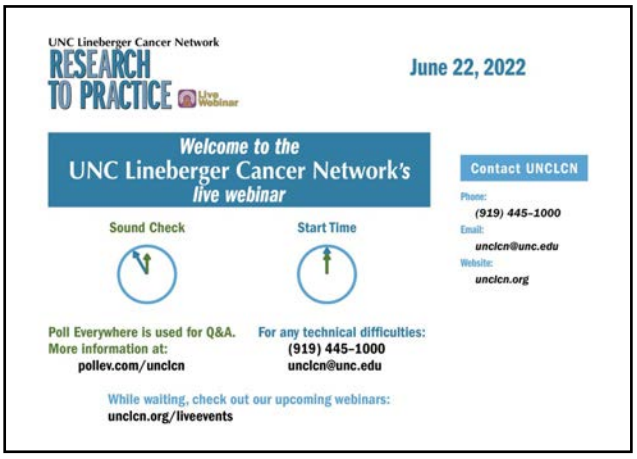
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Live Webinar
June 22, 2022
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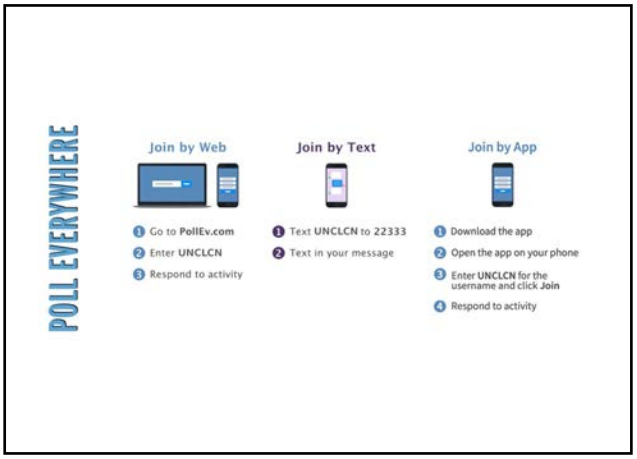
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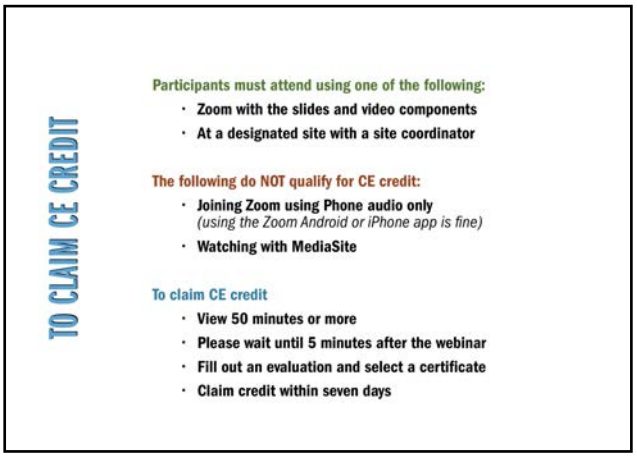
1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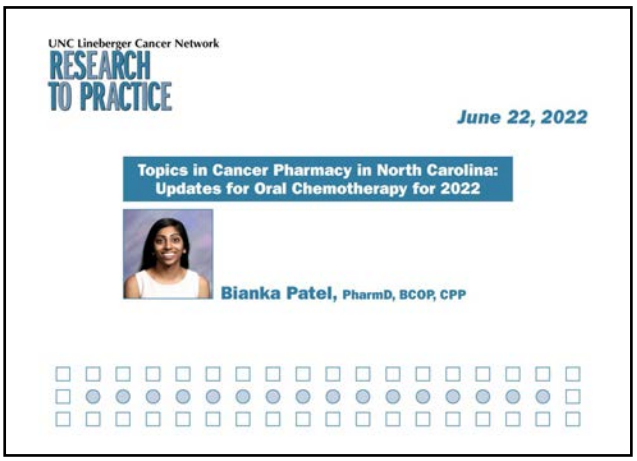
UNC Lineberger Cancer Network
RESEARCH TO PRACTICE
June 22, 2022
Topics in Cancer Pharmacy in North Carolina: Updates for Oral Chemotherapy for 2022
Bianka Patel, PharmD, BCOP, CPP

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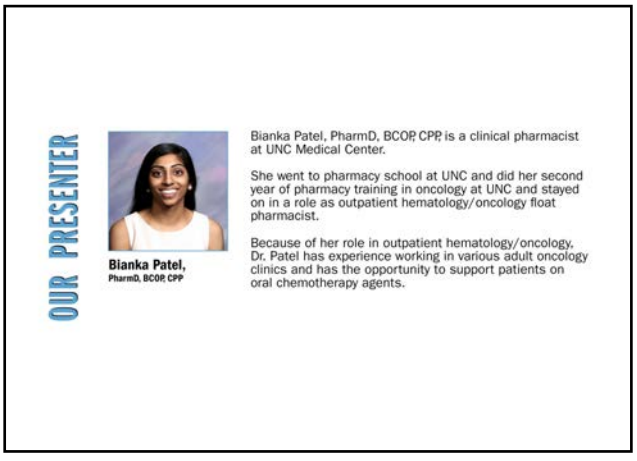
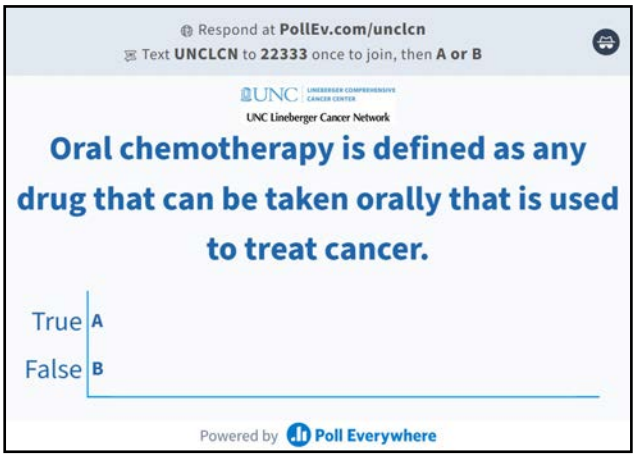

OUR PRESENTER
Bianka Patel,
PharmD, BCOP, CPP
Bianka Patel, PharmD, BCOP, CPP, is a clinical pharmacist at UNC Medical Center.
She went to pharmacy school at UNC and did her second year of pharmacy training in oncology at UNC and stayed on in a role as outpatient hematology/oncology float pharmacist.
Because of her role in outpatient hematology/oncology, Dr. Patel has experience working in various adult oncology clinics and has the opportunity to support patients on oral chemotherapy agents.

5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UNC Lineberger Cancer Network
Oral chemotherapy is defined as any drug that can be taken orally that is used to treat cancer.
True A
False B
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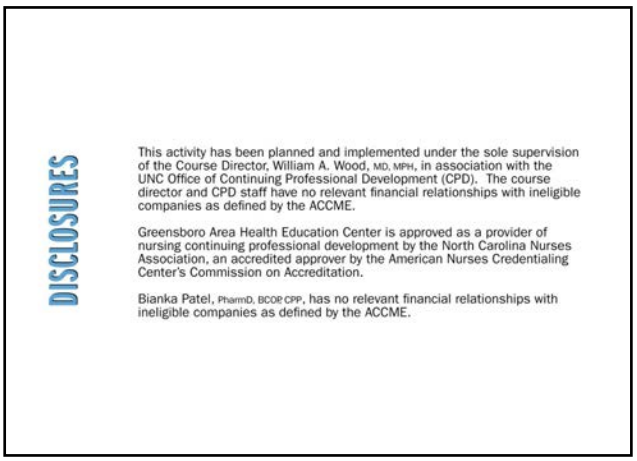
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Bianka Patel, PharmD, BCOP CPP, has no relevant financial relationships with ineligible companies as defined by the ACCME.

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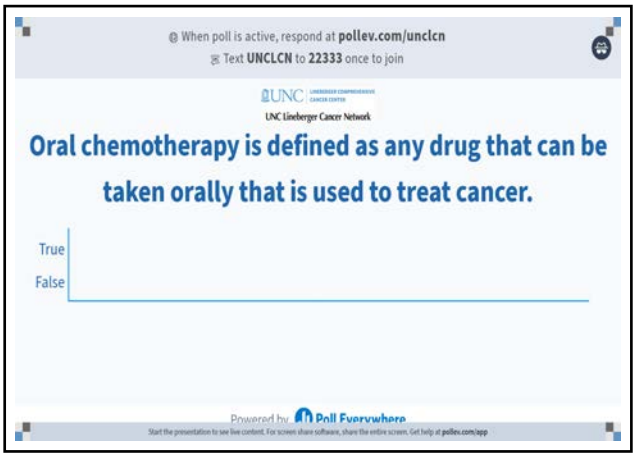
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Oral chemotherapy is defined as any drug that can be taken orally that is used to treat cancer.
True
False
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8

Navigating Oral Chemotherapy

Bianka Patel, PharmD, BCOP, CPP
Hematology/Oncology Clinical Pharmacist

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Objectives

- **Identify important considerations for prescribing oral chemotherapy**
- **Explain the steps involved in dispensing/distribution of oral chemotherapy to patients**
- **Describe best practices in monitoring, toxicity management, and follow-up for patients receiving oral chemotherapy**

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What is Oral Chemotherapy?

- Oral chemotherapy is defined as any drug that can be taken orally that is used to treat cancer
- There are several different types of oral chemotherapy, many of which work similarly to intravenous chemotherapy
- These drugs can often be categorized in several different therapeutic classes based on mechanism of action
- Over the past several years, we have seen an accelerating expansion of the development of oral anticancer drugs, including oral cytotoxic agents, small molecule inhibitors directed at cell surface receptors and other proteins, and other agents targeted at the tumor microenvironment
- Spending on oral chemotherapy continues to increase
- These drugs have several unique considerations that differentiate them from intravenous chemotherapy

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Seiger et al. JAMA Oncol 2020; 6:154-56.

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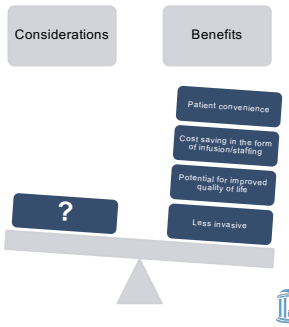
Pros & Cons

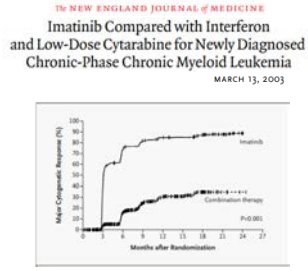


Mackler et al. J Oncol Pract 2019; 15:e346-355.

12

Changing the paradigm

- The advent of imatinib, a selective inhibitor of BCR-ABL tyrosine kinase has changed the landscape of CML treatment
- This is just one example of many in which oral chemotherapy has completely changed treatment landscape


The NEW ENGLAND JOURNAL of MEDICINE

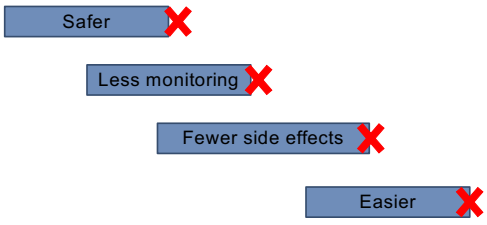
Imatinib Compared with Interferon and Low-Dose Cytarabine for Newly Diagnosed Chronic-Phase Chronic Myeloid Leukemia

MARCH 13, 2003

O' Brien et al. N Engl J Med 2003;348:994-1004. [landmark study]

13

Misconceptions



Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Pharmacology

Prolonged exposure	Variable bioavailability
Can easily start/hold	Impacted by adherence

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Patient Case

CL is a 53 yo M with relapsed mantle cell lymphoma. He was originally diagnosed in 2015 with low-risk MCL, received chemotherapy and s/p autologous stem cell transplant now relapsed.

PMH: hypertension, history of DVT in 2020; GERD; seasonal allergies

FH/SH: lives with his wife, kids in college; retired now but previously lab technician

The team is considering starting oral chemotherapy agent acalabrutinib.

Labs
WBC 5.3; Hgb 15.3; PLT 264; ANC 3.7; Serum creatinine 1.24

Medications
Acetaminophen 500 mg every 6 hours PRN
Cetirizine 10 mg daily
Esomeprazole 20 mg daily
Rivaroxaban 10 mg daily
Telmisartan 20 mg daily
Turmeric supplement

DVT: deep vein thrombosis
GERD: gastroesophageal reflux disease

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When poll is active, respond at **pollev.com/unclcn**
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Which of the following is true regarding considerations for prescribing acalabrutinib, an oral chemotherapy, for CL?

- It is important to educate CL and any caregivers on the new therapy
- It is not necessary to complete a medication reconciliation prior to prescribing the drug
- Oral chemotherapy rarely has drug interactions with other chronic medications
- Baseline monitoring or labs are usually not required for oral chemotherapy

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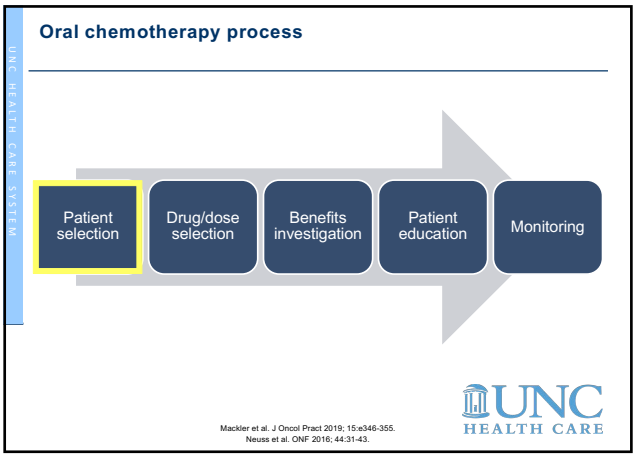
Oral chemotherapy process
Patient selection
Drug/dose selection
Benefits investigation
Patient education
Monitoring
Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.
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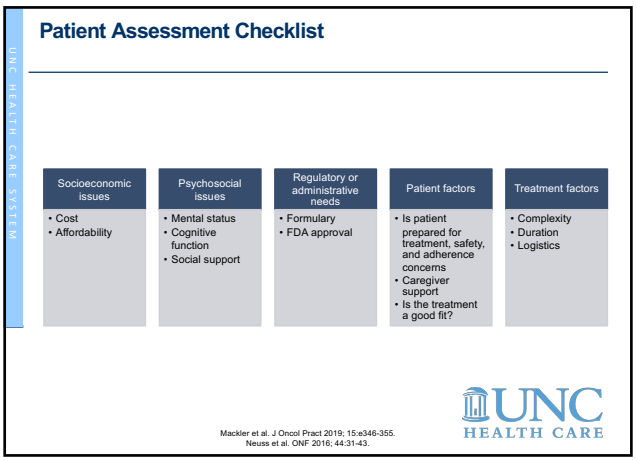
Patient Assessment Checklist
Socioeconomic issues
• Cost
• Affordability
Psychosocial issues
• Mental status
• Cognitive function
• Social support
Regulatory or administrative needs
• Formulary
• FDA approval
Patient factors
• Is patient prepared for treatment, safety, and adherence concerns
• Caregiver support
• Is the treatment a good fit?
Treatment factors
• Complexity
• Duration
• Logistics
Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.
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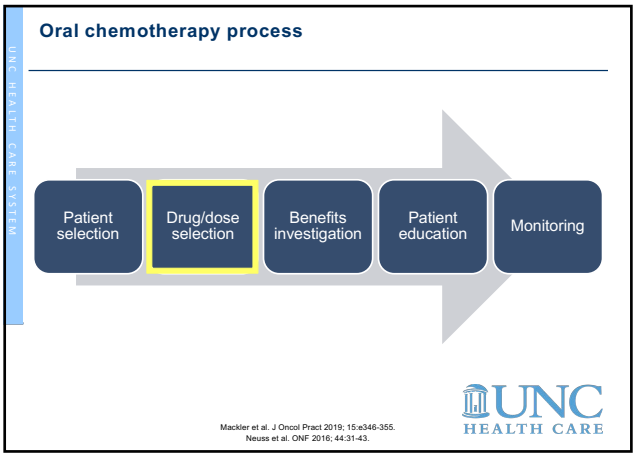
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Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.
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Drug/dose selection

- Drug interactions (including supplements!)
- Administration
- Ordering
- Adherence
- Baseline monitoring
- Toxicity profile

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

21

Drug Interactions

- Complete medication reconciliation
  - Include over-the-counter (OTC) medications and supplements!
- Check for drug-drug interactions (DDIs)
  - Can use interaction database, prescribing information, etc.
  - Consult a pharmacist!
- Adjust if needed
  - May need to make modifications, avoid certain medications, or adjust therapy entirely due to DDI

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

22

Drug Interactions

- **The potential for drug interactions increases as the number of medications a patient takes increases**
- **Oral chemotherapy agents often have a narrow therapeutic index, and all patients on oral chemotherapy agents should be screened for potential drug–drug or drug–herbal interactions.**
- **The most common interactions with oral drugs involve pharmacokinetic interactions, where one drug affects the absorption, distribution, metabolism or elimination of the other drug**
- **Most of the drug interactions we see in clinical practice involve the cytochrome P450 (CYP450) enzyme system**

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

23

Drug-Drug Interactions

Increased action of drug
- Venetoclax + posaconazole (3A4 inhibitor)

Decreased action of drug
- Tamoxifen + fluoxetine (2D6 inhibitor)
- Enzalutamide + carbamazepine (3A4 inducer)

Cause adverse effects
- Acalabrutinib + rivaroxaban (monitor for bleeding)
- Nilotinib + haloperidol (monitor QTc)

Rogala et al. J Oncol Pract 2019; 15:81-90.

24

Common Drug-Drug Interactions

Common chronic medications	Supplements	OTCs
• Direct oral anticoagulants • Acid reducers (proton pump inhibitors, histamine antagonists) • Diltiazem • Amiodarone • Carvedilol • Statins	St. John's Wort Turmeric	Non-steroidal anti-inflammatory drugs (NSAIDs)

CYP3A4 inhibitors	CYP3A4 inducers	Pgp inhibitors
• Azole antifungals • Clarithromycin • Ritonavir	• Anticonvulsants • Barbiturates • Rifampin	• Amiodarone • Cyclosporine • Diltiazem • Verapamil

Rogala et al. J Oncol Pract 2019; 15:81-90.
Carpenter et al. Am Fam Physician. 2019;99(9):558-564
Hussaarts et al. Ther Adv Med Oncol 2019, Vol. 11: 1–34

25

Food-drug interactions

- Grapefruit
- Lactose
- Calcium or dairy products
- High fat meals
- Alcohol or smoking

Rogala et al. J Oncol Pract 2019; 15:81-90.
Carpenter et al. Am Fam Physician. 2019;99(9):558-564
Neuss et al. ONF 2016; 44:31-43.

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DDI Resources

- **Memorial Sloan Kettering integrative medicine database**
  - https://www.mskcc.org/cancer-care/diagnosis-treatment/symptom-management/integrative-medicine/herbs
- **Package inserts/prescribing info**
  - https://dailymed.nlm.nih.gov/dailymed/
- **Lexicomp® drug database interaction checker**
- **Consult your pharmacist!**

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Drug/dose selection

Drug interactions (including supplements!)	Administration	Ordering
Adherence	Baseline monitoring	Toxicity profile

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Administration

- **Typically should be taken whole (ie do not chew, cut, or crush)**
  - Some drugs have instructions for patients that may not be able to swallow ie vandetanib
- **Food considerations**
  - Regorafenib: calorie restrictions (should be taken with a LOW fat meal)
  - 6-mercaptopurine – avoiding dairy or citrus products
  - Stomach acid requirements
- **May improve absorption for certain drugs i.e. carbonated beverage or betaine for dasatinib**
- **Time of day: if sedating or nauseating, often recommend bedtime administration**

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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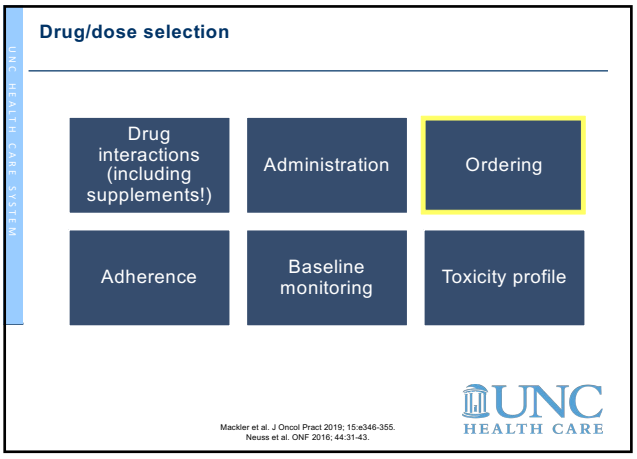
Drug/dose selection
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Neuss et al. ONF 2016; 44:31-43.
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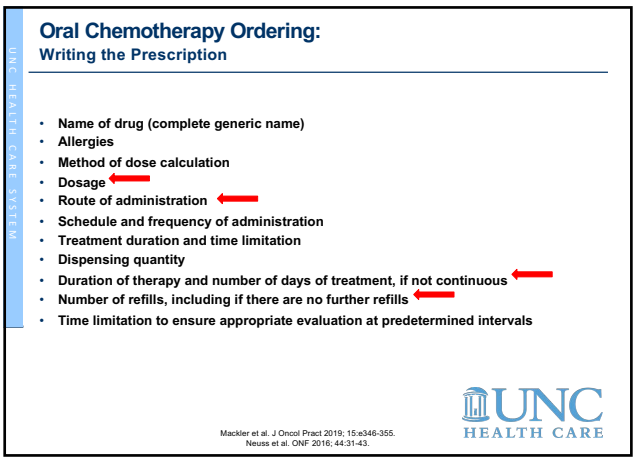
Oral Chemotherapy Ordering:
Writing the Prescription
Name of drug (complete generic name)
Allergies
Method of dose calculation
Dosage
Route of administration
Schedule and frequency of administration
Treatment duration and time limitation
Dispensing quantity
Duration of therapy and number of days of treatment, if not continuous
Number of refills, including if there are no further refills
Time limitation to ensure appropriate evaluation at predetermined intervals
Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.
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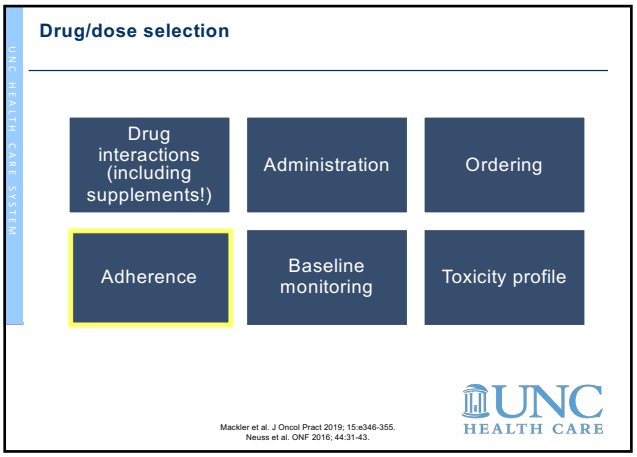
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Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.
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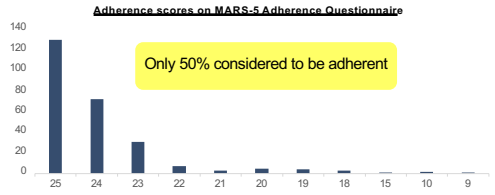
Importance of Adherence

- Non-adherence is prevalent even in treatment of cancer
- Can be a barrier to positive outcomes
- Several reasons for non-adherence
- Care team can help patients overcome this challenge



Bouwman et al. BMC Cancer 2017; 17:739.

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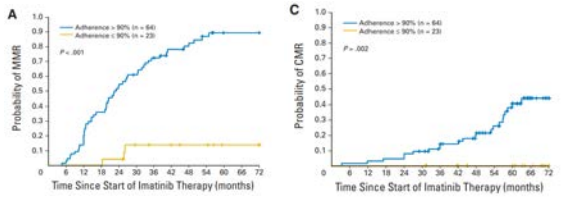
Importance of Adherence



MMR=major molecular response
CMR=complete molecular response

Marin et al. J Clin Oncol 2010; 28: 2381-88. [landmark study]

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UNC Adherence Data

- Inclusion: adults receiving care at UNC Medical Center outpatient oncology clinics with chronic myeloid leukemia, kidney cancer, breast cancer, or GI malignancy
- Objective: analyze patients perception of adherence to oral chemotherapy

- Confusion or misunderstanding about the timing of drug with food
- Forgetfulness in oral antineoplastic administration
- Reducing/stopping drug without informing MD
- Difficulty understanding directions on the drug vial label

Muluneh et al. J Oncol Pract 2018; 14:e324-34.

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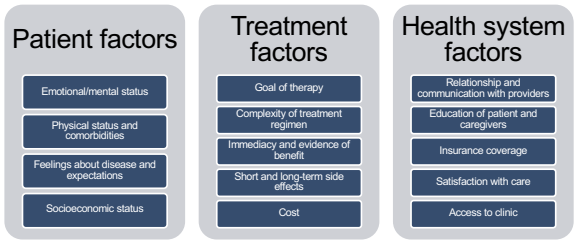
Factors Influencing Adherence



Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.
Gast et al. Systematic Reviews 2019; 8:112.

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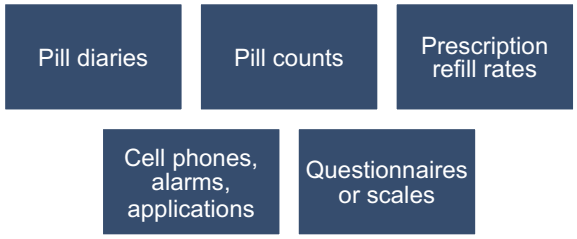
Tools for Monitoring Adherence



Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.
Gast et al. Systematic Reviews 2019; 8:112.

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Methods to Encourage & Improve Adherence

- **Calendar or daily medication checklist**
- **Pill diaries**
- **Patient and family education**
- **Establishing routine, which includes drug administration**
- **Home psychological support**
- **Pillboxes with multiple compartments (as packaging form and storage needs permit)**
- **Electronic reminders**
  - Alarms on clocks, timers and cell phones
  - Smartphone applications
  - Glowing or electronic pillboxes
  - Text message reminder
  - Automated voice recording (phone call) reminder
- **Medication-dispensing machines**

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.
Gast et al. Systematic Reviews 2019; 8:112.

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Drug/dose selection

- Drug interactions (including supplements!)
- Administration
- Ordering
- Adherence
- Baseline monitoring
- Toxicity profile

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Monitoring

- **Oral chemotherapies often have unique lab or other monitoring requirements**
- **It is essential to be aware of these to ensure patient safety on these therapies**

Abiraterone (anti-androgen)	Erdafitinib (FGFR inhibitor)	Gilteritinib (FLT3 inhibitor)	Lenvatinib (VEGF TKI)	Nilotinib (BCR-ABL TKI)	Venetoclax (BCL-2 inhibitor)
Hepatic enzymes	Ophthalmology exams	Electrocardiogram (EKG)	Blood pressure	Lipid panel	Tumor lysis labs: uric acid, potassium, phosphate, calcium
Potassium	Serum phosphate	Creatine phosphokinase	EKG	Amylase/lipase	Serum creatinine
Blood pressure			Thyroid	Hepatic enzymes	
Fluid retention			Hepatic enzymes	EKG	
			Proteinuria		

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Abiraterone [package insert]. Horsham, PA: Janssen 2021.
Erdafitinib [package insert]. Horsham PA: Janssen 2022.
Gilteritinib [package insert] Northbrook, IL: Astellas 2022.
Lenvatinib [package insert]. Nutley,NJ: Eisai; 2021.
Nilotinib [package insert]. East Hanover, NJ: Novartis; 2021.
Venetoclax [package insert] North Chicago, IL AbbVie; 2021.

40

Toxicity Profile

- **Many therapies have both similar and unique toxicities to consider**

Palbociclib (CDK inhibitor)	Trifluridine/tipiracil (Antimetabolite)	Acalabrutinib (BTK inhibitor)
Myelosuppression	Myelosuppression	Myelosuppression
Fatigue		Atrial fibrillation
GI		Bleeding
Stomatitis		

CDK=cyclin dependent kinase
BTK=Bruton's tyrosine kinase

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Palbociclib [package insert]. New York, NY: Pfizer; 2019.
Trifluridine/tipiracil [package insert]. Princeton, NJ:Taiho; 2019.
Acalabrutinib [package insert] Wilmington, DE: AstraZeneca; 2019.

41

Safety: REMS Programs

- **A Risk Evaluation and Mitigation Strategy (REMS) is a drug safety program that the U.S. Food and Drug Administration (FDA) can require for certain medications with serious safety concerns to help ensure the benefits of the drug outweigh the risk**
- **Example: Lenalidomide (Revlimid)**

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Lenalidomide [package insert] Summit, NJ: Celgene; 2022.

42

Choosing an Agent

- **If several drugs within a therapeutic class are an option, select based on patient factors and comorbidities**

Drug	Imatinib (1st generation)	Dasatinib (2nd generation)	Nilotinib (2nd generation)	Bosutinib (2nd generation)	Ponatinib (3rd generation)
Dosing/ administration	• Once daily • With food • Requires renal/hepatic dose adjustments	• Once daily • With food if GI upset • Ph-dependent – avoid acid reducers	• Twice daily • Empty stomach • Ph-dependent – avoid acid reducers • Requires hepatic dose adjustment	• Once daily • With food if GI upset • Ph-dependent – avoid acid reducers	• Once daily • With food if GI upset
Notable toxicities	• Edema • GI effects	• Pleural effusion	• QTc prolongation • Hyperglycemia	• Diarrhea • Transaminitis	• Vascular events
DDI potential	Major 3A4 substrate	Major CYP 3A4 substrate	Major CYP 3A4 substrate	Major CYP 3A4 substrate	Major CYP 3A4 substrate

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Larson et al. Blood 2015; 126:2370-75.

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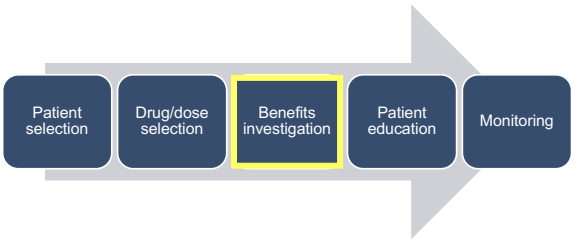
Oral Chemotherapy Process



Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Benefits Investigation

Confirm insurance coverage → Send Rx to Specialty Pharmacy → Prior Authorization → Copay → Delivery

-Copay card
-Manufacturer's assistance
-Grant

- Remember to educate patients on this process & set expectations for how long it can take

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Specialty Pharmacies

Benefits

- Highly experienced and knowledgeable oncology pharmacy staff
- Provides additional patient education by phone or mail
- Delivers medication to patient at no additional cost
- Able to work closely with insurance plans
- Access to patient assistance programs

Concerns

- Typically not local; patients may have concerns about working with a pharmacy via telephone
- Education and instructions can differ from information received from care team
- Non-chemotherapy prescriptions often filled at another pharmacy

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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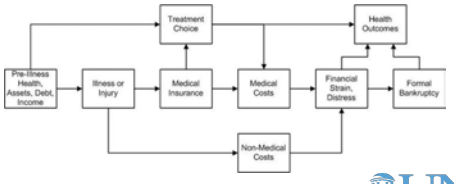
Financial Toxicity

- **The terms financial toxicity and financial distress are used to describe how out-of-pocket costs can cause financial problems for a patient.**
- **Out-of-pocket costs are what you pay for your medical care that is not covered by your health insurance. Out-of-pocket costs include copayments, coinsurance, and deductibles**
- **Cancer patients and survivors are more likely to experience financial toxicity**



NIH: National Cancer Institute: Financial Toxicity and Cancer Treatment; cancer.gov

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Resources for Patients

- **Patient Access Network Foundation** www.panfoundation.org
- **Leukemia Lymphoma Society** www.lls.org
- **NeedyMeds** www.needymeds.org
- **Rx Assist** www.rxassist.org
- **RxHope** www.rxhope.com
- **1 of US** 1ofus.org
- **Social Security Compassionate Allowance** www.socialsecurity.gov/compassionateallowances/

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Resources for Patients

- **Food, utilities, gas → NC Utility and Energy Assistance →** https://www.needhelppayingbills.com/html/north_carolina_utility_and_ene.html
- **Counseling, gas cards, peer to peer support, meals** → Cornucopia House www.cancersupport4u.org
- **Peer support Buddies (Adults & Young Adults)** www.cancer.net/coping-with-cancer/finding-support-and-information/finding-support-buddy)
- **Transportation, home care, childcare** → CancerCare www.cancercare.org

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Patient Case

CL is a 53 yo M with relapsed mantle cell lymphoma. He was originally diagnosed in 2015 with low-risk MCL, received chemotherapy and s/p autologous stem cell transplant now relapsed.

PMH: hypertension, history of DVT in 2020; GERD; seasonal allergies

FH/SH: lives with his wife, kids in college; retired now but previously lab technician

The team is considering starting oral chemotherapy agent acalabrutinib.

Labs
WBC 5.3; Hgb 15.3; PLT 264; ANC 3.7; Serum creatinine 1.24

Medications
Acetaminophen 500 mg every 6 hours PRN
Cetirizine 10 mg daily
Esomeprazole 20 mg daily
Rivaroxaban 10 mg daily
Telmisartan 20 mg daily
Turmeric supplement

DVT: deep vein thrombosis
GERD: gastroesophageal reflux disease

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When poll is active, respond at pollev.com/unclcn
Text UNCLCN to 22333 once to join
UNC Lineberger Cancer Network
Which of the following is true regarding steps to dispense oral chemotherapy?
It is important to educate patients on logistics of obtaining oral chemotherapy
Most oral chemotherapy does not require a prior authorization
Most oral chemotherapy can be picked up at a local pharmacy
Most oral chemotherapy is affordable without copay assistance
Powered by Poll Everywhere

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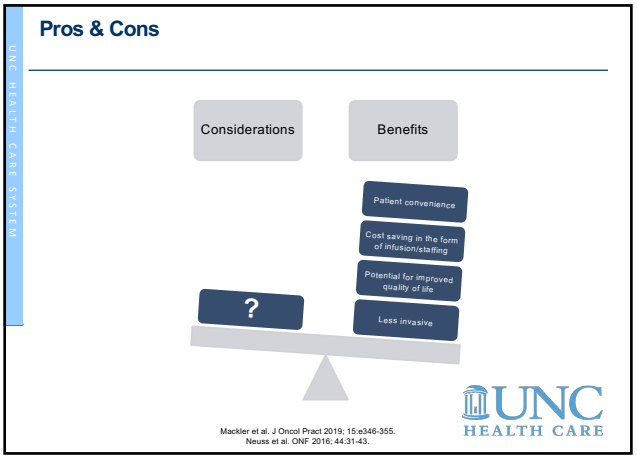
Pros & Cons
Considerations
Benefits
Patient convenience
Cost saving in the form of infusion/staffing
Potential for improved quality of life
Less invasive
?
Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.
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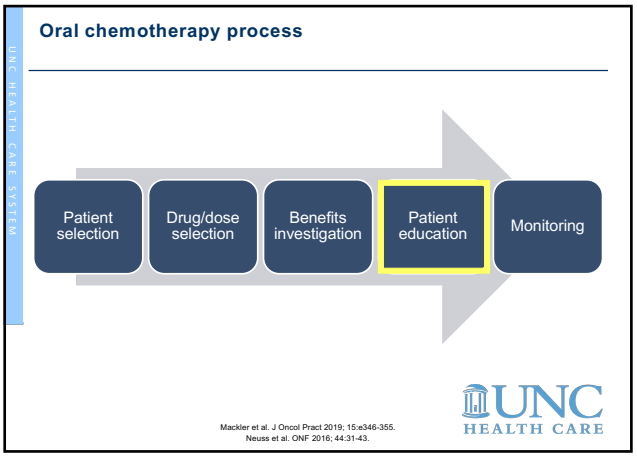
Oral chemotherapy process
Patient selection
Drug/dose selection
Benefits investigation
Patient education
Monitoring
Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.
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Patient Education
Key Components

1. Diagnosis, goal and duration of treatment
2. Drug name
3. Drug information, such as appearance and packaging
4. How the drug will be obtained
5. Potential side effects and the management of short- and long- term side effects, including reproductive and fertility risks
6. Safe storage and handling
7. Disposal of unused medication
8. Safe handling of body secretions and waste in the home
9. Dose schedule for the oral chemotherapy, as well as schedule of supplemental medications needed for the therapy
10. Food and/or drug interactions
11. Missed dose plan (i.e., what to do if the patient omits a dose)
12. Monitoring appointments (i.e., physician visits and any laboratory work needed)
13. Information on how, when, who and why to contact to report side effects and ask questions
14. The refill process, including how much time is needed to obtain refills and how to obtain them
15. A calendar with the patient's treatment cycle clearly written out, which should be given to the patient at the initial teaching session and reviewed at each follow-up session

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Patient Education Resources

- **Oncolink®, Chemocare®** (Spanish translations available!)
- **Hematology Oncology Pharmacy Association (HOPA)** (https://www.oralchemoedsheets.com/)
- **Institutional handouts**
- **FDA medication guides:** https://www.fda.gov/drugs/drug-safety-and-availability/medication-guides

Be mindful of patient's health literacy!

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Oral Chemotherapy Handling

- **Keep away from children and pets**
- **Should not be chewed, crushed, cut, or dissolved**
- **It is recommended that patients administer the chemotherapy agent to themselves; If a caregiver is preparing the medication, recommend gloves and hand washing**
- **Many patients store their oral medications in pill boxes; if using for oral chemotherapy, use a separate pillbox**
  - Some drugs i.e. regorafenib must be kept in original container
  - Many oral chemotherapy drugs are dispensed in blister packs
- **If a patient on oral chemotherapy soils linens with bodily fluids, launder soiled linen separately from non-soiled linen**

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Storage/Disposal

Storage	Disposal
Most oral chemotherapy should be stored at room temperature	Patients may NOT place in trash or flush down toilet/sink
Example of a refrigerated drug: trametinib	-REMS drugs -Instructions for hazardous drug disposal

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Drug disposal in NC

- National Association of Boards of Pharmacy (NABP): drug disposal center locator
  - https://safe.pharmacy/drug-disposal/results/?address=27514&distance=10
- UNC Central Outpatient Pharmacy
- Local police departments
- Local pharmacies

National Association of Boards of Pharmacy https://safe.pharmacy/

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Reproductive Safety

- Address pregnancy, sexual activity, and contraception with patients
- Some oral chemotherapies require NON-hormonal contraception because the chemotherapy drug can interact with hormonal contraception!
  - Examples: belzutifan, dabrafenib
- Musts be careful to follow all recommendations for patients of reproductive potential

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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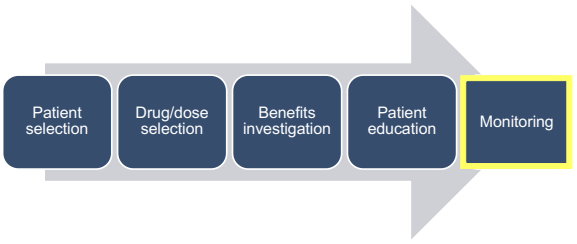
Oral chemotherapy process



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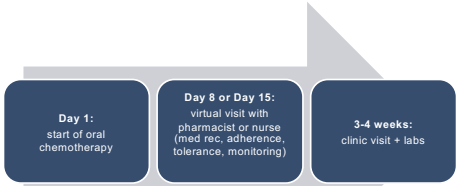
Follow-up

- **Example follow-up for patient starting oral chemotherapy**



Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Monitoring:
Symptom Management

Example management strategies for VEGF TKIs:

Hypertension	Skin changes	General Supportive Care	Medications
• Daily logging of blood pressure • Adjustment of medications for hypertension	• Avoid friction, heat exposure • Sunscreen • Moisturize	• Energy • Oral intake	• Anti-emetics • Anti-diarrheals • Magic mouthwash

VEGF=vascular endothelial growth factor

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Role of Pharmacist

- Counseling
- Medication access
- Adherence
- Lab monitoring
- Toxicity management

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Putting it all together in practice!

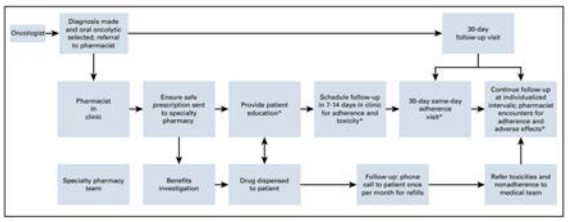

FIG 1. Oral Oncolytic Management - Example Workflow. (*) Encounters may be completed via telephone or an in-clinic encounter.

Mackler et al. J Oncol Pract 2019; 15:e346-355.
Neuss et al. ONF 2016; 44:31-43.

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Summary

- There are several important considerations for prescribing oral chemotherapy including patient factors, dosing/administration, drug interactions, comorbidities, and more
- Dispensing/distribution of oral chemotherapy can be a complex, multi-step process
- Baseline and regular lab monitoring is necessary to ensure patient safety
- Toxicity and symptom management is key in helping patients tolerate therapy
- Patients on oral chemotherapy also require close follow-up
- Pharmacists, nurses, and advanced practice providers (APPs) can play a huge role in helping manage oral chemotherapy

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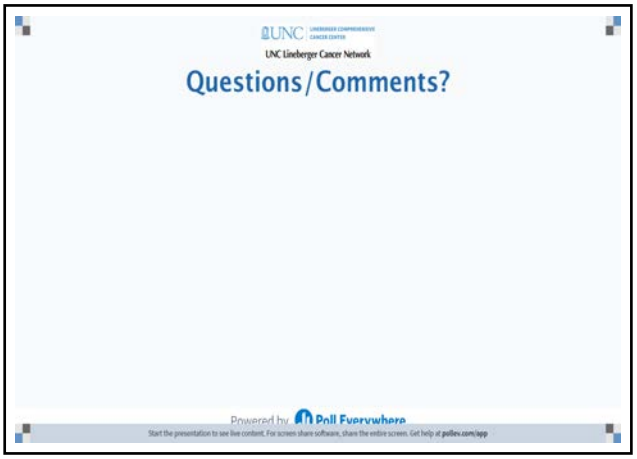

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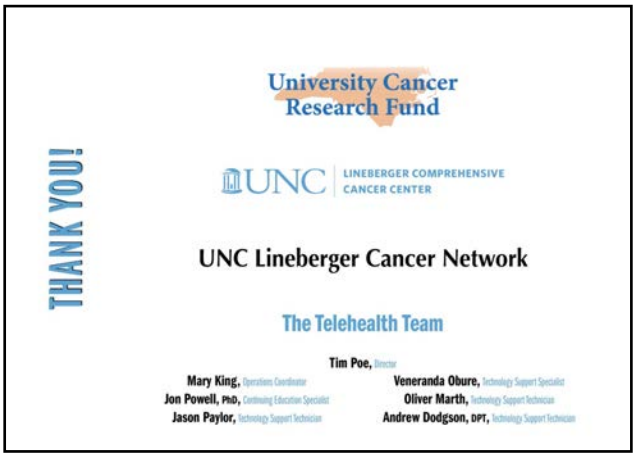

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UPCOMING LIVE WEBINARS
PATIENT CENTERED CARE
Live Webinar
July 13
12:00 PM
Mobile Health and ePROs/Symptom Assessment to Assist with Surgical Recovery
Angela Smith, MD, MS, FACS
ADVANCED PRACTICE PROVIDER
Live Webinar
July 20
4:00 PM
Ostomies, Tubes, and Drains
Julienne S. Harris, MSN, FNP-C
RESEARCH TO PRACTICE
Live Webinar
July 27
12:00 PM
Lymphoma Management in North Carolina: Updates for 2022
Christopher Dittus, DO, MPH
Complete details on upcoming LIVE webinars:
learn.unclcn.org/live-webinars

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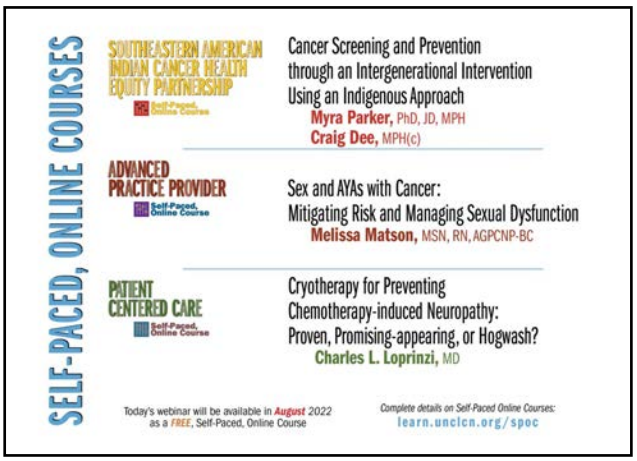
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