severe irAEs
 - Discontinue treatment
 - Steroids and other immuno-suppressants
 - Hospitalization may be required
 - Expert consultation

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4. Hematology/Oncology (Cancer) Approvals & Safety Notifications. FDA. www.fda.gov/drugs/informationondrugs/approveddrugs/ucm279174.htm. Accessed 8/10/2019.
5. Varricchi G, et al. *ESMO Open* 2017;2(4):e000247, doi:10.1136/esmoopen-2017-000247
6. Weber. *JCO*. 2017;35:785.
7. NCCN. Management of Immunotherapy-Related Toxicities. V.1.2019. (Accessed 06/23/19)

Questions?

Kirollos S. Hanna, PharmD, BCPS, BCOP

Assistant Professor of Pharmacy

Mayo Clinic College of Medicine

Hematology/Oncology Clinical Pharmacist

University of Minnesota Medical Center

The Treatments Involved in CINV

Kristie Fox, PharmD

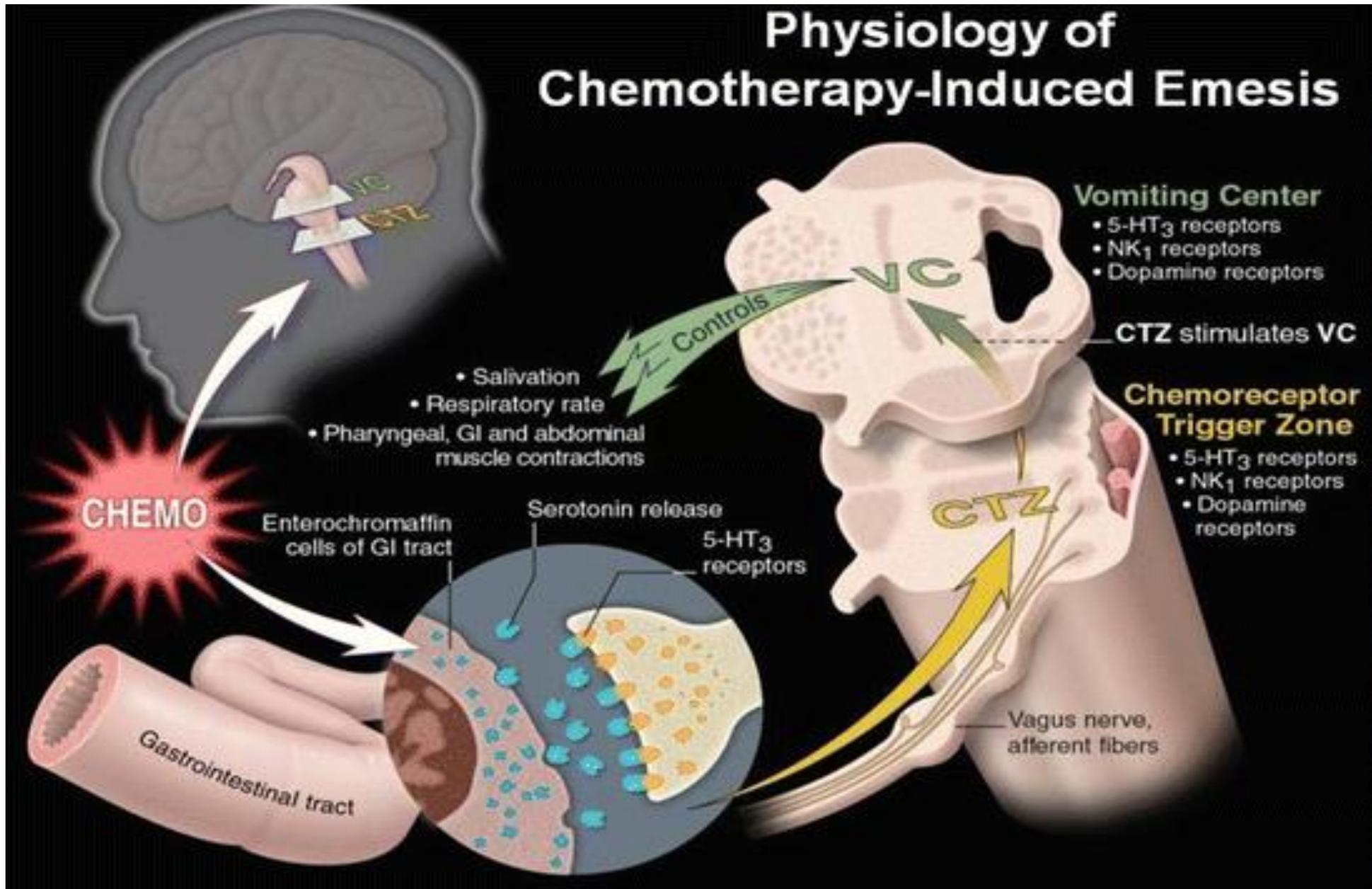
Clinical Oncology Pharmacist

Cancer Specialists of North Florida

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Physiology of Chemotherapy-Induced Emesis



CINV Treatment and Prophylaxis

5-HT₃ antagonists

Dolasetron
Granisetron
Ondansetron
Palonosetron

NK1 antagonists

Aprepitant
Rolapitant

Corticosteroids

Methylprednisolone
Dexamethasone

Dopamine antagonists

Olanzapine
Prochlorperazine
Promethazine

Metoclopramide

Cannabinoids

Dronabinol

Pharmacologic Pearls

- 5HT₃s – watch prolongation of QT interval interactions and when using patch or long acting, use another agent for breakthrough
- NK₁s – extended half life (especially Rolapitant – 2 weeks) – use for delayed onset CINV
- Steroids – consider SE profile and agents you are using with (immunotherapies/cellular therapies – use alternative agent for N/V) and dose in am due to insomnia
- Olanzapine – not widely used, avoid in elderly, watch QT interval interactions

Pharmacologic Pearls

- Phenothiazines – safe and effective, watch SE profile (EPS, sedation)
- Metoclopramide – watch SE profile, increases gut motility – watch in patients already experiencing diarrhea
- Cannabinoid – may help stimulate appetite, start low and slowly increase (easy to dose adjust)
- Scopolamine – consider using when positional changes or excessive secretions are a problem
- Benzos – use in anticipatory N/V, watch in elderly, watch combo with opioids



Single-dose wallet card contains two 90-mg tablets¹

- 1 dose, no dose adjustments of dexamethasone, and choice of 5-HT₃ RA¹
- Tablets can be taken with or without food
- VARUBI is effective when taken 2 hours (at the *earliest*) to 1 minute (at the *latest*) prior to chemotherapy treatment¹
- VARUBI is the only NK-1RA with a long half-life of ≈7 days, lasting through the delayed CINV phase following chemotherapy.¹ Patients do not need to take a follow-up dose of VARUBI before 14 days after the previous dose

Varubi Counseling

- Bring to appointment to administer prior to chemotherapy
- Take BOTH tablets by mouth at one time
- Often given with DEX and 5HT₃
- Watch CYP_{3A4} interactions, liver impairment

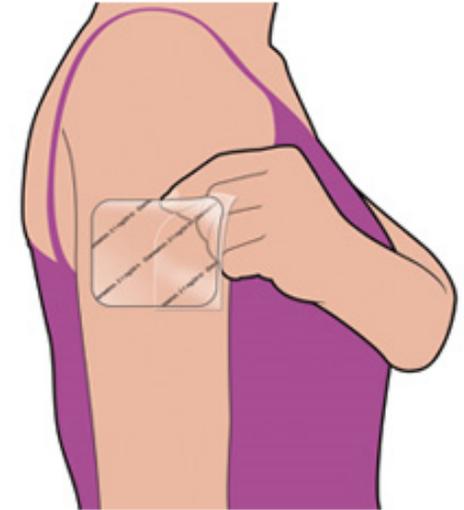
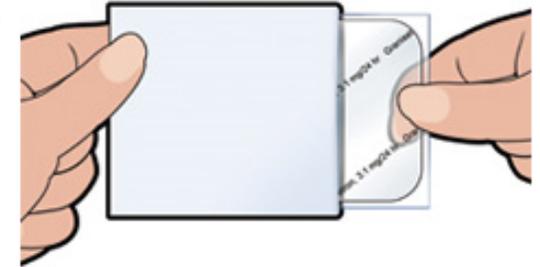


Emend Counseling

- Bring to appointment to administer prior to chemotherapy on Day 1
- Day 2 and Day 3 take in AM as instructed
- Often given with DEX and 5HT₃
- Watch CYP3A4 interactions, liver impairment
- Can be made into an oral suspension 20mg/mL



- Apply SANCUSO a minimum of 24 to a maximum of 48 hours before your scheduled chemotherapy treatment.¹
- **Do not cut the SANCUSO patch into pieces.**¹
- Apply SANCUSO to a clean, dry, healthy area of skin on the outside part of your upper arm. SANCUSO should not be placed on skin that is red, irritated, or damaged.¹
- **Do not put SANCUSO on areas that have been treated with creams, oils, lotions, powders, or other skincare products that might keep the patch from sticking to your skin.**¹
- If the patch does not stick well, you may use surgical bandages or medical adhesive tape to keep the patch in place. Place tape or bandages on the edges of the patch. Do not completely cover the patch with bandages or tape and do not wrap completely around your arm. If the patch comes more than half off or it becomes damaged see your healthcare provider.¹



References

1. Hesketh et al. N Engl J Med. 2008; 358:2482-2494.
2. NCCN. Antiemesis. V.1.2019 (Accessed 7/8/2019)
3. Varubi {package insert}. Lake Forest, IL: TerSera Therapeutics LLC; 2018.
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Questions?

Kristie Fox, PharmD

Clinical Oncology Pharmacist

Cancer Specialists of North Florida

NCODA's National Meetings

Madison Motzner
PharmD Candidate 2022
Washington State University

NCODA's National Meetings



Students at NCODA National Meetings

- NCODA Professional Student Organization Student Champions and/or Chapter Presidents or President-Elects ~ Complimentary



PROFESSIONAL
STUDENT
ORGANIZATION

- NCODA Advanced Pharmacy Practice Experience students that are on rotation during a national meeting ~ Complimentary



Association Management
Advanced Pharmacy
Practice Experience

- Other NCODA Professional Student Organization student members and APPE students can participate on a case-by-case basis ~ Not Complimentary



Students at NCODA's 2019 Fall Summit



Fall Summit 2019

Included on the Program Agenda:

- ✓ Hot Topics Covered:
 - ✓ DIR Fees & Co-Pay Accumulators
 - ✓ **Cannabis in Cancer**
 - ✓ How USP 800 Applies in Your Practice
 - ✓ **Re-Using and Re-Dispensing Prescriptions**
 - ✓ Effective Practices for Patient Navigation
- ✓ Nurse & Technician Pre-Conference Sessions
- ✓ Workshops and Roundtable Discussions
- ✓ Networking with your peers!
 - ✓ Regional Dinners & Poster Session



Fall Summit 2019



Interested in participating at **NCODA's 2020 Spring Forum** in Dallas, TX?

Email Rebecca at:

Rebecca.Corvese@ncoda.org

Contact@ncoda.org

NCODA Professional Student Organization Update

Rebecca Corvese, PharmD
National Community Oncology Dispensing Association, Inc.

NCODA's Commitment to Students

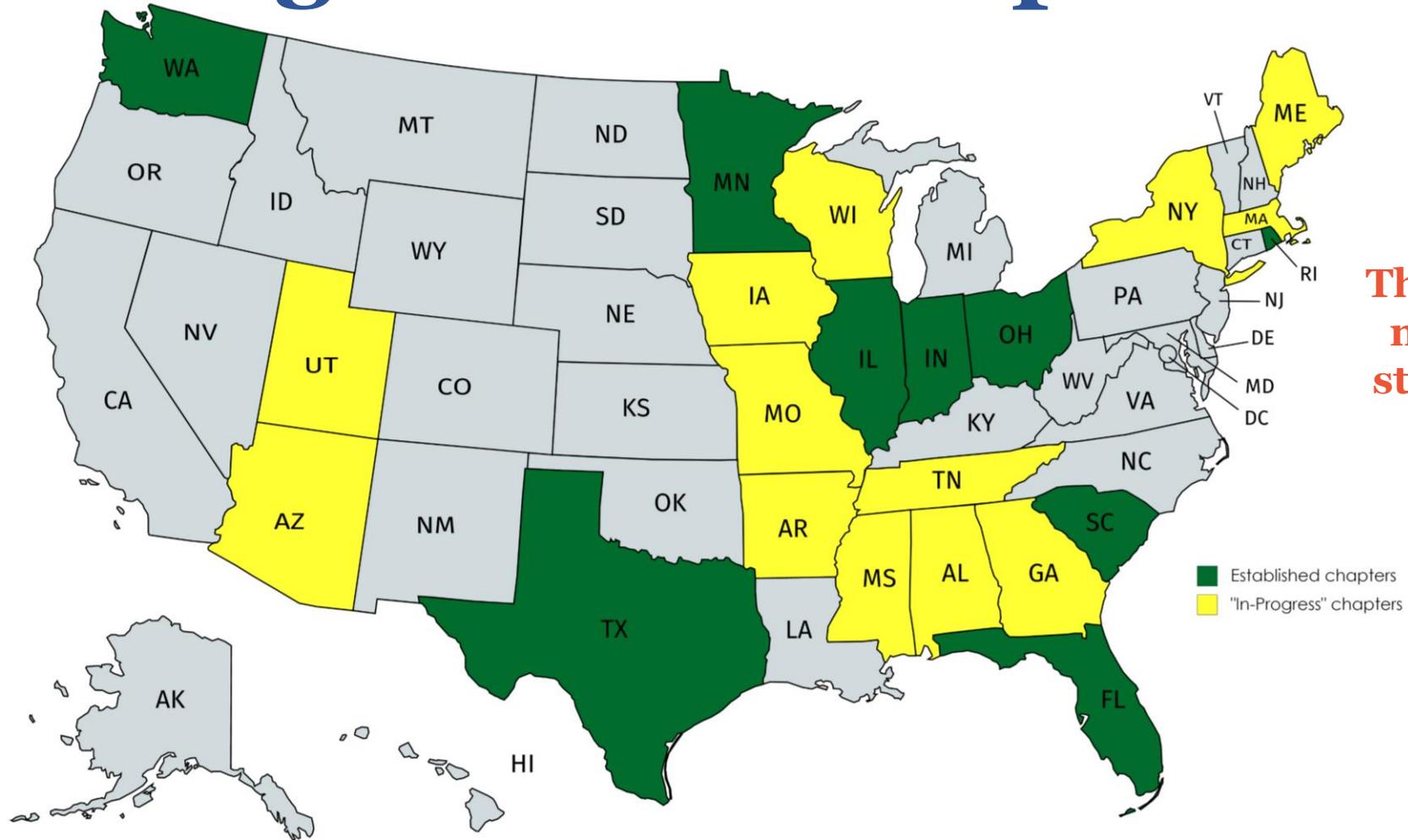
*NCODA is collaborating with colleges/universities nationwide to offer pharmacy students, nursing students, and more, membership into a professional organization centered around advancing NCODA's Mission with the goal of **improving patient care.***

College Engagement

- NCODA's College Engagement Initiative:
 - Professional Student Organization chapters
 - South University College of Pharmacy
 - University of Rhode Island College of Pharmacy
 - Midwestern University Chicago School of Pharmacy
 - Elective APPE
 - University of Rhode Island
 - Albany College of Pharmacy & Health Sciences
 - St. John Fisher College Wegmans School of Pharmacy
 - Oncology Association Management Fellowship
 - First Fellow began in June 2019
 - Currently seeking Fellow for 2020-2021



NCODA Professional Student Organization chapters



There are over 250 national NCODA student members!

NCODA's 10 Established PSO Chapters

1. ***South University School of Pharmacy*** (Columbia, SC)
2. ***University of Rhode Island College of Pharmacy*** (Kingston, RI)
3. ***Midwestern University Chicago College of Pharmacy*** (Chicago, IL)
4. ***University North Texas Health Science Center*** (Fort Worth, TX)
5. ***Washington State University*** (Spokane, WA)
6. ***Texas Tech University Health Sciences Center*** (Abilene, Amarillo & Fort Worth, TX)
7. ***Purdue University College of Pharmacy*** (West Lafayette, IN)
8. ***Nova Southeastern University*** (Davie, FL)
9. ***University of Minnesota*** (Minneapolis, MN)
10. ***University of Toledo*** (Toledo, OH)



PROFESSIONAL
STUDENT
ORGANIZATION



PSO Chapter Impact

- ✓ 5 student chapters hosted Be The Match Donor Drives in October 2019 – added 58 registrants to Be The Match Registry!
- ✓ South University School of Pharmacy chapter educated patients on NCODA *Oral Chemotherapy Education* sheets during Health Fair
- ✓ 11 students actively participated at recent 2019 Fall Summit Meeting
- ✓ Students present on a national level to Oncology Pharmacy Technicians
- ✓ Creation of NCODA SETs!



Questions?

Email Rebecca at:

Rebecca.Corvese@ncoda.org

contact@ncoda.org



SETS

Student Educational Talks

Thank you for attending!

Next NCODA SET will be coming soon!