



# Putting the Pieces together: Recognizing Toxicities from Oral Oncolytics.

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# Objectives

- + Recognize the impact of oral chemotherapy
- + Discuss the complexity of evaluating toxicities in combination treatment regimens.
- + Formulate a complete plan to assess patients for toxicities on oral chemotherapy.
- + Discriminate between symptoms of disease and drug toxicities.
- + Review importance of patient education in adherence.

# Importance of Oral Chemotherapy

- + Oral chemotherapy represents an important addition to cancer treatment.
- + Targeted therapies have shifted treatments away from traditional chemotherapy.
- + Oral oncolytics have added to the complexity of treatment and recognition of treatment related toxicities.
- + Approximately 25% of cancer patients are on some form of oral chemotherapy.
- + People 65 years or older is the fastest growing population in the US. By 2030 that age group will be >20% of the US population.

Sharpless, N. (2018). *The challenging landscape of cancer and aging: Charting a way forward.*

<https://www.cancer.gov/news-events/cancer-currents-blog/2018/sharpless-aging-cancer-research>

# Evaluating Toxicities

- + Complexity of treatment regimens
- + Importance of baseline: It is vital to have an accurate baseline
- + Use a comprehensive grading tool
  - + CTCAE (Common Terminology Criteria for Adverse Events)
  - + Always compare to baseline
- + Patients must have a plan to manage any potential toxicities.
- + Ongoing process
- + Open, honest atmosphere
- + Potential drug interactions

National Cancer Institute: Common Terminology Criteria for Adverse Events, version 5.0. Available at [https://ctep.cancer.gov/protocoldevelopment/electronic\\_applications/docs/ctcae\\_v5\\_quick\\_reference\\_8.5x11.pdf](https://ctep.cancer.gov/protocoldevelopment/electronic_applications/docs/ctcae_v5_quick_reference_8.5x11.pdf). Accessed December 2, 2022.

A row of pharmacy bottles is shown in a shallow depth of field. The central focus is on a white bottle with a white cap. The label on this bottle is partially legible, showing a handwritten signature and the date '08/04'. Above the signature, the word 'COLLAGEN' is visible. To the left, a yellow bottle is partially visible with some text including '-2206' and 'CAUTION: Federal law prohibits the transfer of this drug to anyone other than the patient for whom it was prescribed'. To the right, another white bottle is visible with some text including 'a white, elliptical printed with P' and '20 on the other'. The background is blurred, showing more bottles in a pharmacy setting. There are decorative white dashed lines and a solid orange line in the bottom right corner of the image.

# Oral Chemotherapy: Is it really easier?



# Laboratory Toxicities

## + Hematologic toxicities

- + WBC
- + Platelets
- + Hemoglobin

## + Organ function

- + Renal function
- + Hepatic function
- + Pancreatic function

## + Electrolytes

## + Blood sugar

## + Triglycerides/lipids

# Cardiac Toxicities

- + Understand patient's cardiac health history. Who manages cardiac issues?
- + Set up regular monitoring schedules depending on appropriate FDA recommendations.
- + Hypertension
- + Electrical issues:
  - + Monitor EKG
  - + Monitor electrolytes
- + Mechanical Issues:
  - + Echocardiograms

# Gastrointestinal Toxicities

- +Nausea
- +Vomiting
- +Dyspepsia
- +Anorexia
- +Constipation
- +Diarrhea
- +Stomatitis

Andreyev HJN, Lalji A, Mohammed K, et al: The FOCCUS study: A prospective evaluation of the frequency, severity and treatable causes of gastrointestinal symptoms during and after chemotherapy. Support Care Cancer. 29:1443-1453, 2021.



# Dermatologic Toxicities

- + Paronychial issues
  - + Skin fissures
  - + Nail infections
  - + Hangnails
- + Rash
  - + Steven Johnson Syndrome
- + Acne form rash
- + Dry skin
- + Pruritis
- + Secondary malignancies
- + Alopecia

Ra, H.S., Shin, S.J., Kim, J.H., Lim, H., Cho, B.C. and Roh, M.R. (2013) The Impact of Dermatological Toxicities of Anti-Cancer Therapy on the Dermatological Quality of Life of Cancer Patients. *The Journal of the European Academy of Dermatology and Venereology*, 27, e53-e59.

# Miscellaneous Toxicities

- + Pulmonary
  - + Interstitial lung disease
  - + Pneumonitis
- + Tumor Lysis Syndrome
  - + Flu like symptoms
- + Functional toxicities
  - + Fatigue
  - + Arthralgias/myalgias
  - + Headaches
  - + Weakness
- + Hypersensitivity

# Dangers of Oral Oncolytic Treatment

- + Some drugs can cause serious birth defects or harm to an unborn fetus.
- + REMS program
- + Reliable birth control is a **MUST!!**
- + Sperm banking
- + Ovarian preservation
- + Egg retrieval

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6594853/>

<https://www.fda.gov/whats-rems>



# Steroid Toxicities

- + Steroids are frequently used in the treatment regimens of many hematologic malignancies.
- + Muscle wasting
- + Skin changes
  - + Acne
  - + Thin skin
  - + Bruising
- + Delayed wound healing
- + Bone loss
- + Sleep Issues
- + Mood changes
  - + Anxiety
  - + Jitteriness
  - + Aggression
  - + Depression

<https://www.mayoclinic.org>steroids>

<https://www.hoafredericksburg.com>prednisolone>

# Adherence and Persistence

- + Patient education is vital.
- + Spend some time understanding the patient.
- + Set patients up for success
- + Education is a continual process
- + Importance of assessing for financial toxicity

Talens, A., Guilabert, M., Lumbreras, B., Aznar, M.T., & Lopez-Pintor, E. (2021) Medication experience and adherence to oral chemotherapy. A qualitative study of patients' and health professionals' perspectives. *International Journal of Environmental Research and Public Health*. 18(8), 4266. <https://doi.org/10.3390/ijerph18084266>



# Financial Toxicity

- + NCCN recommends assessing each patient for financial toxicity.
- + Material consequences of treatment
  - + Out-of-pocket expenses
  - + Debt
  - + Decreased income
- + Explore various assistance options
  - + Pharmaceutical company programs
  - + Grants
  - + Other assistance programs

<https://education.nccn.org/node/90902>

<https://www.cancer.gov/about-cancer/managing-care>





