iKnowMed℠ Regimen Library Standards

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Regimen Library Standard Operating Procedures (SOP)

Revised March 2025

1. For a regimen to be considered for the iKnowMed[SM] (iKM) Regimen Library, the following minimum criteria must be met:
   1.1. FDA approved regimen **or**
   Publicly available data supported by substantive evidence **or**
   Recommendation per CCC or Pathways Task Force (PTF) **or**
   Approval by disease group subcommittee (i.e., Hematology Interest Group) with appropriate references and documentation
   1.2. Clinical trial regimens and pediatric regimens are beyond the scope of the CCC.
   1.3. The regimens should be based on the highest level of evidence available.

2. Standard Operating Procedure for Regimen Library Additions:
   2.1. Regimen Title
      2.1.1. Titles should include generic names (unless otherwise designated) and cycle length. Disease, days of administration, dose, and route of administration may be added to the title to differentiate a regimen if a similar regimen exists.
         2.1.1.1. Titles may include brand names in parenthesis after generic names in select circumstances, such as look-alike/sound alike risk (i.e., ado-trastuzumab vs. fam-trastuzumab) or drugs commonly recognized as brand products (i.e., bispecific antibody drugs)
         2.1.1.2. Days of Administration are specified in the regimen title when the same drug combination has different days of administration.
         Example: Paclitaxel Q21D and Paclitaxel D1,8,15 Q21D
         Exception: If days of administration will prolong the regimen extensively, they may not be added – for example, multiple myeloma regimens may not have days of administration for all drugs.
         2.1.1.3. Administration on Day 1 is assumed without being specified in regimen title.
         2.1.1.4. Disease is specified in the regimen title when the same drug combination may be used in more than one disease but with differences in drug dosing, administration frequency, or cycle length.
         Example: Gemcitabine D1,8,15 Q28D (Ovarian) and Gemcitabine D1,8,15 Q28D (NSCLC)
         Exception: If listing multiple diseases will prolong the regimen title extensively, dose may be used in title instead to differentiate between regimens.
         2.1.1.5. Dose is specified in the regimen title only if days of administration and disease are not sufficient to differentiate between similar regimens or number of listed diseases causes unreasonable prolongation of the regimen title
         Example: Capecitabine (1000 mg/m2) D1-14 Q21D and Capecitabine (1250 mg/m2) D1-14 Q21D
         2.1.1.6. Route of administration is specified in the regimen title if drugs are given by multiple routes. Route of administration may be included if used to distinguish from alternative route.
         Example: Ifosfamide (CIV) + Carboplatin + Etoposide, Temozolomide PO + XRT
         Exception: Steroids used as part of treatment within a regimen (for example multiple myeloma or prostate regimens) will not have route specified in regimen titles.
      2.1.2. Acronyms
         2.1.2.1. Acronyms will not be utilized unless commonly known within oncology clinical practice terminology (e.g., CHOP).
         2.1.2.2. Acronyms will be spelled out in the regimen title if the regimen contains 3 or fewer drugs.
         Example: Fluorouracil (Bolus + CIV) + Oxaliplatin (FOLFOX 6, modified) versus CHOP
         2.1.2.3. An acronym that is not well-known in oncology nomenclature may be chosen for the regimen title if title length is of concern. If an acronym not commonly accepted in the

oncology clinical practice is utilized to shorten a regimen title, it will be concordant with the treatment protocol reference and spelled out in the regimen instructions.

2.2. Request Priority
- 2.2.1. New FDA-approved therapies may require a higher priority status.
- 2.2.2. Regimens being considered for pathway addition may require a higher priority status.

2.3. Accepted Reference(s) and Format
- 2.3.1. References may include primary literature, product Prescribing Information, NCCN Guidelines, CCC Approved Regimen Standards, or others.
  - 2.3.1.1. Multiple references may be included to support different aspects of the regimen.
  - 2.3.1.2. In general, a primary literature reference should be included for all regimens unless not yet published, not available, or discrepancies between FDA approval or NCCN Guidelines, in which case other references may be included in addition to or as alternatives.
  - 2.3.1.3. If discrepancies exist between the primary literature and FDA labeling or NCCN Guidelines, other references may be included in addition to or as alternatives.
  - 2.3.1.4. See below sections for other references, such as tertiary drug references, which may be used to determine drug details.
- 2.3.2. Acceptable reference format
  - 2.3.2.1. Journal articles (AMA format): Author last name Author first initial, et al. Journal name year;volume:pp-pp. (if applicable, Disease).
    - 2.3.2.1.1. List the disease in parentheses following a journal reference if a regimen template is utilized for more than one disease state.
      Examples: Smith E, et al. N Engl J Med 2020;365:123-9. (Breast).
      Smith E, et al. N Engl J Med 2020;365:123-9. (Breast)
  - 2.3.2.2. Journal articles published online ahead of print: Author last name Author first initial, et al. year month abbreviation day [online ahead of print].
    Example: Hossain S, et al. J Clin Oncol 2021 Jun 11 [online ahead of print].
  - 2.3.2.3. Meeting Abstracts: Author last name Author first initial, et al. Journal name (or name of meeting if not published in journal) year;volume(issue): abstr #.
    Example: Smith E, et al. J Clin Oncol 2020;20(3): abstr 401.
  - 2.3.2.4. Prescribing Information: Drug Prescribing Information [Accessed yyyy].
    Example: Nerlynx Prescribing Information [Accessed 2021].
  - 2.3.2.5. NCCN Guidelines: NCCN Guidelines Disease v.m.yyyy [Accessed yyyy].
    Example: NCCN Guidelines Breast Cancer v.4.2020 [Accessed 2021].
  - 2.3.2.6. CCC Regimen Standards: CCC Approved Regimen Standard (mm/yyyy).
    Example (single): CCC Approved Regimen Standard (11/2020).
    Example (multiple): CCC Approved Regimen Standards (11/2020, 2/2021).

2.4. Diagnosis
- 2.4.1.Problem group for which regimen is referenced
  - 2.4.1.1. Disease abbreviations should not be used
  - 2.4.1.2. Unless otherwise specified, when available, second primary diagnoses or problems will also be included.
  - 2.4.1.3. If the regimen is for multispecialty use and does not have an existing Problem Group, it will be tagged to All Problems.

2.5. Stage (default to all)

2.6. Line of Therapy (default to all)

2.7. Emetic Risk
- 2.7.1. Emetogenic potential of regimens will be according to NCCN Antiemesis Guidelines as a primary reference.

2.7.2. If the NCCN Antiemesis Guidelines do not specify the emetic potential of a specific oncolytic agent or regimen, the primary literature source and/or prescribing information will be utilized. The regimen will be categorized according to the following emetic risk categories:
- High (>90%)
- Moderate-High (60-90%), see Moderate-High Emetic Risk Category
- Moderate (30-60%), see Moderate-High Emetic Risk Category
- Low (10-30%)
- Minimal (<10%)

2.7.3. Regimens containing only oral oncolytic agents will be classified according to NCCN Antiemesis Guidelines as the primary reference. If the NCCN Antiemesis guidelines do not specify the emetic potential of the specific oral oncolytic agent, the primary literature source and/or prescribing information will be utilized.

2.7.4. Oral oncolytic agents will be classified according to the following emetic risk categories:
- Moderate to high (≥30%)
- Minimal to low (<30%)
- Oral oncolytic regimens with oral agents of moderate to high emetic risk will be provided with an oral oncolytic supportive care template.

2.8. Regimen Instructions

2.8.1. Used to designate the following scenarios (included, but not limited to):
- Multi-part regimen orders
- Non-common acronym definitions
- REMS requirements
- Regimens accompanied by radiation therapy unless otherwise specified by CCC
- Duration of therapy if relevant or if regimen is shared between multiple disease states where duration of therapy may differ slightly.
- Other unique circumstances or recommendations not specified elsewhere in the regimen.

2.9. Communication Orders

2.9.1. Communication orders are information only orders which may be included under any medication header and serve different functions based on the order. These may include:
- Dosing Guidance: included to provide additional detail for drugs with complex dosing which may include dosing based on weight, ramp up dosing, dose adjustments based on laboratory values, etc.
- Monitoring Guidance: included to provide guidance on monitoring parameters
- Immunotherapy Monitoring: included in immune checkpoint inhibitor regimens to provide guidance on NCCN Guideline-recommended monitoring
- Bispecific Antibody Monitoring: included in lymphocyte-engaging bispecific antibody regimens to provide guidance on NCCN Guideline-recommended monitoring
- VTE Prophylaxis Reminder and VTE Prophylaxis Exception: see VTE Prophylaxis section

2.10. Medication Headers and Order of Administration

2.10.1. Each medication will be placed under the medication header that most appropriately designates its class/mechanism of action.

2.10.1.1. Available headers:
- Immunotherapy (including multipart)
- Chemotherapy (including multipart or CIV)
- Oral Oncolytic
- Additional Medications
- Hydration (Pre-Hydration and/or Post-Hydration)
- Fluids
- Medications
- PRN Medications

2.10.2. Drug
- 2.10.2.1. Generic name
  - 2.10.2.1.1. Exceptions: brand names will be used in cases of a generic name serving multiple brand names used in different diseases (i.e. Prolia, Xgeva), biosimilars of reference products [Filgrastim (Neupogen), Zarxio, Nivestym, Granix], cases of brand names having different rates of infusion (i.e. Treanda, Bendeka, Bendamustine by Eagle Pharmaceuticals) or cases of brand names/non-equivalent generic products that have differing recommendations for routes of administration (Velcade® and Bortezomib by Fresenius-Kabi), and vaccines (due to unclear differentiation of available generic names).
  - 2.10.2.1.2. Brand names will be called out for drug therapies with similar generic/product names [i.e., biosimilars, products with like brand names (Lupron®, Eligard®), and analogues of prior therapies (trastuzumab, ado-trastuzumab emtansine, etc.)], with a notation at the end of the drug instructions. (i.e., NOTE: This is Zarxio).
  - 2.10.2.1.3. Refer to CCC Standard from 2/2020 for list of look-alike / sound-alike drugs with differing naming conventions.

2.10.3. Dose
- 2.10.3.1. Dose should be listed as follows: # followed by units (e.g., mg, units)
  - 2.10.3.1.1. Discuss acceptable abbreviations
    - 2.10.3.1.1.1. JCAHO Do Not Use Abbreviation List
    - 2.10.3.1.1.2. Exception: Gram (GM) due to software limitations

2.10.4. Route
- 2.10.4.1. Choices include (but are not limited to):
  - IVPB
  - IV Push
  - PO
  - IM
  - SQ (per iKM)
  - IP
  - PR
  - CIV
  - IT
- 2.10.4.2. Display for CIV drugs given once per cycle: TOTAL CIV CYCLE DOSE RANGE = 2400-3000 mg/m2 CIV over 46 hours. Patient to be seen for a pump disconnect on Day 3. Refer to drug stability guidelines.
- 2.10.4.3. Display for CIV drugs given daily: DAILY DOSE = 50 mg/m2/day CIV for 4 days. Total cycle dose = 200 mg/m2. Patient to return daily for pump refill. Patient to be seen for pump disconnect on Day 5. Refer to drug stability guidelines.

2.10.5. Rate
- 2.10.5.1. Per product Prescribing Information or CCC Approved Regimen Standards, unless otherwise denoted (per reference).

2.10.6. Diluent
- 2.10.6.1. Per product Prescribing Information or CCC Approved Regimen Standards, unless otherwise denoted (per reference).
- 2.10.6.2. If the above references do not include diluent information, tertiary drug references may be used (Clinical Pharmacology, Micromedex, Lexi-Comp)

2.10.7. Drug Administration Instructions
- 2.10.7.1. Specific administration details that are relevant and necessary to pharmacy or nursing personnel to administer drugs are included
- 2.10.7.2. If the above references do not include diluent information, tertiary drug references may be used (Clinical Pharmacology, Micromedex, Lexi-Comp)
- 2.10.7.3. Order of drug instruction information: Dose details (if applicable), mixing or diluent information, administration rate (if applicable), additional administration instructions, monitoring for infusion reactions (if applicable), vesicant/irritant, “NOTE: This is Brand Name” (if applicable).

2.10.7.4. Unless otherwise noted, administration details will defer to the product Prescribing Information or CCC Approved Regimen Standards, unless otherwise denoted (per reference)

2.10.7.5. Vesicant/Irritant

2.10.7.5.1. Within the drug instructions after special administration instructions, insert if agent is a vesicant/irritant.

2.10.7.5.2. Reference for designation of vesicant/irritant information is: Clinical Pharmacology, Micromedex, Lexi-Comp or select Prescribing Information, as documented.

2.10.8. Number of Cycles

2.10.8.1.1. If more than one option per cited reference(s), default to lower number (with call out in regimen instructions)

2.10.8.1.2. If number of cycles is not designated in the reference or detailed as 'until progression', defaults to **6 months** of therapy, unless otherwise specified by the disease group or CCC.

- Note: 6 months of therapy may result in different total number of cycles depending on cycle length (e.g., 21-day cycles for 6 months are equivalent to 8 cycles of treatment).

2.10.9. Cycle Length

2.10.9.1. Default the cycle length to the number of days listed in the primary reference (either literature or prescribing information).

2.10.9.2. Refer to CCC Standards for exceptions.

2.10.9.3. If listed in months instead of days, use the below conversion:

- 1 year = 12 months = 52 weeks = 365 days
- ½ year = 6 months = 26 weeks = 182 days
- ¼ year = 3 months = 13 weeks = 91 days
- 1 month = 4 weeks = 30 days

2.10.10. Drug Order

2.10.10.1. Drugs are listed in the regimen in the order by which they should be given.

2.10.10.2. In the absence of data or evidence documenting preferred order of administration the drugs within the template will be listed in the following order:

1) Targeted therapy (monoclonal antibodies, immunotherapy)
2) Chemotherapy
3) Oral therapy
4) Hydration (Pre-hydration and/or Post-hydration)
5) Additional medications

2.11. Oral therapy

2.11.1. Data fields

- Tablet strength
- Amount
- Unit (example: mg, mg/m^2, mg/kg, etc.)
- Route

2.11.2. Within drug field/instructions, identify default tablet or capsule strength

2.11.3. Dispense: # of day supply

2.11.3.1. Dispense value should be 0 for all drugs with weight-based dosing

2.11.3.2. Consideration should be made for available package size for individual agents when determining dispense value (refer to How Supplied section of prescribing information).

2.11.3.3. Considerations should be made when determining common dispense values for reimbursement (day supply allotted by payor).

2.11.4. Drug instructions

2.11.4.1. Note: iKnowMed^{SM} Generation 2 maximum character length allowed is 140 characters (including spaces) within the drug instructions.

2.11.5. Refill(s) should be provided for allowance of the anticipated duration of the regimen.

2.12. Immunologic or Biologic Agents
- 2.12.1. Includes targeted agents and monoclonal antibodies
- 2.12.2. Refer to Supportive Care Template premedications and additional medications.

2.13. Additional Medications
- 2.13.1. Refer to Supportive Care Template for premedications and additional medications.
- 2.13.2. May be prechecked or unchecked, please indicate accordingly
- 2.13.3. Supportive care agents
  - 2.13.3.1. May include erythropoietin, white blood cell (WBC) colony stimulating factor support, or other therapies to prevent myelosuppression
    - Febrile neutropenia risk is classified based on NCCN Guidelines for Hematopoietic Growth Factors. If regimen is not listed in NCCN Guidelines, then classification will be based on rate of febrile neutropenia in the primary reference(s) (CCC Vote 11/2021).
    - WBC colony stimulating factor template will be included in regimens with a high risk of febrile neutropenia (≥20% incidence).
    - Trilaciclib may be included in extensive-stage small cell lung cancer regimens with a high risk of febrile neutropenia (≥20% incidence).
      - 2.13.3.1.1.1. The following agents are included within the regimen template in the following order when WBC colony stimulating factor is indicated:
        - Nyvepria®, syringe (pegfilgrastim-apfg) [preferred prechecked agent for regimens with high risk of febrile neutropenia, P&T Executive Committee decision 11/2023]
        - Udenyca®, syringe (pegfilgrastim-cbqv)
        - Udenyca®, auto-injector (pegfilgrastim-cbqv)
        - Stimufend®, syringe (pegfilgrastim-fpgk)
        - Fulphila®, syringe (pegfilgrastim-jmdb)
        - Fylnetra®, syringe (pegfilgrastim-pbbk)
        - Pegfilgrastim, syringe (Neulasta®)
        - Pegfilgrastim, syringe with wearable injector (Neulasta Onpro®)

        Criteria for inclusion of filgrastim products: duration between chemotherapy doses <12 days, stem cell mobilization, or MDS indication (CCC vote 11/2022)
        - Zarxio®, syringe (filgrastim-sndz)
        - Filgrastim, syringe (Neupogen®)
        - Nivestym®, syringe (filgrastim-aafi)
        - Releuko®, syringe (filgrastim-ayow)
        - Nypozi™, syringe (filgrastim-txid)
        - Granix®, syringe (tbo-filgrastim)
          - Short-acting WBC colony stimulating factors are included as a flat dose of 480 mcg and included for a total of 7 days unless otherwise designated

- 2.13.4. VTE Prophylaxis
  - 2.13.4.1. Multiple myeloma regimens, all cycles day 1 (voted by CCC 5/2022)
    - VTE Prophylaxis Reminder (pre-checked)
      - Instructions: Consider venous thromboembolism (VTE) prophylaxis for patients with Multiple Myeloma. Selection of VTE prophylaxis agent should be based on individual risk assessment. See VTE Prophylaxis in Multiple Myeloma education document linked in references section for more information.
    - VTE Prophylaxis Exception (available, not pre-checked)
      - Instructions: Patient has been evaluated and does not qualify for VTE prophylaxis OR is already receiving VTE prophylaxis.
    - Aspirin 81 mg orally daily, dispense: 30 tablets, refills 0 (available, not pre-checked)
    - Aspirin 325 mg orally daily, dispense: 30 tablets, refills 0 (available, not pre-checked)

- Apixaban 2.5 mg orally twice daily, dispense: 60 tablets, refills 0 (available, not pre-checked)
- Rivaroxaban 10 mg orally daily, dispense: 30 tablets, refills 0 (available, not pre-checked)
- Enoxaparin 40 mg subcutaneously daily, dispense: 30 each, refills 0 (available, not pre-checked)
- Dalteparin 5000 mg subcutaneously daily, dispense: 30 each, refills 0 (available, not pre-checked)
- Fondaparinux 2.5 mg subcutaneously daily, dispense: 30 each, refills 0 (available, not pre-checked)

2.13.5. Pre- and Post-Hydration

2.13.5.1. Cisplatin-containing regimens (available in template, normal saline prechecked)

- Pre-hydration: 500-1000 mL NS or D5½ NS or D5NS
- Post-hydration: 500-1000 mL NS or D5½ NS or D5NS
- Magnesium supplementation: 1 gram IVPB
- Potassium supplementation: 10 mEq IVPB

Cisplatin Dosage	Status	Fluid and Volume
≥ 50 mg/m^2	PRE-CHECKED	PRE-HYDRATION Normal Saline (0.9% Sodium Chloride) 1000 mL
	PRE-CHECKED	POST-HYDRATION Normal Saline (0.9% Sodium Chloride) 1000 mL
40-50 mg/m2	PRE-CHECKED	PRE-HYDRATION Normal Saline (0.9% Sodium Chloride) 1000 mL
	Available, not pre-checked	POST-HYDRATION Normal Saline (0.9% Sodium Chloride) 1000 mL
<40 mg/m^2 including consecutive daily doses	PRE-CHECKED	PRE-HYDRATION Normal Saline (0.9% Sodium Chloride) 500 mL
	Available, not pre-checked	POST-HYDRATION Normal Saline (0.9% Sodium Chloride) 500 mL

2.13.5.2. Carfilzomib-containing regimens

- Pre-hydration:
  - NS 250 mL, cycle 1 only (pre-checked)
  - NS 250 mL, cycle 2 and subsequently (available, not pre-checked)
  - NS 500 mL, cycle 1 only (available, not pre-checked)
  - NS 500 mL, cycle 2 and subsequently (available, not pre-checked)
- Post-hydration:
  - NS 250 mL, all cycles (available, not pre-checked)
  - NS 500 mL, all cycles (available, not pre-checked)

2.13.5.3. Pentostatin-containing regimens (available, not pre-checked)

- Pre-hydration: 500 mL and 1000 mL NS and D5½NS
- Post-hydration: 500 mL and 1000 mL NS and D5½ NS

2.13.6. Pre-and Post-Treatment

2.13.6.1.1. Cetuximab-based regimens (available, not pre-checked)

- Magnesium supplementation: 1 gram IVPB

2.13.7. Premedications

2.13.7.1. See Supportive Care Template for agents to be included based on emetic risk and risk of infusion-related reactions.

2.13.7.2. Pre-checked antiemetics are based on CCC decision – see CCC Approved Regimen Standards.

2.13.7.3. Drug-specific premedications may be included based on product Prescribing Information recommendations or if risk of infusion-related reactions

2.13.7.4. If pre-check is required, intravenous premedications are generally preferred for intravenously administered cancer therapies. Oral premedications may be preferred for non-intravenously administer cancer therapies. Both may be included if allowed by product Prescribing Information.

2.13.7.5. When premedication dose ranges are provided in product Prescribing Information, typically the lower dose will be defaulted with the dose range included in the drug instructions

2.13.7.6. Dexamethasone is generally preferred for consistency across regimens so may be included in situations where both dexamethasone and other steroids are listed as equivalent options in the product Prescribing Information.

2.13.8. Hypersensitivity Medications

2.13.8.1. Pre-checked PRN meds to be added to all parenteral chemotherapy and immunotherapy unless otherwise specified by the CCC Approved Regimen Standards.

- Epinephrine 0.3 mg IM PRN
- Diphenhydramine 50 mg IV PRN
- Famotidine 20 mg IV PRN
- Hydrocortisone 100 mg IV PRN
- Methylprednisolone 125 mg IV PRN

3. Standard Operating Procedure for Regimen Library Removals

3.1. Regimens are periodically reviewed for inactivation/removal from the Regimen Library

3.1.1. Criteria for removal include but are not limited to: FDA indication withdrawal, market removal, very low utilization, regimen duplications, etc.

Clinical Content Committee (CCC) Approved Regimen Standards

Revised September 2024

The purpose of this section is to provide the rationale for clinical decisions voted on and approved by CCC, including but not limited to regimen order sets within the Standard Regimen Library and Supportive Care Templates.

1. Carboplatin dosing: mg/m^2 vs. AUC

Regimens affected

- Fluorouracil CIV D1-4 + Carboplatin Q28D
- Carboplatin Q28D
- Paclitaxel + Carboplatin + XRT Q7D

Issue

- The cited references for head and neck regimen recommends carboplatin 100 (weekly) or 300 mg/m^2 (Q3 week) be administered in combination with fluorouracil
- The cited reference for cervical regimen recommends initiating carboplatin at a dose of 360 mg/m^2 and titrating based on toxicity
- Clinical practice currently prefers AUC dosing over mg/m2 to prevent myelotoxicity

References

- Forastiere AA, et al. *J Clin Oncol* 1992;10:1245-51.
- Burke TW, et al. *Gynecol Oncol* 1993;51:397-400.
- Suntharalingham M, et al. *Int J Radiat Oncol Biol* 2000;47:49-56.

CCC-Approved Regimen Standard

CCC discussed and voted (*in* ***November 2010****, updated* ***June 2020***) on the following:
• **Carboplatin Q28D: Change carboplatin dosing to AUC 4** • **Fluorouracil + Carboplatin: Change carboplatin dosing to AUC 4** • **Paclitaxel + Carboplatin + XRT Q7D: Change weekly carboplatin dosing to AUC 2**

2. Paclitaxel + Carboplatin + Trastuzumab (TCH) Q21D Administration: Days 1 and 2 or Day 1

Diagnosis impacted

- Breast Cancer

Issue

- Clinical practice currently prefers drug administration on Day 1 only instead of Days 1 and 2 as the reference states

Reference

- Robert N, et al. *J Clin Oncol* 2006;24: 2786-92.

CCC-Approved Regimen Standard

CCC discussed and voted *(in* ***November 2010****)* on the following**:**
• **Maintain drug administration (Paclitaxel + Carboplatin + Trastuzumab) all on Day 1.**

3. Leuprolide Cycle Length

Regimens affected

- All regimen templates that contain leuprolide

Issue

- The cited references state 'every 12 weeks' and 'every 16 weeks'
- Clinical practice currently prefers drug administration on day 91 for Q3 month dosing and day 120 for Q4 month dosing due to denied claims when therapy given at 84 and 112 days
- UPDATE August 2018: Leuprolide Prescribing Information has since clarified cycle lengths – one month is 4 weeks, 3 months are 12 weeks, 4 months are 16 weeks, and 6 months are 24 weeks

References

- Sharifi R. Clin Ther 1996;18:647. (Prostate)
- Harvey HA, et al. JCO 1985;3(8):10680. (Breast)
- Lupron Depot [Prescribing Information]. North Chicago, IL: AbbVie Inc.; 2016.

CCC-Approved Regimen Standard

CCC discussed and voted (*in* ***November 2010,*** *updated* ***August 2018***) on the following:
• November 2010: Maintain cycle length for Leuprolide Q3 months as 91 days and cycle length for Leuprolide Q4 months as 120 days. • **July 2018: Based on clarification from Lupron Prescribing Information, adjust leuprolide depot cycle lengths back to 4-week (28-day) intervals.** 1 month = 28 days 3 months = 84 days 4 months = 112 days 6 months = 168 days

4. Liposomal Doxorubicin Dosing

Diagnosis impacted

- Ovarian Cancer

Issue

- The dosing for liposomal doxorubicin per cited references for the ovarian regimen is 40 to 50 mg/m^2
- Clinical practice utilizes a liposomal doxorubicin dose of 40 mg/m^2 due to improved tolerability

References

- Campos SM, et al. *Gynecol Oncol* 2001;91:206-212.
- Rose PG, et al. *Gynecol Oncol* 2001;82:323-328.
- Markman M, et al. *Gynecol Oncol* 2000;78:369-372.

CCC-Approved Regimen Standard

CCC discussed and voted *(in* ***October 2010****)* on the following:
• **Change Liposomal doxorubicin dosing to 40 mg/m2 for ovarian regimens.**

5. Trastuzumab for Breast Cancer regimens: Weekly vs. Q3week

Diagnosis impacted

- Breast Cancer

Issue

- Variability exists in trastuzumab schedules used in breast cancer regimens
- Trastuzumab administration schedule as used per study references in a regimen may differ from the schedule of concomitant chemotherapy
- Pharmacokinetic data exists to support interchangeability of weekly vs. q3week schedule
- Clinical practice often utilizes the trastuzumab schedule to match the frequency of chemotherapy

References

- Baselga J, et al. *J Clin Oncol* 2005;23:2162-71.
- Jones SE, et al. *Lancet Oncol* 2013;14:1121-8.
- Marty M, et al. *J Clin Oncol* 2005;23:4265.
- Pegram MD, et al. *JNCI* 200;96:759-69.
- Slamon D, et al. *N Engl J Med* 2001;344:783-92.
- Slamon D, et al. *N Engl J Med* 2011;365:1273-83.

CCC-Approved Regimen Standard

CCC discussed and voted *(in **October 2010**)* on the following:
○ **Weekly and q3week trastuzumab may be used interchangeably in trastuzumab-containing chemotherapy regimens for breast cancer** ○ **Regimens may contain both weekly and q3week schedule options, but the q3week option will be prechecked**

6. Leucovorin Dosing in FOLFOX 6, modified +/- Bevacizumab

Diagnoses impacted

- Colon cancer
- Rectal cancer

Issue

- The cited reference for the colorectal regimen recommends administering leucovorin 375 mg/m2
- Clinical practice currently prefers leucovorin dosing of 400 mg/m2

Reference

- Hochester HS, et al. *J Clin Oncol* 2008;26:3523-9.

CCC-Approved Regimen Standard

CCC discussed and voted (*in **August 2011***) on the following:
○ **Maintain leucovorin doses at 400 mg/m2 for FOLFOX regimens due to provider familiarity**

7. Paclitaxel Infusion Time: 24 hour vs. 3 hour infusion

Diagnosis impacted

- Ovarian Cancer

Regimen affected

- Paclitaxel D1 IV + Cisplatin IP D1,8 + Paclitaxel IP D8

Issue

- Clinical practice currently prefers 3-hr bolus infusion (IVPB) over 24-hr CIV

References

- Armstrong DK, et al. *N Eng J Med* 2006;354:34-43.
- Chin SN, et al. *Gynecol Oncol* 2009;112:450-4.
- Markman M, et al. *J Clin Oncol* 2006;24:988-94.

CCC-Approved Regimen Standard

CCC discussed and voted (*in* ***November 2010***) on the following:
○ **Use 3-hr IVPB as the standard infusion time for paclitaxel infusions**

8. Addition of SQ route to Bortezomib-containing regimens

Regimens affected

- All bortezomib-containing regimen templates

Issue

- The administration route for bortezomib per cited study references the equivalence of intravenous and subcutaneous routes
- Pharmacokinetic and pharmacodynamic data exists to support interchangeability of intravenous vs. subcutaneous bortezomib
- The subcutaneous route provides a good option for patients with poor venous access and improves convenience
- The initial study was conducted in relapsed multiple myeloma patients

References

- Moreau P, et al. *Lancet* 2011;12:431-440.
- Bortezomib Prescribing Information [Accessed 4/2014].

CCC-Approved Regimen Standard

CCC discussed and voted (in ***September 2011***) on the following:
○ **Add optional subcutaneous bortezomib at the same dose/schedule seen in the regimen to all bortezomib-containing regimens**
CCC discussed and voted (*in* ***April 2014***) on the following:
○ **Due to clinical practice conversion to subcutaneous administration, remove intravenous bortezomib option** ○ **Add the following instructions to subcutaneous bortezomib:** **If given SQ, dilute with NS to a final concentration of 2.5 mg/mL. May give IV. If given IV, dilute with NS to a final concentration of 1 mg/mL and give over 3-5 seconds. Flush with NS for 10-20 minutes to ensure entire IV dose is infused. Bortezomib is a possible irritant.**

9. Bevacizumab Infusion Time over 30 minutes

Regimens affected

- All bevacizumab-containing regimen templates

Issue

- Administration per cited reference is weight-based infusion rate of 0.5 mg/kg/min
- Current bevacizumab-containing regimens have instructions about administration that read: First infusion over 90 minutes, then 60 minutes, then 30 minutes (if tolerated)
- The incidence of infusion-related hypersensitivity reactions to bevacizumab is low and the current extended infusion times are unnecessary

Reference

- Reidy, D.L., et.al. *J Clin Oncol* 2007;25:2691-5.

CCC-Approved Regimen Standard

CCC discussed and voted (*in* ***March 2012,*** *updated* ***September 2019***) on the following:
○ **CCC elected to use a flat infusion time of 30 minutes rather than a weight-based infusion of 0.5 mg/kg/min to minimize calculation errors and due to lack of functionality for iKnowMed[SM] to allow for weight-based infusion rates** ○ **In September 2019, the CCC voted to also apply this bevacizumab regimen standard for a 30-minute infusion duration to all FDA-approved bevacizumab biosimilars**

10. Mannitol and Furosemide Removal from Cisplatin-containing regimens

Regimens affected

- All cisplatin-containing regimen templates

Issue

- Cisplatin can cause nephrotoxicity and repeated cycles can cause irreversible declines in GFR
- Cisplatin may cause a defect in magnesium re-absorption leading to hypomagnesemia – this can lead to secondary hypocalcemia and hypokalemia
- Diuretics do not decrease platinum content in plasma or kidney 'nor do they decrease degree of cellular necrosis and can even aggravate it. Any renal protection from mannitol has only been seen in the first cycle but not in subsequent cycles.
- CCC felt that data is lacking to support use of mannitol and furosemide and were also concerned about possible increased harm

References

- Launay-Vacher V, et al. *Cancer Chemother Pharmacol* 2008;61:903-9.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***June 2012***) on the following:
○ **Remove mannitol and furosemide from all existing cisplatin-containing regimens and do not include in new cisplatin-containing regimens**

11. Mesna Standardization

Regimens affected

- All ifosfamide-containing regimen templates, except those given CIV

Issue

- Ifosfamide-containing regimens have mesna included based on primary literature yet literature and NCCN templates are inconsistent

References

- NCCN Templates
- Clinical Pharmacology

CCC-Approved Regimen Standard

CCC discussed and voted (in ***April 2015***) on the following:
Standardize mesna dosing/administration to: **Prechecked: IV + PO + PO** **- 20% of total ifosfamide dose IV at hour 0** **- 40% of total ifosfamide dose PO at hour 2 after the start of ifosfamide** **- 40% of total ifosfamide dose PO at hour 6 after the start of ifosfamide** **Optional: IV + IV + PO** **- 20% of total ifosfamide dose IV at hour 0** **- 20% of total ifosfamide dose IV at hour 4 after the start of ifosfamide** **- 40% of total ifosfamide dose PO at hour 6 after the start of ifosfamide** **Round to nearest 400 mg tablet**

12. Age-based Methotrexate Dosing in CODOX-M

Diagnosis impacted

- Non-Hodgkin Lymphoma

Regimen affected

- Rituximab + CODOX-M

Issue

- Clinical practice currently prefers lower doses of methotrexate for patients over the age of 65

References

- Barnes JA, et al. *Ann Oncol* 2011;22:1859-64.
- Lacasce A, et al. *Leuk Lymphoma* 2004;45:761-77.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***November 2015***) on the following:
○ **Use age-based dosing for methotrexate as seen in Up-to-Date (a regimen combined from various references, including Magrath I, et al. J Clin Oncol 1996;14: 925, Mead GM, et al. Ann Oncol 2002;13: 1264 and Mead GM, et al. Blood 2008;112: 2248.)** ○ **Age 65 years or younger: 300 mg/m2 IV loading dose over one hour on day 10, followed by 2700 mg/m2 IV infusion administered over the next 23 hours; leucovorin rescue begins 36 hours from the start of the methotrexate infusion** ○ **Age >65 years: 100 mg/m2 IV loading dose over one hour on day 10, followed by 900 mg/m2 IV infusion administered over the next 23 hours; leucovorin rescue begins 36 hours from the start of the methotrexate infusion**

13. Vincristine Dose Calculation

Regimens affected

- All vincristine-containing regimen templates

Issue

- Cited reference may utilize capped dose or formula dose with recommended cap of 2 mg and may appear differently within the iKnowMed Regimen Library templates
- ASCO Practice Guidelines: Appropriate Dosing for Obese Adult Patients with Cancer expert panel recommends consideration of fixed dosing with select cytotoxic agents
- Due to potential for neurotoxicity concerns, vincristine is capped at maximum dose of 2 mg when used as part of CHOP or CVP regimens

Reference

- Griggs JJ, et al. *J Clin Oncol* 2012;30:1553-61.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***March 2018***) on the following:
○ **Vincristine dosing will follow the specific reference utilized for the intended regimen** ○ **If a formula dose is used without a clearly stated capped dose within the reference article (e.g., 1.5 mg/m^2), the formula dose will be used in the regimen template** ○ **The vincristine maximum dose is set at 2 mg so an alert should fire with a recommended cap of 2 mg** ○ **If a fixed / capped vincristine dose is used within the referenced article, a fixed dose will be utilized within the regimen template**

14. Moderate-High Emetic Risk Category

Regimens affected

- Regimens containing one or more parenteral chemotherapy with an emetic risk of 60-90%
- Place in therapy warrants preselected antiemetics (e.g., given before or after radiation therapy, clinical scenario being treated)
- Please see Antiemetic Templates for a detailed list of moderate-high and moderate emetic risk agents included

Issue

- The Moderate emetic risk category as referenced in NCCN Antiemesis Guidelines does not account for patient- or disease-specific factors.
- Moderate-high emetic risk was to allow regimens with a vomiting incidence at the higher end of the recommended broad definition of emetic risk to be treated with more aggressive antiemetic therapy

CCC-Approved Regimen Standard

CCC discussed and voted (in ***April 2017***) on the following:
○ **A new moderate-high emetic risk category will be created and will contain different prophylactic antiemetic preferences compared with the moderate emetic risk template** ○ **The moderate-high emetic risk template will be defaulted in all regimens with an emetic risk of >60-90%** ○ **The moderate emetic risk template will be defaulted in all regimens with an emetic risk of 30-60%** ○ **See supportive care template document for specific medications designated for each emetic risk category and chemotherapeutic agents included**

15. Dexamethasone Pre-Medication for Paclitaxel

Regimens affected

- All regimen templates containing paclitaxel

Issue

- Historically iKnowMed regimens containing paclitaxel included dexamethasone 10 mg IV given prior to paclitaxel to reduce risk of infusion reactions
- Paclitaxel Prescribing Information recommends dexamethasone premedication given orally 20 mg at 12 and 6 hours prior to the paclitaxel infusion
- Review of the literature demonstrated fewer paclitaxel infusion-related reactions when dexamethasone premedication was administered orally as recommended per the Prescribing Information
- UPDATE March 2023: Committee discussed and voted to keep the pre-checked oral dexamethasone premedication, but felt addition of a pre-checked PRN Dexamethasone IV order for patients who didn't take oral dexamethasone at home would allow RNs to administer without an additional order from a prescriber

References

- Kwon JS, et al. *Gynecol Oncol* 2002;84:420-5.
- O'Cathail SM, et al. *Int J Gynecol Cancer* 2013;23:1318-25.
- Chen F, et al. *Oncotarget* 2017;8:19236-43.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***April 2017***, updated ***March 2023***) on the following:
○ **April 2017: All regimens containing paclitaxel will include a pre-checked dexamethasone oral prescription of 20 mg by mouth at 12 hours and 6 hours prior to the paclitaxel** ○ **March 2023: A pre-checked order for Dexamethasone 10 mg IV PRN for patients who missed 1-2 doses of oral dexamethasone at home will be included in all paclitaxel regimens**

16. Preferred Parenteral Neurokinin-1 Receptor Antagonist (NK_1RA)

Regimens affected

- Regimen templates containing one or more containing oncologic therapy characterized as high (>90%) and moderate-high (60-90%) emetic risk

Issue

- NCCN Antiemesis guidelines list several appropriate antiemetic regimens containing NK_1RAs
- Several NK_1 RAs agents are available and vary with regard to their pharmacokinetic properties, safety profiles and cost
- To streamline care and to provide appropriate antiemetic selections based upon emetic risk of a regimen, a preferred agent was selected for precheck within the high and moderate-high emetic risk regimen templates

CCC-Approved Regimen Standard

CCC discussed and voted (in ***September 2019***) on the following:
○ **The preferred NK_1 RA will be generic Fosaprepitant** ○ **Generic fosaprepitant will be prechecked within all high and moderate-high emetic risk templates with a minimum frequency of once every 7 days**

17. Lutetium Lu 177 dotatate (Lutathera®) Amino Acids

Regimens affected

- Lutetium Lu 188 dotatate Q56D

Issue

- Lutetium Lu 177 dotatate requires administration of amino acids before, during, and after its administration for nephroprotection
- The Lutetium Lu 177 dotatate (Lutathera®) Prescribing Information recommends 18-24 g of Arginine HCL, 18-24 g of Lysine HCL, osmolarity <1050 mOsm and a volume of 1500-2200 mL
- Commercially available amino acid solutions containing these combinations of amino acids have been intermittently on short supply or have been unavailable for extended periods
- Commercially available amino acids given with Lutetium Lu 177 dotatate are highly emetogenic and require antiemetic prophylaxis
- Compounded amino acids have been recommended by NCCN in the concentration of Arginine 2.5% / Lysine 2.5% in 1000 mL NaCL infused at 250 L/hour x 4 hours

References

- NCCN Guidelines Neuroendocrine and Adrenal Tumors v.2.2018 [Accessed 5/2018].

CCC-Approved Regimen Standard

CCC discussed and voted (in ***May 2018***) on the following:
○ **The NCCN-approved amino acid solution for Lutetium Lu 177 dotatate will be a compounded line item within the regimen template for Lutetium Lu 177 dotatate** ○ **Manual billing will still be required for this treatment**

18. White Blood Cell Colony Stimulating Factor (WBC CSF) Template within Regimens that carry Intermediate Risk of Febrile Neutropenia (10-20%)

Regimens affected

- All regimens with febrile neutropenia risk of 10-20% per NCCN Guidelines or primary reference(s)

Issue

- Regimens that carry an intermediate RN risk are those with an FN incidence of 10-20%
- As of July 2018, the WBC stimulating factor template was inconsistently present within all regimens classified as intermediate FN risk
- Addition of this template would add considerable length to regimens
- There were concerns that providing the template within the regimens may lead to more confusion and inappropriate CSF use
- The committee felt providers who used clinical judgement to prescribe WBC CSFs for patients with appropriate risk factors should be encouraged to prescribe using the standalone Pegfilgrastim regimen
- The committee felt providers should use clinical judgement to prescribe WBC CSF for patients with risk factors

Reference

- NCCN Guidelines Hematopoietic Growth Factors v.2.2020 [Accessed 1/2020].

CCC-Approved Regimen Standard

CCC discussed and voted (in ***July 2018***) on the following:
○ **DO NOT INCLUDE the white blood cell colony stimulating factor (WBC CSF) template within regimens classified as intermediate risk (10-20%) of febrile neutropenia.**

19. Leuprolide Depot Dosing in Breast Cancer Regimens

Regimens affected

- All leuprolide-containing breast cancer regimens

Issue

- Historically all leuprolide-containing regimens for breast cancer included 7.5 mg every 28-day dosing and 22.5 mg every 3-month dosing
- Leuprolide is not FDA approved in breast cancer and dosing varies in the literature
- Some practices have reported infrequent insurance denials for the higher doses of leuprolide
- The Medicare Allowable Reimbursement for lower doses is significantly higher than the high doses and are currently underwater
- The committee discussed and most practices reported no issues with reimbursement and more common use of the higher leuprolide doses in clinical practice, but felt use of the lower doses is appropriate if preferred per clinical discretion or payer mandates

CCC-Approved Regimen Standard

CCC discussed and voted (in ***November 2018***) on the following:
○ **KEEP pre-checked leuprolide depot doses of 7.5 mg every 28 days and 22.5 mg every 3 months for all breast cancer regimens** ○ **ADD optional orders for leuprolide 3.75 mg every 28 days and 11.25 mg every 3 months to all breast cancer regimens**

20. Docetaxel Q21D single-agent regimens standard dosing

Regimens affected

- All regimen templates that contain single-agent docetaxel

Issue

- The docetaxel dose was 100 mg/m^2 in the single-agent Q21D regimens for bladder, breast, cervical, head and neck, small cell lung, uterine, ovarian/fallopian/primary peritoneal cancers and sarcoma
- There were concerns that the 100 mg/m^2 Q21D dose may induce more hematologic toxicity with minimal additional clinical benefit over the 75 mg/m^2 Q21D dose
- References for breast, head and neck, and small cell lung cancers supported 60-100 mg/m^2 Q21D
- References for the other remaining diseases (gynecologic cancers, bladder cancer, sarcoma) did not support lower doses, however, often lower doses are used in practice
- CCC wished to lower the starting dose of docetaxel in this regimen to 75 mg/m^2 IV Q21D with a comment in the drug instructions and regimen instructions that the provider may consider dose escalation to 100 mg/m^2 depending on clinical scenario

References

- Burris HA, *Semin Oncol* 1999;26(3 Suppl 9):1-6. (Breast Cancer)
- Catimel G, et al. *Ann Oncol* 1994;5:533-7. (Head and Neck Cancers)
- Guardiola E, et al. *Eur J Cancer* 2004;40:2071-6.
- Harvey V, et al. *J Clin Oncol* 2006;24:4963-70. (Breast Cancer).
- Smyth JF, et al. *Eur J Cancer* 1994;30A:1058-60. (Small Cell Lung Cancer)

CCC-Approved Regimen Standard

CCC discussed and voted (in ***January 2019***) on the following:
○ **Adjust the standard single-agent docetaxel starting dose to 75 mg/m^2 every 21 days** ○ **Add comment in drug instructions and regimen instructions that docetaxel dose may be escalated up to 100 mg/m^2 in clinically appropriate scenarios per provider decision**

21. Vinca Alkaloid Administration and Infusion Duration

Regimens affected

- All vinblastine, vincristine, and vinorelbine-containing regimen templates

Issue

- The goal of this standard was to change the preferred method of vinca alkaloid administration to IV piggyback via minibag (vs. IV push administration) to reduce the risk of potential sentinel errors with inadvertent intrathecal vinca alkaloid chemotherapy administration
- Although the risk of inadvertent administration is low, the sequelae to this error is significant as intrathecal administration of vinca alkaloids are universally fatal
- This standard is in alignment with recommendations from the Institute of Safe Medication Practices (ISMP), the Oncology Nursing Society (ONS), The American Society of Clinical Oncology (ASCO), National Comprehensive Cancer Network (NCCN), and Joint Commission
- UPDATE November 2019: After review of prescribing information for vinca alkaloids, infusion durations via minibag differ in the literature and are not contained within the Prescribing Information for vinblastine or vincristine. Most references recommend infusion of vinblastine and vincristine if given as an intermittent piggyback infusion over 5-15 minutes, and the Navelbine® (vinorelbine) prescribing information has an infusion duration recommendation of 6-10 minutes.
- UPDATE March 2021: FDA released a statement alerting healthcare providers to labeling updates for preparation of vinca alkaloids. Based on FDA guidance, vinca alkaloid package inserts are removing instructions for preparation by syringe and recommending IV minibags only.

References

- World Health Organization. Vincristine (and other vinca alkaloids) should only be given via a minibag. July 18, 2007. https://www.who.int/patientsafety/highlights/PS_alert_115_vincristine.pdf?ua=1
- Institute for Safe Medication Practices. 2018-2019 Targeted Medication Safety Best Practices for Hospitals.
- The Joint Commission. Eliminating vincristine administration events. Quick Safety 2017;37:1-3.
- Neuss MN, et al. 2016 Updated American Society of Clinical Oncology / Oncology Nursing Society Chemotherapy Administration Safety Standards, Including Standards for Pediatric Oncology. Oncology Nursing Forum 2016;44:A1-A13.
- U.S. Food & Drug Administration. FDA updates vinca alkaloid labeling for preparation in intravenous infusion bags only. January 15, 2021. https://www.fda.gov/drugs/drug-safety-and-availability/fda-updates-vinca-alkaloid-labeling-preparation-intravenous-infusion-bags-only

CCC-Approved Regimen Standard

CCC discussed and voted (***November 2019*** and **March 2021**) on the following:
○ **November 2019: If administered via piggyback, vinblastine and vincristine infusions will be over 5-15 minutes, vinorelbine infusion will be over 6-10 minutes** ○ **March 2021: IV Push will be removed from all regimen templates. IV piggyback via minibag will remain as the only option for preparation and administration of vinca alkaloids based on FDA recommendations.**

22. Parenteral Hormonal Therapy Regimens – Exceptions to inclusion of Supportive Care Antiemetics

Regimens affected

- All fulvestrant, goserelin, and leuprolide-containing regimen templates

References

- NCCN Guidelines. Antiemesis. v.1.2019. [Accessed 8/2019].
- Faslodex [Prescribing Information]. Wilmington, DE: AstraZeneca Pharmaceuticals LP.; 5/2019.
- Eligard [Prescribing Information]. Fort Collins, CO: Tolmar Pharmaceuticals, Inc.; 4/2019.
- Lupron [Prescribing information]. North Chicago, IL: AbbVie Inc.; 2019.
- Zoladex 3.6 mg [Prescribing Information]. Lake Forest, IL: TerSera Therapeutics LLC.; 2017.
- Zoladex 10.8 mg [Prescribing Information]. Lake Forest, IL: TerSera Therapeutics LLC; 2017.

CCC-Approved Regimen Standard

CCC discussed and voted (*in* ***July 2019,*** *updated* ***November 2019***) the following:
○ July 2019: Parenteral hormone therapy regimens including single-agent regimens containing fulvestrant, goserelin, and leuprolide will NOT contain antiemetic template medications or a PRN Hypersensitivity medication template. ○ **November 2019 Update: Due to reactions occurring with a generic Fulvestrant product, CCC voted to replace the standard *PRN Hypersensitivity Meds* within all parenteral product regimen templates, including parenteral hormone templates**

23. Preferred Prechecked Antiemetic in Regimens that contain ONLY Subcutaneous Chemotherapy/Immunotherapy with Low, Moderate, Moderate-High, and High emetic risk

Regimens affected

- Azacitidine SQ regimen templates

Issue

- Patients receiving subcutaneous administration of chemotherapy or immunotherapy often do not undergo IV access during treatment appointments
- IV administration of antiemetics is impractical when patients do not require IV access for chemotherapy/immunotherapy administration unless the patient has a condition that precludes oral medication administration

References

- NCCN Guidelines Antiemesis v.1.2023 [Accessed 2/2023].

CCC-Approved Regimen Standard

CCC discussed and voted (*in* ***July 2019***) on the following:
○ **The preferred prechecked route for antiemetics (neurokinin-1 RA, dexamethasone, and 5-HT_3 RA) within regimens containing ONLY subcutaneous chemotherapy or immunotherapy agents of low, moderate, moderate-high, or high emetic risk will be ORAL** ○ **For Moderate, Moderate-High, and High emetic risk, the preferred agents will be: ondansetron 16 mg PO and dexamethasone 8 mg PO** ○ **For Low emetic risk, the preferred agent will be: ondansetron 8 mg PO**

24. Preferred Frequency of Trastuzumab IV Administration in 3 trastuzumab-containing regimens

Regimens affected

- Docetaxel + Carboplatin + Trastuzumab IV (TCH) Q21D
- Docetaxel + Cyclophosphamide IV (TCH) Q21D
- Paclitaxel + Carboplatin + Trastuzumab IV Q21D

Issue

- The original studies supporting the above trastuzumab-containing regimens supported the use of trastuzumab administered at the Q7D schedule
- In 2012, CCC voted to include the Q21D administration of trastuzumab within these regimen templates because this schedule had become more common and logistically practical for administration with concomitant chemotherapy scheduled Q21 days
- These regimen templates were reviewed upon approval of numerous trastuzumab biosimilar agents, and it was felt by the CCC that the Q7D schedule, although supported in the literature, was rarely used and logistically impractical

References

- NCCN Guidelines Breast Cancer v.2.2019 [Accessed 8/2019].

CCC-Approved Regimen Standard

CCC discussed and voted (in ***July 2019***) on the following:
○ **Remove the Q7D trastuzumab IV dosing schedule from the three regimens addressed by this standard (noted above)**

25. Diphenhydramine Removal from Premedications and PRN Hypersensitivity Meds templates within Parenteral Iron regimens

Regimens affected

- All regimen templates containing parenteral iron products

Issue

- Ferumoxytol infusion-related events have been variably reported throughout the literature and in the US Oncology Network. Attempts have been made to identify trends, risk, and contributing factors for the infusion-related reactions seen with the product.
- Fishbane-type reactions are low-grade reactions characterized by flushing, myalgia, arthralgia. Mechanism is unknown, but hypothesized they're caused by labile iron in bloodstream.
- Diphenhydramine has been reported in the literature to worsen Fishbane-type reactions. It may increase somnolence, restless leg, diaphoresis and tachycardia, which can mimic a worsened reaction to the parenteral iron product.

References

- Rampton D, et al. *Haematologica* 2014;99:1671-76.
- Feraheme [Prescribing Information]. Waltham, MA: AMAG Pharmaceuticals; 2018.
- Braaten K, Holcombe RF, Kim SS. *Am J Hematol* 2015;90:E207.
- Auerbach M, Macdougal IC. *Blood Transfus* 2014;12:296-300.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***September 2019***) on the following:
○ **Regimens containing parenteral iron products will NOT contain diphenhydramine within the premedication template(s), nor the *PRN Hypersensitivity Meds* template(s).**

26. Atropine PRN orders in Irinotecan-Containing Regimens

Regimens affected

- All regimen templates containing irinotecan

Issue

- iKnowMed[SM] users reported challenges with the status of atropine being contained within the irinotecan-containing regimen premedications, but not prechecked
- It was reported that PRN atropine orders were routinely missed by providers and due to unclear drug instructions, when the order was selected, it was not clear to clinicians if its intent was a premedication vs. a rescue medication for cholinergic diarrhea
- In January 2020, CCC proposed atropine orders be placed under a new header "PRN MEDICATIONS"
- In addition, CCC requested clarification of the drug instructions within atropine orders
- The irinotecan prescribing information only recommends use of atropine for patients experiencing cholinergic symptoms. It does not recommend use of atropine for prevention.
- UPDATE December 2024: CCC requested further clarification of PRN atropine in FOLFIRNOX regimens to coincide with standard to administer irinotecan prior to oxaliplatin to ensure appropriate atropine use.

References

- Camptosar [Prescribing Information]. New York, NY: Pfizer Injectables; 2020.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***January 2020***, ***February 2020,*** *and* ***December 2024***) on the following:

- **January 2020: Regimens with irinotecan will contain an atropine order under a "PRN Medications" header.**
- **February 2020: The intent of the atropine order will be clarified as a rescue medication order, with drug instructions and dosage to read as follows: "Atropine 0.4 mg IV push once as needed for treatment of acute cholinergic reaction. Dosage not to exceed 1 mg in 24 hours."**
- **December 2024: The intent of the atropine order will be clarified in FOLFIRINOX regimens to read as follows: "Atropine 0.4 mg IV push once as needed for treatment of acute cholinergic reaction due to irinotecan. Dosage not to exceed 1 mg in 24 hours.".**

27. Famotidine Addition to PRN Hypersensitivity Medications Template

Regimens affected

- All regimen templates containing a parenteral drug product, which all contain a PRN Hypersensitivity Medication template

Issue

- All iKnowMed[SM] regimens containing a parenteral drug contain a PRN hypersensitivity template
- As of February 2020, the PRN Hypersensitivity template consisted of epinephrine, diphenhydramine, methylprednisolone and hydrocortisone
- H1/H2 receptor antagonists are frequently recommended by national guidelines for management of symptoms associated with hypersensitivity (urticaria, hives)
- It was noted that H2 receptor antagonists have potential to mitigate cardiovascular symptoms

References

- Rosello S, et al. *Ann Oncol* 2017;28(suppl_4):iv100-iv118.
- Lin RY, et al. *Ann Emerg Med* 2000; 26:462-8.
- Lieberman P, et al. *Ann Allergy Asthma Immunol* 2015;115:341-84.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***February 2020***) on the following:
○ **The PRN Hypersensitivity Meds template will now contain an H_2 receptor antagonist, Famotidine IV, to be in alignment with national guidelines and current US Oncology Nursing Standards recommendations (NURS-3024).** ○ **This order will read as follows: Famotidine 20 mg IV PRN Hypersensitivity Reaction Instructions: Re-initiate treatment only upon physician approval.**

28. Look-Alike/Sound-Alike Naming Convention

Regimens affected

- Identified look-alike / sound-alike ONCOLOGY BIOLOGIC drug products

Issue

- iKnowMed℠ doesn't support tall man lettering to designate differences in drug naming convention
- Look-alike/sound-alike products lists are issued by the FDA as well as the Institute for Safe Medication Practices (ISMP), however after review of these lists and processes for their content, the lists do NOT contain many oncology products thought to have look-alike/sound-alike potential. In addition, drugs that are added to this list are only done so after an error has been reported to these agencies (thus may be subjected to reporting bias)
- Several near miss safety events that had recently occurred within the Network practices at the time of admixture had been reported with drugs that have look-alike/sound-alike potential.
- These events were reviewed and the committee felt including both trade name and the chemical name for certain BIOLOGIC products would potentially help mitigate possible errors on admixture

CCC-Approved Regimen Standard

CCC discussed and voted (in ***February 2020***) on the following:
○ **Drugs with Look-Alike/Sound-Alike risk will be named within iKnowMed℠ by their [Branded name (chemical name)] within regimens**

Examples of Drugs with Look-Alike/Sound-Alike Concerns	
Drug	**Naming Recommendation in iKnowMed**
Ado Trastuzumab Emtansine	Kadcyla (Ado-Trastuzumab Emtansine)
Atezolizumab	Tecentriq (Atezolizumab IV)
Avelumab	Bavencio (Avelumab IV)
Daratumumab	Darzalex (Daratumumab IV)
Durvalumab	Imfinzi (Durvalumab IV)

29. Precheck of IV Fluid Orders in Cisplatin-Containing Regimens

Regimens affected

- All cisplatin-containing regimen templates

Issue

- Prior iKnowMed℠ cisplatin-containing orders did not have a prechecked IV fluid order for PRE-HYDRATION or POST-HYDRATION due to lack of consensus on choice of fluid and volume
- In April 2020, the committee discussed and voted to precheck normal saline (0.9% sodium chloride) in the following volumes in all cisplatin-containing regimens (see table below). The committee was in support due to concerns of missed or omitted orders for patients receiving cisplatin placing the patient at higher risk for nephrotoxicity

CCC-Approved Regimen Standard

CCC discussed and voted (in ***April 2020***) on the following:
○ **To precheck NORMAL SALINE (0.9% Sodium Chloride) in all cisplatin-containing regimens** ○ For cisplatin doses < 40 mg/m^2, 500 mL of 0.9% sodium chloride (NS) as pre-hydration only will be prechecked ○ For cisplatin doses 40-50 mg/m^2, 1000 mL 0.9% sodium chloride (NS) as pre-hydration only will be prechecked ○ For cisplatin doses > 50 mg/m^2, 1000 mL 0.9% sodium chloride (NS) as both pre-hydration and post-hydration will be prechecked

30. Removal of Provider Guidance in [Rx] e-Prescribed Medications

Regimens affected

- All regimen templates containing medications intended to be e-prescribed directly from the regimen in iKnowMed^{SM} Generation 2

Issue

- Due to lack of regimen instruction population to the flowsheet, many times provider guidance was added to oral medications to guide prescribers with dosing
- Provider guidance included thing such as dose ranges of drugs, weight and BSA-related dosing recommendations, and hold parameters may lead to patient and outside provider confusion and medication errors

CCC-Approved Regimen Standard

CCC discussed and voted (in ***May 2020***) on the following:
○ **Remove all provider guidance from medications that may be e-prescribed from within a regimen, including oral and injectable medications** ○ This information, if necessary for safe prescribing, will be relocated to the regimen instructions

31. Olanzapine Pre-Medication Order Updates

Regimens affected

- All high, moderate-high, and moderate emetic risk regimen templates containing olanzapine premedication

Issue

- Historically olanzapine premedication drug instructions included a dose range of 2.5-10 mg and instructions to take before chemotherapy on day 1 and repeat dose on days 2-4
- Inclusion of dose range in the prescription, intended for provider guidance only, led to a safety event where patient misinterpreted and took a dose four times the intended dose
- Inclusion of provider guidance on prescriptions may lead external pharmacy and/or patient confusion and medication errors

CCC-Approved Regimen Standard

CCC discussed and voted (in ***May 2020***) on the following:
○ **In alignment with CCC-Approved Regimen Standard #29 and due to safety concerns, dose range will be removed from olanzapine premedication prescriptions** ○ **Default dose of olanzapine 2.5 mg will be maintained as conservative dosing for a pre-checked order and may be adjusted by providers at their clinical discretion** ○ **Olanzapine drug instructions will be updated to administer at bedtime due to sedative effects, in alignment with what majority of practices are recommending in clinical practice**

32. Precheck of Oral Hypersensitivity Pre-Medications for SQ Daratumumab

Regimens affected

- All SQ daratumumab-containing regimen templates

Issue

- Prior SQ daratumumab-containing regimens had prechecked IV pre-meds diphenhydramine and steroid
- Patients receiving SQ daratumumab with other oral or SQ agents typically do require IV access
- Darzalex Faspro Prescribing Information allows for administration of pre-medications as IV or oral
- September 2021 update: Darzalex Faspro Prescribing Information requires steroid pre-medication be taken 1-3 hours prior to each dose, which may prolong infusion chair time if administered in clinic. Most practices have moved to steroid pre-medication as an outpatient prescription for patient self-administration.
- May 2024 update: literature review demonstrated infusion/injection-related reactions are low grade and rare after the 3rd daratumumab dose, omitting pre-medications after the 3rd dose is safe, reduces chair time, and increases patient satisfaction.

Reference

- Darzalex Faspro™ [Prescribing Information]. Horsham, PA: Janssen Biotech, Inc.; 2020.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***September 2020***, *updated* ***September 2021*** *and* ***May 2024***) on the following:

- **September 2020: Pre-check oral diphenhydramine and corticosteroid pre-medications starting with the first SQ daratumumab dose.** Corticosteroid pre-medications will be added as in-house orders administered in clinic. Keep IV pre-medications available but not pre-checked.
- **September 2021: Change pre-checked oral corticosteroid pre-medication to an outpatient prescription for patient self-administration.** Keep oral and IV in-house pre-medications available but not pre-checked.
- **May 2024: Pre-checked pre-medications will stop after the 3rd dose in daratumumab regimen templates.** Pre-medications for subsequent daratumumab doses (starting with the 4th dose) will be available but not pre-checked.

33. Infection Prophylaxis within Regimens

Regimens affected

- Regimen templates containing drugs with high risk of HSV/VZV or PJP infection

Issue

- Many drugs have infection prophylaxis recommendations in product Prescribing Information or NCCN Guidelines, but inclusion in regimens is inconsistent
- Decisions surrounding infection prophylaxis are complex and clinical judgement is required to address questions such as: which patients need infection prophylaxis and how to determine, what type of prophylaxis, when should prophylaxis be initiated and for how long, which drug/dose to prescribe, etc.
- Inclusion of all infection prophylaxis options within regimens is not feasible due to many reasons, including requirement of provider clinical judgement, potentially increasing confusion with too many options, and concerns for significantly increasing length of regimens
- Due to the above issues, regimens will not include all possible infection prophylaxis options

Reference

- NCCN Guidelines Prevention and Treatment of Cancer-Related Infections v.2.2020 [Accessed 1/2021].

CCC-Approved Regimen Standard

CCC discussed and voted (in ***January 2021***) on the following:
○ **Infection prophylaxis for HSV/VZV and PJP will be integrated into regimens containing drugs with high infection risk as recommended by product Prescribing Information or NCCN Cancer-Related Infection Guidelines** ○ **Preferred drug and dosing for HSV/VZV prophylaxis is acyclovir 400 mg PO BID** ○ **Preferred drug and dosing for PJP prophylaxis is sulfamethoxazole/trimethoprim 800 mg/160 mg (double strength) PO 3 times a week** ○ Exceptions to the above may occur if product Prescribing Information recommends otherwise

34. Ferumoxytol (Feraheme®) Infusion Length

Regimens affected

- Ferumoxytol (Ferahame) D1,8 (Intravenous Iron)

Issue

- Ferumoxytol regimen had instructions to infuse "over at least 15 minutes" based on Feraheme PI
- Iron reaction and management review articles recommend prolonging the infusion length in patients who may be at high risk for reactions or with a history of reaction to iron products (see IV Iron Reaction Management Guide).
- Multiple Network practices have reported issues with hypersensitivity or infusion-related reactions with ferumoxytol and have adjusted their standard infusion length to 30 minutes or longer

CCC-Approved Regimen Standard

CCC discussed and voted (in ***January 2021***) on the following:
○ **Due to risk for infusion reactions and concern for patient safety, the Ferumoxytol (Feraheme) infusion length will be adjusted from "over at least 15 minutes" to "over at least 30 minutes"**

35. Cisplatin Infusion Length

Regimens affected

- All cisplatin-containing regimen templates

Issue

- Cisplatin orders historically had instructions to "administer over at least 1 hour but not faster than 1 mg/min"
- The 1 mg/min max often led to long infusions, particularly in obese patients, which was likely unnecessary
- Guidance or literature on cisplatin infusion length are scarce - cisplatin Prescribing Information recommends infusion over 6-8 hours, but this is rarely followed in clinical practice
- A retrospective observational study in lung cancer patients demonstrated no significant difference in nephrotoxicity between a cisplatin 1 hour infusion vs. 3 hour infusion (see reference below)
- NCCN Chemotherapy Order Templates recommend cisplatin infusion rates of 1 or 2 hours, which is also reflective of most healthcare institution standards and clinical trials

References

- Mense ES, Smit AAJ, Crul M, Franssen EJF. *J Clin Pharm Ther* 2019;44:249-57.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***January 2021***) on the following:
○ **Change cisplatin infusion length to a range of 1-2 hours**

36. Precheck of Granisetron IV in Low Emetic Risk regimens

Regimens affected

- All regimen templates containing IV low emetic risk drugs

Issue

- NCCN and ASCO Guidelines recommend premedication with a single antiemetic agent prior to low emetic risk anticancer therapies
- Historically, low emetic risk drugs in the iKnowMed Regimen Library have antiemetics available but are not prechecked, requiring that providers manually select an agent if needed
- CCC members note that often selection of an antiemetic is missed and some practices have implemented collaborative protocols to allow pharmacists to order an agent if missed, but this is not ideal and not feasible everywhere

References

- NCCN Guidelines Antiemesis v.1.2021 [Accessed 6/2021].

CCC-Approved Regimen Standard

CCC discussed and voted (in ***March 2021***) on the following:
○ **Pre-check granisetron 1000 mcg IV as a premedication in all regimens containing intravenous low emetic risk drugs**

37. Myeloid Growth Factor with Dose-Dense AC followed by Dose-Dense Paclitaxel regimen

Regimens affected

- Doxorubicin + Cyclophosphamide (AC) Q14D fb Paclitaxel Q14D

Issue

- Historically this regimen had growth factor pre-checked during the AC portion only, not paclitaxel
- During the clinical trial, growth factor was administered during both AC and paclitaxel portions
- NCCN Guidelines list this regimen as high risk for febrile neutropenia but notes that growth factor support may not be needed during the paclitaxel portion
- A phase II trial evaluated the need for pegfilgrastim during the paclitaxel portion of this regimen and found that 90% of patients were able to complete paclitaxel on-schedule with only 6.4% requiring 1+ doses of pegfilgrastim

References

- NCCN Guidelines Hematopoietic Growth Factors v4.2021 [Accessed 8/2021].
- Citron MC, et al. *J Clin Oncol* 2003;21:1431-9.
- Vaz-Luis I, et al. *J Clin Oncol* 2020;38:2390-7.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***July 2021***) on the following:
○ **Do not add or pre-check myeloid growth factors during the paclitaxel portion of the dose-dense AC followed by dose-dense paclitaxel regimen**

38. Antiemetics for Selinexor regimens

Regimens affected

- All regimen templates containing selinexor

Issue

- Historically selinexor regimens have included a standard antiemetic template, which does not include any pre-checked or scheduled antiemetics
- Rates of all-grade nausea in selinexor clinical trials ranged from 50-72% and all-grade vomiting from 21-41%, despite ondansetron primary antiemetic prophylaxis
- Xpovio Prescribing Information and Dose Guides recommend consideration of additional antiemetics, such as olanzapine or NK1 antagonists
- NK1 antagonists may present potential issues, including reimbursement concerns, frequency of dosing, and drug interaction with dexamethasone

References

- Xpovio Prescribing Information [Accessed 8/2021].
- Xpovio: A Dosing and Dosage Modification Guide [Accessed 8/2021].
- NCCN Guidelines Antiemesis v.1.2021 [Accessed 8/2021].

CCC-Approved Regimen Standard

CCC discussed and voted (in ***July 2021***) on the following:
○ **Add and pre-check the following antiemetics in all selinexor regimens:** **Ondansetron 8 mg orally 30 minutes prior to each selinexor dose and continued every 8 hours as needed for nausea or vomiting** **Olanzapine 2.5 mg orally every day at bedtime for nausea and vomiting** ○ **Do not add or pre-check NK1 antagonists in selinexor regimens**

39. Pertuzumab IV Monitoring

Regimens affected

- All regimen templates containing IV pertuzumab

Issue

- Historically regimens containing IV pertuzumab include monitoring periods based on the Perjeta Prescribing Information recommendations – 60 minutes following the first infusion and 30 minutes following subsequent infusions
- Infusion reactions beyond the first pertuzumab dose are infrequent
- A single-center retrospective study demonstrated that elimination of observation periods following pertuzumab administration did not lead to an increase in infusion reactions or rescue medications

References

- Perjeta Prescribing Information [Accessed 8/2021].
- Wood EM, et al. *J Oncol Pharm Pract* 2018;24(suppl_2): abstract CT13.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***July 2021***) on the following:
○ **Maintain 60-minute observation period following pertuzumab loading dose in regimen drug instructions: "Observe patients closely for 60 minutes after the first infusion."** ○ **Remove 30-minute observation period following pertuzumab maintenance doses in regimen drug instructions**

40. Ipilimumab 3 mg/kg Infusion Length

Regimens affected

- All regimen templates containing ipilimumab 3 mg/kg

Issue

- Historically the ipilimumab Prescribing Information recommends doses of 1 mg/kg over 30 minutes and higher doses of 3 mg/kg and 10 mg/kg over 90 minutes.
- While the ipilimumab PI recommends the 3 mg/kg dose over 90 minutes for melanoma, the recent approval in HCC allows the same dose over 30 minutes.
- A single-center study evaluated rate of infusion-related reactions with the 3 mg/kg dose over 90 minutes versus 30 minutes and found no significant difference (2.2% vs. 5.8).
- Data provided by Bristol-Myers Squibb showed similar rates of hypersensitivity and infusion-related reactions with the two infusion schedules in melanoma study CA209-038/CheckMate 038.

References

- Yervoy Prescribing Information [Accessed 11/2021].
- Momtaz P, et al. *J Clin Oncol* 2015;33:3454-8.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***November 2021***) on the following:
○ **The infusion rate for ipilimumab 3 mg/kg will be changed to 30 minutes (rather than 90 minutes) in all regimen templates regardless of disease or indication**

41. G-CSF inclusion in FOLFOXIRI and FOLFIRINOX regimens

Regimens affected

- All FOLFOXIRI and FOLFIRINOX (full-dose) regimen templates

Issue

- Historically NCCN Guidelines classified FOLFIRINOX and FOLFOXIRI as intermediate or high FN risk, but rates of FN in primary references vary.
- Given NCCN's inconsistency in classification and reasonable use of G-CSF in clinical practice, CCC felt it reasonable to include a G-CSF template but un-checked due to provider discretion.
- NCCN Guidelines recommend ≥12 days between pegfilgrastim and next chemotherapy cycle. Due to the 14-day cycle and CIV fluorouracil on days 1-3, pegfilgrastim administration must be on the same day as fluorouracil pump disconnect (day 3) to allow for 12 days in between.
- Due to fluorouracil's short half-life, small studies demonstrating low rates of FN, and low risk of reimbursement issues since fluorouracil is billed on day 1 at pump hookup, CCC felt it reasonable to include pegfilgrastim in FOLFOXIRI/FOLFIRINOX regimens as an un-checked order on day 3.

References

- Eckstrom J, et al. *Support Care Cancer* 2019;27:873-8.
- Draper AS, et al. *J Oncol Pharm Pract* 2021;27:1159-64.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***January 2022***) on the following:
○ **FOLFOXIRI & FOLFIRINOX (full-dose) regimens will include un-checked G-CSF template:** **- Pegfilgrastim (and biosimilars) on day 3 following fluorouracil pump disconnect** **- Filgrastim (and biosimilars) daily on days 4-10** - Pegfilgrastim on-body injector will be excluded because administration on day 4 provides less than 12 days between pegfilgrastim and the next chemotherapy cycle

42. Rasburicase Fixed Dosing in TLS Supportive Care Regimen

Regimens affected

- Tumor Lysis Syndrome (TLS) and Rasburicase Supportive Care

Issue

- Although the FDA-approved rasburicase dosing is 0.2 mg/kg daily for up to 5 days, several studies demonstrate that lower fixed dosing may be effective and also more cost-effective
- In March 2019, the CCC Supportive Care Task Force discussed and chose to standardize rasburicase dosing within the TLS Supportive Care regimen to 4.5 mg for prevention of TLS only
- Based on thorough additional review of the literature, a lower rasburicase fixed dose of 3 mg has been shown effective in prevention of hyperuricemia in patients with intermediate to high risk TLS
- The literature also supports fixed dosing of rasburicase for treatment of hyperuricemia in patients with TLS based on uric acid level and TLS risk assessment

References

- Boutin A, et al. *J Oncol Pharm Pract* 2019;25:577-83.
- Hossain S, et al. *J Oncol Pharm Pract* 2021 Jun 11 [online ahead of print].
- Hough R, et al. *Hematology Am Soc Hematol Educ Program* 2017;2017:251-8.
- McBride A, et al. *Pharmacotherapy* 2013;33:295-303.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***January 2022***) on the following:
○ **Dosing in the Tumor Lysis Syndrome (TLS) and Rasburicase Supportive Care regimen will be:** **- Rasburicase 3 mg for TLS prophylaxis with intermediate to high risk assessment** **- Rasburicase 3 mg for TLS treatment if serum uric acid level 8-12 mg/dL and intermediate to high risk assessment** **- Rasburicase 6 mg for TLS treatment if serum uric acid level > 12 mg/dL and high risk assessment**

43. Iron Dextran 1 gram over 1-2 hours

Regimens affected

- Iron Dextran (Infed) (Intravenous Iron)

Issue

- Iron dextran Prescribing Information and tertiary drug references recommend administration by total dose infusion over 4-6 hours or intermittent injection over multiple days
- A retrospective review published in 2011 supported flat dosing of iron dextran at 1 gram and administered rapidly over 1 hour
- The committee felt it reasonable to include 1 gram as a dosing option in the regimen template but preferred to include a rate range of 1-2 hours for practices or providers who may prefer to be more conservative. They did not feel this option should be pre-checked.

References

- Auerbach M, et al. *Am J Hematol* 2011;86(1):860-2.
- Clinical Pharmacology

CCC-Approved Regimen Standard

CCC discussed and voted (in ***November 2022***) on the following:
○ **Add Iron Dextran 1 gram over 1-2 hours as an optional, un-checked order in the Iron Dextran (Infed) regimen.** Keep existing options (total dose infusion, intermittent injection) available. Dose and administration are at the clinical discretion of the prescribing provider.

44. Ifosfamide Bolus Infusion Length

Regimens affected

- All ifosfamide bolus-containing regimens

Issue

- Historically ifosfamide bolus infusion lengths were inconsistent, ranging from 30 min to 3 hours
- Ifosfamide PI recommends at least 30 minutes and NCCN templates vary from 30 min to 3 hours
- Unfortunately, there is no literature that shows association between duration of bolus infusion and toxicities, however, there are some studies demonstrating higher rate of neurotoxicity and myelosuppression with bolus infusion versus continuous infusion ifosfamide
- USON practice providers reported anecdotal reports of neurotoxicity with rapid ifosfamide infusions, such as 30-60 minutes, and therefore prefer a longer infusion length

References

- Ifosfamide Prescribing Information [Accessed 1/2023].
- Cerny T, et al. Lancet 1990;335:175.
- Anderson H, et al. J Cancer Res Clin Oncol 1991;117 suppl 4:S139-40.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***January 2023***) on the following:
○ **Standardize all ifosfamide bolus infusions over 3 hours, regardless of dose.**

45. Dexamethasone Pre-Medication for Docetaxel

Regimens affected

- All regimen templates containing docetaxel

Issue

- Docetaxel PI recommends dexamethasone be administered 8 mg twice daily for 3 days starting the day prior to docetaxel to reduce risk of fluid retention and hypersensitivity reactions
- For weekly docetaxel dosing which is typically lower, 3 days of dexamethasone may lead to significant adverse effects for patients. NCCN chemotherapy templates as well as other clinical trials support reduced dexamethasone dosing in this situation.
- Committee also discussed and support addition of a pre-checked PRN Dexamethasone IV order for patients who didn't take oral dexamethasone at home

References

- Masood W, et al. *J Oncol Pharm Pract.* 2022;28(1):96-100.
- Rogers ES, et al. *Ann Oncol*. 2014;25(suppl_4): abstr 1542P.
- Chouhan JD, Herrington JD. J Oncol Pharm Pract. 2011;17(3):155-9.
- Montoya ME, et al. J Clin Oncol. 2007;25(18): abstr 19635.
- Gervais R, et al. *Ann Oncol*. 2005;16:90-6.
- Gridelli C, et al. *Br J Cancer.* 2004;91:1996-2004.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***May 2023***) on the following:
○ **Regimens containing <u>Q14D – Q28D</u> docetaxel will include a pre-checked dexamethasone oral prescription of 8 mg BID the day before, day of, and day after docetaxel** ○ **Regimens containing <u>weekly</u> docetaxel will include a pre-checked dexamethasone oral prescription of 8 mg the evening prior to, morning of, and evening after docetaxel** ○ **A pre-checked order for Dexamethasone 10 mg IV PRN for patients who missed any dose of oral dexamethasone at home will be included in all docetaxel regimens**

46. Precheck of PO Ondansetron in Moderate/High Emetic Risk Oral Regimens

Regimens affected

- All regimen templates containing a moderate to high emetic risk oral agent

Issue

- Historically all regimens containing a moderate to high emetic risk oral agent per NCCN Guidelines included an oral antiemetic template which included all optional only orders with insufficient quantities to last 30 days and no refills
- NCCN Guidelines for Antiemesis recommends administering antiemetics up-front for moderate to high emetic risk oral agents based on:
  1) Agents for which prophylaxis is required on days of oral anticancer agent administration
  2) Agents for which PRN dosing is initially appropriate on days of oral anticancer agent administration
- CCC members noted that often sending an antiemetic prescription is missed, which may require intervention of a pharmacist and/or nurse

References

- NCCN Guidelines Antiemesis v.2.2023 [Accessed 7/2023].

CCC-Approved Regimen Standard

CCC discussed and voted (in ***July 2023***) on the following:

- **Pre-check the following antiemetic in all regimens containing a moderate to high emetic risk oral agent that NCCN designates prophylaxis is required on days of oral anticancer agent administration:**
  Ondansetron 8 mg PO 30-60 min prior to each oral anticancer agent dose and continued every 8 hours as needed for nausea. Dispense: 30d supply, Refills: remaining # of cycles
- **Pre-check the following antiemetic in all regimens containing a moderate to high emetic risk oral agent for which NCCN recommends PRN dosing on days of oral anticancer agent administration:**
  Ondansetron 8 mg PO every 8 hours PRN nausea. Dispense: 30d supply, Refills: remaining # of cycles
- **Granisetron will also be included as an optional, un-checked order with 2 mg daily dosing for single-dose or daily dosed agents, or 1 mg for twice daily dosed agents**
- **Exception to the above: For oral anticancer agents which carry risk for QT prolongation, an antiemetic will NOT be pre-checked due to concern for additive toxicity; decision to select and prescribe an agent will be at the discretion of the ordering prescriber**

47. Zoledronic Acid in Endocrine Therapy Regimens for Adjuvant Breast Cancer

Regimens affected

- All regimen templates including zoledronic acid and endocrine therapy for adjuvant breast cancer

Issue

- Historically zoledronic acid was populated beginning on Cycle 1 Day 1 of all adjuvant endocrine therapy breast cancer regimens and continued every 6 months for 3 years
- In clinical practice, it's rare that zoledronic acid is administered on Cycle 1 Day 1 of endocrine therapy due to delays with infusion center scheduling, insurance clearance, and dental clearance
- Some practices and providers prefer to order zoledronic acid separately from the breast cancer regimens due to this reason, however, some do prefer to use the optional zoledronic order within the regimens. Zoledronic acid is still available as a separate supportive care regimen if preferred.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***July 2023***) on the following:
○ **In all endocrine therapy regimens for adjuvant breast cancer where zoledronic acid is included as an optional order, populate zoledronic acid starting on Cycle 2 Day 1 and continue every 6 months for approximately 3 years.**

48. Antihistamine Prophylaxis for Alpelisib-containing Regimens

Regimens affected

- All regimen templates containing alpelisib

Issue

- Rash is a common side effect of alpelisib, with any grade rash occurring in 52% of patients and grade 3-4 rash occurring in 20% of patients
- While the PI doesn't explicitly recommend antihistamine prophylaxis, Novartis healthcare provider materials recommend to consider prophylaxis with a non-sedating antihistamine for a minimum of 8 weeks
- In the SOLAR-1 trial evaluating alpelisib + fulvestrant vs. placebo + fulvestrant in patients with PIK3CA-mutated, HR+, HER2- advanced breast cancer, patients who received antihistamine prophylaxis had a lower incidence of rash (38%) than those who did not receive antihistamine prophylaxis (58%)
- The committee felt that inclusion of an optional antihistamine order in alpelisib regimens would be helpful to serve as a reminder for prescribers to consider, but preferred the order be un-checked since antihistamines are available over-the-counter and do not require a prescription

References

- Piqray [Prescribing Information]. East Hanover, NJ: Novartis; 2023.
- Rugo HS, et al. *Ann Oncol* 2020;31(8):1001-10.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***September 2023***) on the following:
○ **Add cetirizine 10 mg PO daily as an optional, un-checked order for rash prophylaxis to all alpelisib-containing regimens**

49. Antibiotic and Topical Steroid Prophylaxis for IV EGFR-containing Regimens

Regimens affected

- All regimen templates containing panitumumab or cetuximab

Issue

- Acneiform rash is a common side effect of panitumumab and cetuximab, with any grade rash occurring in 70-82% of patients and grade 3-4 rash occurring in 10-15% of patients
- MASCC Guidelines recommend minocycline or doxycycline and topical hydrocortisone for acneiform rash prophylaxis
- A meta-analysis demonstrated significant reduction in occurrence of severe acneiform eruptions (grade 2+) and smaller reduction in occurrence of any acneiform eruption with the use of antibiotic prophylaxis
- The committee felt that inclusion of an optional antihistamine order in alpelisib regimens may improve ease of prescribing, but preferred that the order be un-checked since not all providers may choose to prescribe antibiotic and hydrocortisone cream up-front

References

- Vectibix [Prescribing Information]. Thousand Oaks, CA: Amgen; 2021.
- Erbitux [Prescribing Information]. Indianapolis, IN: Eli Lilly and Company; 2021.
- Lacouture ME, et al. *Support Care Cancer* 2011;19(8):1079-95.
- Gorji M, et al. *Asia Pac J Clin Oncol* 2022;18(6):526-39.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***September 2023***) on the following:
○ **Add doxycycline 100 mg PO daily for 6 weeks and hydrocortisone topical cream 1% BID as optional, un-checked orders for acneiform rash prophylaxis to all panitumumab and cetuximab-containing regimens**

50. Addition of Oral Prescription Hypersensitivity Pre-Medications for SQ Bispecific Antibodies

Regimens affected

- All SQ bispecific antibody (BsAb) maintenance or maintenance component of regimen templates

Issue

- Most SQ bispecifics do not have hypersensitivity pre-medications prechecked for maintenance cycles, however, pre-medications may be necessary if CRS is experienced with a prior dose
- Patients receiving SQ bispecific antibodies typically do not require IV access
- Prescribing Information for SQ BsAb allows IV or oral administration of pre-medications

Reference

- Elrexfio [Prescribing Information]. New York, NY: Pfizer Labs; 2023.
- Epkinly [Prescribing Information]. Plainsboro, NJ: Genmab, Inc.; 2023.
- Talvey [Prescribing Information]. Horsham, PA: Janssen Biotech, Inc.; 2023.
- Tecvayli [Prescribing Information]. Horsham, PA: Janssen Biotech, Inc.; 2024.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***May 2024***) on the following:
○ **Add but do not pre-check prescription options for oral acetaminophen, diphenhydramine, and corticosteroid pre-medications starting with the first SQ bispecific antibody maintenance dose.** Keep IV pre-medications available but not pre-checked.

51. Topical Diclofenac for Capecitabine Hand-Foot Syndrome (HFS) Prevention

Regimens affected

- All regimen templates containing capecitabine

Issue

- HFS is a common adverse effect of treatment with capecitabine and can lead to dose interruptions, reductions, and discontinuation of therapy
- Topical diclofenac has shown to decrease the incidence and severity of HFS in breast and GI cancer patients and improved patient quality of life
- UPDATE December 2024: Instructions for topical diclofenac state "1 application" twice daily vs. 1 g twice daily as stated in D-TORCH. Changing to 1 g twice daily would ensure patients receive the full dose.

References

- Santhosh A, et al. *J Clin Oncol* 2024;42:1821-29.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***May 2024*** *and* ***December 2024***) on the following:
○ **May 2024: Add and pre-check diclofenac gel 1% twice daily in all regimens containing capecitabine** ○ **December 2024: diclofenac gel 1% instructions should state 1 g twice daily**

52. Omission of Pre-Medications after the 3rd Daratumumab Dose

Regimens affected

- All daratumumab-containing regimen templates

Issue

- Infusion/Injection-related reactions are low grade and rare after the 3rd daratumumab dose
- Literature review demonstrated omission of pre-medications after the 3rd daratumumab dose is safe, reduces chair time, and increases patient satisfaction
- Pre-medication options will still be available but not prechecked after the 3rd daratumumab dose
- The committee felt that making pre-medications PRN after the 3rd dose would increase confusion and slow down clinic operations

Reference

- Preedit, et al. *J Hematol Oncol Pharm* 2021;11:10-14.
- Yudchyts, et al. *Blood* 2020;136:22-23.
- Padmaraju K, et al. *JCO* 2023;41: abstr 6574.
- Vazirnia D, et al. JCO Oncol Pract. Published online February 26, 2024:OP2300470.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***May 2024***) on the following:
○ **Pre-checked acetaminophen and diphenhydramine pre-medications will stop after the 3rd daratumumab dose in daratumumab combination regimens. Pre-checked acetaminophen, diphenhydramine, and dexamethasone pre-medications will stop after the 3rd daratumumab dose in daratumumab monotherapy regimens.** Keep pre-medications available but not pre-checked starting with the 4th daratumumab dose.

53. Consolidation of Pre- & Post-Daratumumab Dexamethasone in Combination Regimens

Regimens affected

- All daratumumab-containing combination regimen templates

Issue

- Multiple dexamethasone prescriptions within daratumumab combination regimens increases operational difficulty and confusion for providers and patients which may impact adherence
- Literature review demonstrated post-daratumumab dexamethasone may be modified or omitted based on steroids within the regimen
- The committee felt that combining pre-/post-daratumumab doses to a single dose given prior to daratumumab for cycle 1 will increase ordering efficiency and is commonly done in clinical practice

Reference

- Arnall JR, et al. *Ann Pharmacother* 2022;56:927-940.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***May 2024***) on the following:
○ **Pre-/Post-Daratumumab dexamethasone doses will be combined as a single dose given before daratumumab for the first 3 daratumumab doses in daratumumab combination regimens where dexamethasone is included as part of the regimen.** Exceptions allowed based on other agents in the regimen or complexity of the regimen to prioritize patient safety.

54. Montelukast Supportive Medication for Daratumumab

Regimens affected

- All daratumumab-containing combination regimen templates

Issue

- Montelukast supportive medication is not currently pre-checked within daratumumab regimens
- The committee felt that pre-checking montelukast for cycle 1 or first 3 daratumumab doses only would improve workflow as most practice providers are ordering the montelukast

Reference

- Moore DC, et al. *Clin Lymphoma Myeloma Leuk* 2020;20:e777-81.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***May 2024***) on the following:
○ **Pre-check the montelukast prescription within daratumumab regimens for Cycle 1 or the first 3 daratumumab doses ONLY.** A montelukast prescription for Cycle 2 or the 4th daratumumab dose will be available but not pre-checked.

55. Amivantamab Administration

Regimens affected

- All amivantamab-containing regimen templates

Issue

- Amivantamab PI states to administer via peripheral line for the first 2 weeks of therapy due to high incidence of infusion-related reactions. Historically this was specified in the regimen instructions and applicable drug row instructions.
- When the manufacturer was prompted, they noted there are no data evaluating the safety and efficacy of amivantamab via peripheral line vs. central line
- Upon discussion with the committee, requirement for a peripheral IV seems unnecessary, particularly with the justification of infusion-related reactions, which clinically does not seem valid. Several practices have already moved away from this requirement and allowing administration of any amivantamab dose by peripheral or central line and have not noted any complications.
- The committee also felt that while the PI allows NS or D5W, standardizing to NS and including in the admixture fluid field would save time and effort for infusion pharmacy staff

Reference

- Rybrevant Prescribing Information [Accessed 2024].

CCC-Approved Regimen Standard

CCC discussed and voted (in ***July 2024***) on the following:
○ **Remove verbiage related to IV line from amivantamab regimen templates** ○ **Standardize admixture fluid to NS**

56. Ferric Derisomaltose (Monoferric®) Infusion Length and Volume

Regimens affected

- Ferric Derisomaltose (Monoferric) (Intravenous Iron)

Issue

- Monoferric regimen historically had instructions to infuse “over at least 20 minutes” and dilute in 100-500 mL based on the Monoferric PI
- Multiple Network practices have reported issues with infusion-related reactions with Monoferric and have adjusted their standard infusion length to 30 minutes or longer and volume 100 mL
- Iron reaction and management review articles recommend prolonging the infusion length in patients who may be at high risk for reactions or with a history of reaction to iron products (see IV Iron Reaction Management Guide)
- Manufacturer guidance suggests higher concentrations of iron may reduce amount of labile iron, which may decrease infusion-related reactions, such as dilution in smallest volume of 100 mL

CCC-Approved Regimen Standard

CCC discussed and voted (in ***September 2024***) on the following:
○ **Due to risk for infusion reactions and concern for patient safety, the ferric derisomaltose (Monoferric) infusion length will be adjusted from “over at least 20 minutes” to “30 minutes” and admixture volume standardized to 100 mL**

57. Infection Prophylaxis within Lymphocyte-Engaging Bispecific Antibody Regimens

Regimens affected

- Lymphocyte-engaging bispecific antibody regimen templates with risk of HSV/VZV or PJP infection

Issue

- Antiviral and PJP prophylaxis is recommended to be considered in product prescribing information and/or NCCN Guidelines for various lymphocyte-engaging bispecific antibodies.
- Regimen templates for these bispecific antibodies include antiviral and PJP prophylaxis whenever recommended by the product prescribing information or NCCN guidelines.
- It is standard practice to use antiviral and PJP prophylaxis during treatment with these agents and a pre-check for these antimicrobial agents would increase clinic efficiency.

Reference

- NCCN Guidelines Prevention and Treatment of Cancer-Related Infections v.3.2024 [Accessed 12/2024].

CCC-Approved Regimen Standard

CCC discussed and voted (in ***December 2024***) on the following:
○ **Infection prophylaxis for HSV/VZV and PJP will be integrated and pre-checked within lymphocyte-engaging bispecific antibody regimens with risk of HSV/VZV infection as recommended by product Prescribing Information or NCCN Cancer-Related Infection Guidelines** ○ **Preferred drug and dosing will follow exiting CCC-Approved Regimen standards** ○ Exceptions to the above may occur if product Prescribing Information recommends otherwise

58. Dexamethasone Pre-Medication for Amivantamab

Regimens affected

- All regimen templates containing amivantamab

Issue

- Infusion-related reactions (IRRs) occurred in 65% of patients with single-agent amivantamab.
- Currently, recommended premedications for amivantamab include an antihistamine, antipyretic, and IV corticosteroid.
- SKIPPirr evaluated different prophylactic strategies to reduce the incidence and/or severity of IRRs - including addition of oral dexamethasone for 2 days prior to amivantamab infusion. Rates of IRRs on Week 1 Day 1 were 25% in patients who received the oral dexamethasone vs. 65% in those who did not.
- Adding a prescription for oral dexamethasone to be taken for 2 days prior to amivantamab infusion may decrease the risk of IRRs.

References

- Lopes G, et al. International Association for the Study of Lung Cancer (IASLC) World Conference on Lung Cancer (WCLC); September 7-10, 2024; San Diego, CA.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***December 2024***) on the following:
○ **All regimens containing amivantamab will include a pre-checked dexamethasone oral prescription of 8 mg by mouth twice daily starting 2 days prior to the amivantamab.** ○ **The 20 mg IV dexamethasone dose given in clinic prior to amivantamab infusion will remain the same.**

59. Oxaliplatin and Irinotecan Order of Administration in FOLFIRINOX regimens

Regimens affected

- All FOLFIRINOX regimen templates

Issue

- There have been several cases of patients developing dysarthria while receiving FOLFIRINOX.
- The incidence of ADRs like dysarthria may depend on the order of administration of oxaliplatin and irinotecan. Oxaliplatin may exacerbate the cholinergic effects of irinotecan, increasing the risk of dysarthria.
- Limited published data exists, however, there are several case reports of this effect with reported symptoms resolving with administering irinotecan prior to oxaliplatin.

References

- Matsuoka A, et al. Oncol Lett 2015;10(4):2662-2664.
- Elbeddini A, et al. Am J Case Rep 2020;21:e924058.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***December 2024***) on the following:
○ **FOLFIRINOX regimens will be updated to have irinotecan listed (and therefore administered) prior to oxaliplatin and will include rationale and references within regimen and drug instructions.**

60. DPD Testing

Regimens affected

- All fluorouracil and capecitabine-containing regimen templates

Issue

- In January 2025, the FDA issued a safety announcement highlighting the importance of DPD deficiency discussions with patients prior to capecitabine or 5-FU treatment and updated product labeling.
- NCCN also adopted this recommendation in applicable guidelines in April 2025.
- Currently, regimen templates have no verbiage to address this safety recommendation.

References

- U.S. Food & Drug Administration. Safety announcement: FDA highlights importance of DPD deficiency discussions with patients prior to capecitabine or 5FU treatment. January 24, 2025. https://www.fda.gov/drugs/resources-information-approved-drugs/safety-announcement-fda-highlights-importance-dpd-deficiency-discussions-patients-prior-capecitabine
- NCCN Guidelines Colon Cancer v.2.2025 [Accessed 2025].
- NCCN Guidelines Rectal Cancer v.2.2025 [Accessed 2025].

CCC-Approved Regimen Standard

CCC discussed and voted (in ***March 2025***) on the following:
○ **Fluorouracil and capecitabine-containing regimen templates will be updated to include the following verbiage: Consider testing for genetic variants of DPYD prior to initiating treatment. Inform patients of the potential for serious and life-threatening adverse reactions due to DPD deficiency and discuss with your patient whether they should be tested for genetic variants of DPYD.**

61. Oral Ondansetron in Azacitidine Regimens

Regimens affected

- All azacitidine injection regimen templates

Issue

- Currently, ondansetron is prechecked as an in-clinic medication prior to each dose of azacitidine.
- Changing from clinic-administered ondansetron to self-administration via prescription could increase clinic efficiency.

CCC-Approved Regimen Standard

CCC discussed and voted (in ***March 2025***) on the following:
○ **Azacitidine regimens will be updated to change the prechecked clinic-administered ondansetron order from 8 mg PO once to a prechecked ondansetron prescription for 8 mg PO Q8H PRN with instructions to take 30 minutes prior to each azacitidine dose and as needed throughout treatment.** ○ **Azacitidine regimens will be updated to include a prechecked clinic-administered ondansetron order with the instruction: 8 mg PO once prn. Administer as needed only if patient missed dose of ondansetron at home.**

62. Leucovorin Bolus Discontinuation Simultaneous with 5-FU Order

Regimens affected

- FOLFOX and FOLFIRI regimen templates
- Not applicable for FLOT and FOLFIRINOX

Issue

- NCCN guidelines suggest that lower doses may be favorable in terms of therapeutic effectiveness, toxicity, and cost compared to regimens with higher doses of leucovorin. They also concluded that if the lowest dose is unavailable, it is reasonable to consider treatment without leucovorin.
- In situations where the 5-FU bolus is dropped in FOLFOX and FOLFIRI regimens, it is reasonable to drop the leucovorin bolus as well.

References

- QUASAR Collaborative Group. Lancet. 2000;355(9215):1588-1596.
- Jäger E, et al. J Clin Oncol. 1996;14(8):2274-9.
- O'Connell MJ. 1989;63(6 Suppl):1026-30.
- NCCN Guidelines Colon Cancer v.2.2025 [Accessed 2025].
- NCCN Guidelines Rectal Cancer v.2.2025 [Accessed 2025].

CCC-Approved Regimen Standard

CCC discussed and voted (in ***March 2025***) on the following:
○ **FOLFOX and FOLFIRI plans will be updated to include instructions on the leucovorin order to drop the leucovorin bolus if the 5-FU bolus has been discontinued.**

Regimen Library Antiemetic Templates

Revised May 2024

1. [1-3 Day Regimens] High Emetic Risk Template (>90% Emetic Risk)

- **This template is intended for single day or 2-3 day multi-day regimens**
- **Please see the Regimen Library Premedications section for drug-specific recommendations**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**Palonosetron IV**	**0.25 mg**	**Intravenously push once**	
	Granisetron IV	**1000 mcg**	**Intravenously once**	
	Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day**	
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed Dispense: 6 tablet; Refills 0**	
	[Rx] Granisetron Transdermal Patch [3.1 mg/24 hour patch]	**1 patch**	**transdermally once. Instructions: 24 hours before chemotherapy. Dosing not to exceed 1 patch per 7 days. Dispense: 1 patch; Refills 0**	
	Ondansetron IV	**16 mg**	**Intravenously once**	
OPTIONAL PRECHECK	**Dexamethasone IV**	**10 mg**	**Intravenously Piggyback once. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL.**	
	[Rx] Dexamethasone Oral [4 mg tablet]	**8 mg**	**orally every day. Instructions: Take 8 mg PO on days 2-4. Dispense: 10 Tablet; Refills: 0.**	
OPTIONAL PRECHECK	**Fosaprepitant IV**	**150 mg**	**Intravenously Piggyback once.**	
	Aprepitant IV	**130 mg**	**Intravenously Piggyback once. Admin over: 30 minutes. Volume 100 mL. Instructions: Administer 30 minutes prior to chemotherapy. Dilute in 100 mL NS or D5W. Use only Non-DEHP tubing, non-PVC infusion bags.**	
	Aprepitant IV	**130 mg**	**Intravenously Push once. Admin over: 2 minutes. Instructions: Administer 30 minutes prior to chemotherapy. Do NOT dilute. Flush with NS before and after administration.**	
	Fosnetupitant-Palonosetron IV 235 mg-0.25 mg	**1 vial**	**Intravenously Piggyback once. Admin over: 30 minutes. Instructions: Administer approximately 30 minutes prior to the start of chemotherapy. Further dilute with D5W or NS to a total volume of 50 mL. Flush line after infusion.**	
	[Rx] Aprepitant Oral [125 mg (1) – 80 mg (2) capsule dose pack]	**1 capsule**	**orally as directed. Instructions: First day, dose 125 mg PO one hour prior to chemotherapy. On day 2 and 3, dose is 80 mg daily. Dispense: 1 Kit; Refills: 0**	
	[Rx] Rolapitant Oral [90 mg tablet]	**180 mg**	**orally once. Instructions: Take one to two hours prior to chemotherapy. Dispense: 2 Tablets; Refills: 0**	
	[Rx] Netupitant-Palonosetron Oral 300 mg-0.5 mg [300 mg-0.5 mg capsule]	**1 capsule**	**orally once. Instructions: Take one hour prior to chemotherapy. Dispense: 1 Capsule; Refills: 0**	
OPTIONAL PRECHECK	**[Rx] Olanzapine Oral** [2.5 mg tablet]	**2.5 mg**	**Orally every day at bedtime. Instructions: Take for 4 days starting Day 1 of chemotherapy for nausea. Dispense: 16 Tablet; Refills: 0.**	
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

2. [4-5 Day Regimens] High Emetic Risk Template (>90% Emetic Risk)

- **This template is intended for 4-5 day multi-day regimens**
- **Please see the Regimen Library Premedications section for drug-specific recommendations**
- **Compared to the 1-3 Day Regimens High Emetic Risk Template, the 4-5 Day Regimens High Emetic Risk Template has different dosing schedules for Granisetron IV, Palonosetron IV, Fosaprepitant IV or Aprepitant IV, [Rx] Olanzapine Oral, and pre-checks [Rx] Dexamethasone Oral (CCC vote 9/2022)**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**Granisetron IV**	**1000 mcg**	**Intravenously once. Instructions: Days 1-[3 or 4] (followed by palonosetron on Day [4 or 5]).**	Varies based on 4 vs. 5 days
OPTIONAL PRECHECK	**Palonosetron IV**	**0.25 mg**	**Intravenously push once. Instructions: Day [4 or 5] only (following granisetron on Days [1-3 or 1-4]).**	Varies based on 4 vs. 5 days
	Palonosetron IV	**0.25 mg**	**Intravenously push once. Instructions: Days [1 and 3 or 1, 3, 5]**	Varies based on 4 vs. 5 days
	Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day**	
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed Dispense: 6 tablet; Refills 0**	
	[Rx] Granisetron Transdermal Patch [3.1 mg/24 hour patch]	**1 patch**	**transdermally once. 24 hours before chemotherapy. Instructions: Dosing not to exceed 1 patch per 7 days. Dispense: 1 patch; Refills 0**	
	Ondansetron IV	**16 mg**	**Intravenously once**	
OPTIONAL PRECHECK	**Dexamethasone IV**	**10 mg**	**Intravenously Piggyback once. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL.**	
OPTIONAL PRECHECK	**[Rx] Dexamethasone Oral** [4 mg tablet]	**8 mg**	**orally every day. Instructions: Take on Days [5-7 or 6-8]. Dispense: 6 Tablet; Refills: varies.**	Varies based on 4 vs. 5 days
OPTIONAL PRECHECK	**Fosaprepitant IV**	**150 mg**	**Intravenously Piggyback once. Instructions: Days 1 and 4.**	
	Aprepitant IV	**130 mg**	**Intravenously Piggyback once. Admin over: 30 minutes. Volume 100 mL; Instructions: Days 1 and 4. Administer 30 minutes prior to chemotherapy. Dilute in 100 mL NS or D5W. Use only Non-DEHP tubing, non-PVC infusion bags.**	
	Aprepitant IV	**130 mg**	**Intravenously Push once. Admin over: 2 minutes. Instructions: Days 1 and 4. Administer 30 minutes prior to chemotherapy. Do NOT dilute. Flush with NS before and after administration.**	
	Fosnetupitant-Palonosetron IV 235 mg-0.25 mg	**1 vial**	**Intravenously Piggyback once. Admin over: 30 minutes. Instructions: Administer approximately 30 minutes prior to the start of chemotherapy. Further dilute with D5W or NS to a total volume of 50 mL. Flush line after infusion.**	
	[Rx] Aprepitant Oral [125 mg (1) – 80 mg (2) capsule dose pack]	**1 capsule**	**orally as directed. First day, dose 125 mg PO one hour prior to chemotherapy. On day 2 and 3, dose is 80 mg daily. Dispense: 1 Kit; Refills: 0**	
	[Rx] Rolapitant Oral [90 mg tablet]	**180 mg**	**orally once. Take one to two hours prior to chemotherapy. Dispense: 2 Tablets; Refills: 0**	
	[Rx] Netupitant-Palonosetron Oral 300 mg-0.5 mg [300 mg-0.5 mg capsule]	**1 capsule**	**orally once. Take one hour prior to chemotherapy. Dispense: 1 Capsule; Refills: 0**	
OPTIONAL PRECHECK	**[Rx] Olanzapine Oral** [2.5 mg tablet]	**2.5 mg**	**Orally every day at bedtime. Instructions: Take on Days [1-7 or 1-8] for nausea. Dispense: [7 or 8] Tablet; Refills: varies.**	Varies based on 4 vs. 5 days
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

3. Moderate-High Emetic Risk Template (60-90% Emetic Risk)

- **See Moderate-High Emetic Risk Category**
- **Please see the Regimen Library Premedications section for drug-specific recommendations**
- **Compared to the High Emetic Risk Template, the Moderate-High Emetic Risk Template does not contain Fosnetupitant/Palonosetron IV and *does not precheck* [Rx] Olanzapine Oral**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**Palonosetron IV**	**0.25 mg**	**Intravenously push once**	
	Granisetron IV	**1000 mcg**	**Intravenously once**	
	Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day**	
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed Dispense: 6 tablet; Refills 0**	
	[Rx] Granisetron Transdermal Patch [3.1 mg/24 hour patch]	**1 patch**	**transdermally once. Instructions: 24 hours before chemotherapy. Dosing not to exceed 1 patch per 7 days. Dispense: 1 patch; Refills 0**	
	Ondansetron IV	**16 mg**	**Intravenously once**	
OPTIONAL PRECHECK	**Dexamethasone IV**	**10 mg**	**Intravenously Piggyback once. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL.**	
	[Rx] Dexamethasone Oral [4 mg tablet]	**8 mg**	**orally every day. Instructions: Take 8 mg PO on days 2-4. Dispense: 10 Tablet; Refills: 0.**	
OPTIONAL PRECHECK	**Fosaprepitant IV**	**150 mg**	**Intravenously Piggyback once.**	
	Aprepitant IV	**130 mg**	**Intravenously Piggyback once. Admin over: 30 minutes. Volume 100 mL. Instructions: Administer 30 minutes prior to chemotherapy. Dilute in 100 mL NS or D5W. Use only Non-DEHP tubing, non-PVC infusion bags.**	
	Aprepitant IV	**130 mg**	**Intravenously Push once. Admin over: 2 minutes. Instructions: Administer 30 minutes prior to chemotherapy. Do NOT dilute. Flush with NS before and after administration.**	
	[Rx] Aprepitant Oral [125 mg (1) – 80 mg (2) capsule dose pack]	**1 capsule**	**orally as directed. Instructions: First day, dose 125 mg PO one hour prior to chemotherapy. On day 2 and 3, dose is 80 mg daily. Dispense: 1 Kit; Refills: 0**	
	[Rx] Rolapitant Oral [90 mg tablet]	**180 mg**	**orally once. Instructions: Take one to two hours prior to chemotherapy. Dispense: 2 Tablets; Refills: 0**	
	[Rx] Netupitant-Palonosetron Oral 300 mg-0.5 mg [300 mg-0.5 mg capsule]	**1 capsule**	**orally once. Instructions: Take one hour prior to chemotherapy. Dispense: 1 Capsule; Refills: 0**	
	[Rx] Olanzapine Oral [2.5 mg tablet]	**2.5 mg**	**Orally every day at bedtime. Instructions: Take for 4 days starting Day 1 of chemotherapy for nausea. Dispense: 16 Tablet; Refills: 0.**	
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

4. Moderate Emetic Risk Template (30-60% Emetic Risk)

- **See Moderate / Moderate-High Emetic Risk Category**
- **Please see the Regimen Library Premedications section for drug-specific recommendations**
- **Compared to the Moderate-High Emetic Risk Template, the Moderate Emetic Risk Template *does not precheck* an NK_1 receptor antagonist**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**Palonosetron IV**	**0.25 mg**	**Intravenously push once**	
	Granisetron IV	**1000 mcg**	**Intravenously once**	
	Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day**	
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed Dispense: 6 tablet; Refills 0**	
	[Rx] Granisetron Transdermal Patch [3.1 mg/24 hour patch]	**1 patch**	**transdermally once. Instructions: 24 hours before chemotherapy. Dosing not to exceed 1 patch per 7 days. Dispense: 1 patch; Refills 0**	
	Ondansetron IV	**16 mg**	**Intravenously once**	
OPTIONAL PRECHECK	**Dexamethasone IV**	**10 mg**	**Intravenously Piggyback once. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL.**	
	[Rx] Dexamethasone Oral [4 mg tablet]	**8 mg**	**orally every day. Instructions: Take 8 mg PO on days 2-4. Dispense: 10 Tablet; Refills: 0.**	
	Fosaprepitant IV	**150 mg**	**Intravenously Piggyback once.**	
	Aprepitant IV	**130 mg**	**Intravenously Piggyback once. Admin over: 30 minutes. Volume 100 mL. Instructions: Administer 30 minutes prior to chemotherapy. Dilute in 100 mL NS or D5W. Use only Non-DEHP tubing, non-PVC infusion bags.**	
	Aprepitant IV	**130 mg**	**Intravenously Push once. Admin over: 2 minutes. Instructions: Administer 30 minutes prior to chemotherapy. Do NOT dilute. Flush with NS before and after administration.**	
	[Rx] Aprepitant Oral [125 mg (1) – 80 mg (2) capsule dose pack]	**1 capsule**	**orally as directed. Instructions: First day, dose 125 mg PO one hour prior to chemotherapy. On day 2 and 3, dose is 80 mg daily. Dispense: 1 Kit; Refills: 0**	
	[Rx] Rolapitant Oral [90 mg tablet]	**180 mg**	**orally once. Instructions: Take one to two hours prior to chemotherapy. Dispense: 2 Tablets; Refills: 0**	
	[Rx] Netupitant-Palonosetron Oral 300 mg-0.5 mg [300 mg-0.5 mg capsule]	**1 capsule**	**orally once. Instructions: Take one hour prior to chemotherapy. Dispense: 1 Capsule; Refills: 0**	
	[Rx] Olanzapine Oral [2.5 mg tablet]	**2.5 mg**	**Orally every day at bedtime. Instructions: Take for 4 days starting Day 1 of chemotherapy for nausea. Dispense: 16 Tablet; Refills: 0.**	
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

5. Low Emetic Risk Template (10-30% Emetic Risk)

- **Please see the Regimen Library Premedications section for drug-specific recommendations**
- **Compared to the Moderate Emetic Risk Template, the Low Emetic Risk Template has granisetron IV pre-checked and does not contain palonosetron, [Rx] Granisetron Transdermal Patch, [Rx] Olanzapine Oral, or any NK_1 receptor antagonists. The Ondansetron ordered dose is lower at 8 mg (rather than 16 mg).**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**Granisetron IV**	**1000 mcg**	**Intravenously once**	
	Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day**	
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed Dispense: 6 tablet; Refills 0**	
	Ondansetron IV	**8 mg**	**Intravenously once**	
	Dexamethasone IV	**10 mg**	**Intravenously Piggyback once. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL.**	
	[Rx] Dexamethasone Oral [4 mg tablet]	**8 mg**	**orally every day. Instructions: Take 8 mg PO on days 2-4. Dispense: 10 Tablet; Refills: 0.**	
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

6. Minimal Emetic Risk Template (<10% Emetic Risk)

- **Please see the Regimen Library Premedications section for drug-specific recommendations**
- **Compared to the Low Emetic Risk Template, the Minimal Emetic Risk Template has no pre-checked medications and does not have Granisetron IV, in-house Granisetron Oral, or Ondansetron IV.**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed Dispense: 6 tablet; Refills 0**	
	Dexamethasone IV	**10 mg**	**Intravenously Piggyback once. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL.**	
	[Rx] Dexamethasone Oral [4 mg tablet]	**8 mg**	**orally every day. Instructions: Take 8 mg PO on days 2-4. Dispense: 10 Tablet; Refills: 0.**	
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

7. [Required Prophylaxis] Oral Antiemetic Template

- **This template is used for regimens containing Oral Oncolytics that are Moderate to High Emetic Risk (≥30%) that NCCN Guidelines *require prophylaxis* on days of oral oncolytic administration.**
- **Exceptions: See separate antiemetic template for Selinexor. For oral oncolytics that carry risk for QT prolongation, no agent will be pre-checked.**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally as directed. Instructions: Take 30-60 min prior to each [oral oncolytic] dose to prevent nausea. Max 2 mg in 24 hrs. Dispense: 60 tablet; Refills: variable**	**For continuous daily dosing oral oncolytic**
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally as directed. Instructions: Take 30-60 min prior to each [oral oncolytic] dose and continue daily as needed for nausea. Max 2 mg in 24 hrs. Dispense: 60 tablet; Refills: variable**	**For single-dose or intermittent daily dosing oral oncolytic**
	[Rx] Granisetron Oral [1 mg tablet]	**1 mg**	**orally as directed. Instructions: Take 30-60 min prior to each [oral oncolytic] dose to prevent nausea. Max 2 mg in 24 hrs. Dispense: 60 tablet; Refills: variable**	**For continuous BID dosing oral oncolytic**
	[Rx] Granisetron Oral [1 mg tablet]	**1 mg**	**orally as directed. Instructions: Take 30-60 min prior to each [oral oncolytic] dose and continue twice daily as needed for nausea. Max 2 mg in 24 hrs. Dispense: 60 tablet; Refills: variable**	**For intermittent BID dosing oral oncolytic**
	[Rx] Granisetron Transdermal Patch [3.1 mg/24 hour patch]	**1 patch**	**transdermally once. Instructions: 24 hours before chemotherapy. Dosing not to exceed 1 patch per 7 days. Dispense: 1 patch; Refills: 0**	
OPTIONAL PRECHECK	**[Rx] Ondansetron Oral** [8 mg tablet]	**8 mg**	**orally as directed. Instructions: Take 30-60 min prior to each [oral oncolytic] dose and continue every 8 hrs as needed for nausea. Max 24 mg in 24 hrs. Dispense: 90 Tablet; Refills: variable**	**Don't pre-check if oral oncolytic causes QT prolongation**
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 20 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**orally every 4 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	

8. [PRN Prophylaxis] Oral Antiemetic Template

- **This template is used for regimens containing Oral Oncolytics that are Moderate to High Emetic Risk (≥30%) that NCCN Guidelines *recommend PRN dosing* on days of oral oncolytic administration.**
- **Exceptions: For oral oncolytics that carry risk for QT prolongation, no agent will be pre-checked.**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally daily as needed for nausea. Instructions: Max 2 mg in 24 hrs. Dispense: 60 tablet; Refills: variable**	**For single-dose or daily dosing oral oncolytic**
	[Rx] Granisetron Oral [1 mg tablet]	**1 mg**	**orally every 12 hours as needed for nausea. Instructions: Max 2 mg in 24 hrs. Dispense: 60 tablet; Refills: variable**	**For BID dosing oral oncolytic**
	[Rx] Granisetron Transdermal Patch [3.1 mg/24 hour patch]	**1 patch**	**transdermally once. Instructions: 24 hours before chemotherapy. Dosing not to exceed 1 patch per 7 days. Dispense: 1 patch; Refills: 0**	
OPTIONAL PRECHECK	**[Rx] Ondansetron Oral** [8 mg tablet]	**8 mg**	**orally every 8 hours as needed for nausea. Instructions: Max 24 mg in 24 hrs. Dispense: 90 Tablet; Refills: variable**	**Don't pre-check if oral oncolytic causes QT prolongation**
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 20 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**orally every 4 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	

9. Low Emetic Risk Template + Oral Antiemetic Template

- **This template is used for combination regimens that include a Low Emetic Risk (10-30%) IV agent and a Moderate to High Emetic Risk (≥30%) oral agent.**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**Granisetron IV**	**1000 mcg**	**Intravenously once**	
	Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day**	
	[Rx] Granisetron Oral [1 mg tablet]	**1 or 2 mg**	**See Oral Antiemetic Templates for correct dose and instructions (may be required or PRN prophylaxis)**	
	[Rx] Granisetron Transdermal Patch [3.1 mg/24 hour patch]	**1 patch**	**transdermally once. Instructions: 24 hours before chemotherapy. Dosing not to exceed 1 patch per 7 days. Dispense: 1 patch; Refills: 0**	
	Ondansetron IV	**8 mg**	**Intravenously once**	
OPTIONAL PRECHECK	**[Rx] Ondansetron Oral** [8 mg tablet]	**8 mg**	**See Oral Antiemetic Templates for correct instructions (may be required or PRN prophylaxis)**	**Don't pre-check if oral oncolytic causes QT prolongation**
	Dexamethasone IV	**10 mg**	**Intravenously once. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL.**	
	[Rx] Dexamethasone Oral [4 mg tablet]	**8 mg**	**orally every day. Instructions: Take 8 mg PO on days 2-4. Dispense: 10 Tablet; Refills: 0.**	
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

10. Minimal Emetic Risk Template + Oral Antiemetic Template

- **This template is used for combination regimens that include a Minimal Emetic Risk (<10%) IV agent and a Moderate to High Emetic Risk (≥30%) oral agent.**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
	[Rx] Granisetron Oral [1 mg tablet]	**1 or 2 mg**	**See Oral Antiemetic Templates for correct dose and instructions (may be required or PRN prophylaxis)**	
	[Rx] Granisetron Transdermal Patch [3.1 mg/24 hour patch]	**1 patch**	**transdermally once. Instructions: 24 hours before chemotherapy. Dosing not to exceed 1 patch per 7 days. Dispense: 1 patch; Refills: 0**	
OPTIONAL PRECHECK	**[Rx] Ondansetron Oral** [8 mg tablet]	**8 mg**	**See Oral Antiemetic Templates for correct instructions (may be required or PRN prophylaxis)**	**Don't pre-check if oral oncolytic causes QT prolongation**
	Dexamethasone IV	**10 mg**	**Intravenously Piggyback once. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL.**	
	[Rx] Dexamethasone Oral [4 mg tablet]	**8 mg**	**orally every day. Instructions: Take 8 mg PO on days 2-4. Dispense: 10 Tablet; Refills: 0.**	
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

11. Paclitaxel

- **NOTE: Paclitaxel single-agent is low emetic risk and the low emetic risk template is included below. Emetic risk of paclitaxel-containing regimen may vary depending on concomitant antineoplastic therapies.**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**Granisetron IV**	**1000 mcg**	**Intravenously once**	
	Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day**	
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed; Dispense: 6 tablet; Refills: 0**	
	Ondansetron IV	**8 mg**	**Intravenously once**	
OPTIONAL PRECHECK	**[Rx] Dexamethasone Oral** [4 mg tablet]	**20 mg**	**Orally As Directed. Instructions: Take 12 and 6 hours prior to paclitaxel. Dispense: Variable; Refills: Variable.**	
OPTIONAL PRECHECK	**Dexamethasone IV**	**10 mg**	**Intravenously Piggyback once as needed. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL. Instructions: NOTE: Administer AS NEEDED ONLY if patient missed 1-2 doses of oral dexamethasone at home (recommended 12 and 6 hours prior to paclitaxel to reduce risk of infusion reaction). Administer 30-60 minutes prior to paclitaxel.**	
	Dexamethasone IV	**10 mg**	**Intravenously Piggyback once. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL.**	
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
	Acetaminophen Oral [325 mg tablet]	**650 mg**	**Orally once. Instructions: Administer 30-60 minutes prior to paclitaxel.**	
OPTIONAL PRECHECK	**Diphenhydramine IV**	**25 mg**	**Intravenously once. Instructions: Administer 30-60 minutes prior to paclitaxel.**	
	Diphenhydramine Oral [25 mg capsule]	**25 mg**	**Orally once. Instructions: Administer 30-60 minutes prior to paclitaxel.**	
OPTIONAL PRECHECK	**Famotidine IV**	**20 mg**	**Intravenously once. Instructions: Administer 30-60 minutes prior to paclitaxel.**	
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

12. Docetaxel (Q14D – Q28D dosing)

- **NOTE: Docetaxel single-agent is low emetic risk and the low emetic risk template is included below. Emetic risk of docetaxel-containing regimen may vary depending on concomitant antineoplastic therapies.**
- **NOTE: Dexamethasone dosing differs between Q14D – Q28D and weekly docetaxel**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**Granisetron IV**	**1000 mcg**	**Intravenously once**	
	Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day**	
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed; Dispense: 6 tablet; Refills: 0**	
	Ondansetron IV	**8 mg**	**Intravenously once**	
OPTIONAL PRECHECK	**[Rx] Dexamethasone Oral** [4 mg tablet]	**8 mg**	**Orally 2 times per day. Instructions: Take the day before, day of, and day after docetaxel. Dispense: 12 tablet; Refills: Variable.**	
OPTIONAL PRECHECK	**Dexamethasone IV**	**10 mg**	**Intravenously Piggyback once as needed. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL Instructions: NOTE: Administer AS NEEDED ONLY if patient missed any dose of oral dexamethasone at home (recommended twice daily the day before, day of, and day after docetaxel to reduce risk of infusion reaction and edema). Administer 30-60 minutes prior to docetaxel.**	
	Dexamethasone IV	**10 mg**	**Intravenously Piggyback once. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL.**	
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

13. Docetaxel (weekly dosing)

- **NOTE: Docetaxel single-agent is low emetic risk and the low emetic risk template is included below. Emetic risk of docetaxel-containing regimen may vary depending on concomitant antineoplastic therapies.**
- **NOTE: Dexamethasone dosing differs between weekly and Q14D – Q28D docetaxel**

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**Granisetron IV**	**1000 mcg**	**Intravenously once**	
	Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day**	
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed; Dispense: 6 tablet; Refills: 0**	
	Ondansetron IV	**8 mg**	**Intravenously once**	
OPTIONAL PRECHECK	**[Rx] Dexamethasone Oral** [4 mg tablet]	**8 mg**	**Orally as directed. Instructions: Take the evening prior to, morning of, and evening after docetaxel. Dispense: Variable; Refills: Variable.**	
OPTIONAL PRECHECK	**Dexamethasone IV**	**10 mg**	**Intravenously Piggyback once as needed. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL Instructions: NOTE: Administer AS NEEDED ONLY if patient missed any dose of oral dexamethasone at home (recommended evening prior to, morning of, and evening after docetaxel to reduce risk of infusion reaction and edema). Administer 30-60 minutes prior to docetaxel.**	
	Dexamethasone IV	**10 mg**	**Intravenously Piggyback once. Admin over: 20 minutes. Admix fluid: 0.9% sodium chloride. Volume: 50 mL.**	
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

14. Selinexor

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed; Dispense: 6 tablet; Refills: 0**	
	[Rx] Granisetron Transdermal Patch [3.1 mg/24 hour patch]	**1 patch**	**transdermally once. Instructions: 24 hours before chemotherapy. Dosing not to exceed 1 patch per 7 days. Dispense: 1 patch; Refills: 0**	
OPTIONAL PRECHECK	**[Rx] Ondansetron Oral** [8 mg tablet]	**8 mg**	**Orally as directed. Instructions: Take 30 minutes prior to each Selinexor dose and continue every 8 hours as needed for nausea or vomiting. Maximum 3 doses in 24 hours. Dispense: 30 Tablet; Refills: 0**	
OPTIONAL PRECHECK	**[Rx] Olanzapine Oral** [2.5 mg tablet]	**2.5 mg**	**Orally every day at bedtime. Instructions: For nausea or vomiting. Dispense: 30 Tablet; Refills: 0**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 20 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	

15. Daratumumab IV Monotherapy

- **NOTE: Daratumumab single-agent is minimal emetic risk and the minimal emetic risk template is included below.**

ADDITIONAL MEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**[Rx] Dexamethasone Oral** [4 mg tablet]	**4 mg**	**Orally as directed. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Start the day after daratumumab and continue daily for 2 days. Dispense: variable; Refills: variable**	Methylprednisolone at an equivalent dose may be given as an alternative. First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	Rx] Dexamethasone Oral [4 mg tablet]	**4 mg**	**Orally as directed. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Start the day after daratumumab and continue daily for 2 days. Dispense: variable; Refills: variable**	4th daratumumab dose and beyond
OPTIONAL PRECHECK	**[Rx] Acyclovir Oral** [400 mg tablet]	**400 mg**	**Orally 2 times per day. Instructions: For infection prophylaxis. Dispense: variable; Refills: variable**	
OPTIONAL PRECHECK for C1 Split Dosing ONLY	**[Rx] Albuterol HFA Inhaler 90 mcg/actuation**	**1 puff**	**Inhaled as directed. Instructions: Take 1 puff as directed for shortness of breath during or after daratumumab. Dispense: 1 Each; Refills: 0**	
OPTIONAL PRECHECK	**[Rx] Montelukast Oral** [10 mg tablet]	**10 mg**	**Orally as directed. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Start the evening before daratumumab and continue daily for 3 days. Continue as needed after Cycle 1. Dispense: variable; Refills: 0**	First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	[Rx] Montelukast Oral [10 mg tablet]	**10 mg**	**Orally as directed. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Start the evening before daratumumab and continue daily for 3 days. Continue as needed after Cycle 1. Dispense: variable; Refills: 0**	4th daratumumab dose and beyond

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed; Dispense: 6 tablet; Refills: 0**	
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
OPTIONAL PRECHECK	**Acetaminophen Oral** [325 mg tablet]	**650 mg**	**Orally once. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Dose Range: 650-1000 mg. Administer 1 hour prior to daratumumab.**	First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	Acetaminophen Oral [325 mg tablet]	**650 mg**	**Orally once. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Dose Range: 650-1000 mg. Administer 1 hour prior to daratumumab.**	4th daratumumab dose and beyond
OPTIONAL PRECHECK	**Diphenhydramine IV**	**25 mg**	**Intravenously once. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Dose Range: 25-50 mg. Administer IV or PO 1 hour prior to daratumumab.**	First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	Diphenhydramine IV	**25 mg**	**Intravenously once. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Dose Range: 25-50 mg. Administer IV or PO 1 hour prior to daratumumab.**	4th daratumumab dose and beyond
	Diphenhydramine Oral [25 mg capsule]	**25 mg**	**Orally once. Instructions: Dose Range: 25-50 mg. Administer IV or PO 1 hour prior to daratumumab.**	
OPTIONAL PRECHECK	**Dexamethasone IV**	**20 mg**	**Intravenously Piggyback once. Admin over: 20 minutes, Admix fluid: 0.9% Sodium Chloride, Volume: 50 mL. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Administer 1 hour prior to daratumumab.**	Methylprednisolone at an equivalent dose may be given as an alternative. First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	Dexamethasone IV	**20 mg**	**Intravenously Piggyback once. Admin over: 20 minutes, Admix fluid: 0.9% Sodium Chloride, Volume: 50 mL. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Administer 1 hour prior to daratumumab.**	4th daratumumab dose and beyond
	Dexamethasone Oral [4 mg tablet]	**20 mg**	**Orally once. Instructions: Administer 1 hour prior to daratumumab.**	Methylprednisolone at an equivalent dose may be given as an alternative.
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

16. Daratumumab SQ Monotherapy

- **NOTE: Daratumumab single-agent is minimal emetic risk and the minimal emetic risk template is included below.**

ADDITIONAL MEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**[Rx] Acyclovir Oral** [400 mg tablet]	**400 mg**	**Orally 2 times per day. Instructions: For infection prophylaxis. Dispense: variable; Refills: variable**	
	[Rx] Albuterol HFA Inhaler 90 mcg/actuation	**1 puff**	**Inhaled as directed. Instructions: Take 1 puff as directed for shortness of breath during or after daratumumab. Dispense: 1 Each; Refills: 0**	
OPTIONAL PRECHECK	**[Rx] Montelukast Oral** [10 mg tablet]	**10 mg**	**Orally as directed. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Start the evening before daratumumab and continue daily for 3 days. Continue as needed after Cycle 1. Dispense: variable; Refills: 0**	First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	[Rx] Montelukast Oral [10 mg tablet]	**10 mg**	**Orally as directed. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Start the evening before daratumumab and continue daily for 3 days. Continue as needed after Cycle 1. Dispense: variable; Refills: 0**	4th daratumumab dose and beyond

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed; Dispense: 6 tablet; Refills: 0**	
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
OPTIONAL PRECHECK	**Acetaminophen Oral** [325 mg tablet]	**650 mg**	**Orally once. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Dose Range: 650-1000 mg. Administer 1 hour prior to daratumumab.**	First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	Acetaminophen Oral [325 mg tablet]	**650 mg**	**Orally once. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Dose Range: 650-1000 mg. Administer 1 hour prior to daratumumab.**	4th daratumumab dose and beyond
	Diphenhydramine IV	**25 mg**	**Intravenously once. Instructions: Dose Range: 25-50 mg. Administer IV or PO 1 hour prior to daratumumab.**	
OPTIONAL PRECHECK	**Diphenhydramine Oral** [25 mg capsule]	**25 mg**	**Orally once. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Dose Range: 25-50 mg. Administer IV or PO 1 hour prior to daratumumab.**	First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	Diphenhydramine Oral [25 mg capsule]	**25 mg**	**Orally once. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Dose Range: 25-50 mg. Administer IV or PO 1 hour prior to daratumumab.**	4th daratumumab dose and beyond
OPTIONAL PRECHECK	**[Rx] Dexamethasone Oral** [4 mg tablet]	**20 mg**	**Orally as directed. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Take 20 mg 1 hour before daratumumab on [add daratumumab cycle days]. Take 4 mg on Days [add the 2 cycle days following daratumumab days]. Dispense: variable; Refills: variable**	Methylprednisolone at an equivalent dose may be given as an alternative. First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	[Rx] Dexamethasone Oral [4 mg tablet]	**20 mg**	**Orally as directed. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Take 20 mg 1 hour before daratumumab on [add daratumumab cycle days]. Take 4 mg on Days [add the 2 cycle days following daratumumab days]. Dispense: variable; Refills: variable**	4th daratumumab dose and beyond
	Dexamethasone Oral [4 mg tablet]	**20 mg**	**Orally once. Instructions: Administer 1 hour prior to daratumumab.**	Methylprednisolone at an equivalent dose may be given as an alternative.
	Dexamethasone IV	**20 mg**	**Intravenously Piggyback once. Admin over: 20 minutes, Admix fluid: 0.9% Sodium Chloride, Volume: 50 mL. Instructions: Administer 1 hour prior to daratumumab.**	Methylprednisolone at an equivalent dose may be given as an alternative.
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

17. Daratumumab IV Combination Therapy

- **NOTE: The low emetic risk template is included below. Emetic risk of daratumumab-containing regimen may vary depending on concomitant antineoplastic therapies.**
- **When dexamethasone is in the background regimen specific corticosteroid, the dexamethasone treatment dose will instead serve as premedication on daratumumab days and therefore is not included below. This will vary based on specific combination regimen.**

ADDITIONAL MEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**[Rx] Acyclovir Oral** [400 mg tablet]	**400 mg**	**Orally 2 times per day. Instructions: For infection prophylaxis. Dispense: variable; Refills: variable**	
OPTIONAL PRECHECK for C1 Split Dosing ONLY	**[Rx] Albuterol HFA Inhaler 90 mcg/actuation**	**1 puff**	**Inhaled as directed. Instructions: Take 1 puff as directed for shortness of breath during or after daratumumab. Dispense: 1 Each; Refills: 0**	
OPTIONAL PRECHECK	**[Rx] Montelukast Oral** [10 mg tablet]	**10 mg**	**Orally as directed. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Start the evening before daratumumab and continue daily for 3 days. Continue as needed after Cycle 1. Dispense: variable; Refills: 0**	First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	[Rx] Montelukast Oral [10 mg tablet]	**10 mg**	**Orally as directed. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Start the evening before daratumumab and continue daily for 3 days. Continue as needed after Cycle 1. Dispense: variable; Refills: 0**	4th daratumumab dose and beyond

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**Granisetron IV**	**1000 mcg**	**Intravenously once**	Omit row if minimal emetic risk
	Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day**	Omit row if minimal emetic risk
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed; Dispense: 6 tablet; Refills: 0**	
	Ondansetron IV	**8 mg**	**Intravenously once**	Omit row if minimal emetic risk
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
OPTIONAL PRECHECK	**Acetaminophen Oral** [325 mg tablet]	**650 mg**	**Orally once. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Dose Range: 650-1000 mg. Administer 1 hour prior to daratumumab.**	First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	Acetaminophen Oral [325 mg tablet]	**650 mg**	**Orally once. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Dose Range: 650-1000 mg. Administer 1 hour prior to daratumumab.**	4th daratumumab dose and beyond
OPTIONAL PRECHECK	**Diphenhydramine IV**	**25 mg**	**Intravenously once. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Dose Range: 25-50 mg. Administer IV or PO 1 hour prior to daratumumab.**	First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	Diphenhydramine IV	**25 mg**	**Intravenously once. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Dose Range: 25-50 mg. Administer IV or PO 1 hour prior to daratumumab.**	4th daratumumab dose and beyond
	Diphenhydramine Oral [25 mg capsule]	**25 mg**	**Orally once. Instructions: Dose Range: 25-50 mg. Administer IV or PO 1 hour prior to daratumumab.**	
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

18. Daratumumab SQ Combination Therapy

- **NOTE: The low emetic risk template is included below. Emetic risk of daratumumab-containing regimen may vary depending on concomitant antineoplastic therapies.**
- **When dexamethasone is in the background regimen specific corticosteroid, the dexamethasone treatment dose will instead serve as premedication on daratumumab days and therefore is not included below. This will vary based on specific combination regimen.**

ADDITIONAL MEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**[Rx] Acyclovir Oral** [400 mg tablet]	**400 mg**	**Orally 2 times per day. Instructions: For infection prophylaxis. Dispense: variable; Refills: variable**	
	[Rx] Albuterol HFA Inhaler 90 mcg/actuation	**1 puff**	**Inhaled as directed. Instructions: Take 1 puff as directed for shortness of breath during or after daratumumab. Dispense: 1 Each; Refills: 0**	
OPTIONAL PRECHECK	**[Rx] Montelukast Oral** [10 mg tablet]	**10 mg**	**Orally as directed. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Start the evening before daratumumab and continue daily for 3 days. Continue as needed after Cycle 1. Dispense: variable; Refills: 0**	First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	[Rx] Montelukast Oral [10 mg tablet]	**10 mg**	**Orally as directed. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Start the evening before daratumumab and continue daily for 3 days. Continue as needed after Cycle 1. Dispense: variable; Refills: 0**	4th daratumumab dose and beyond

PREMEDICATIONS				
Precheck	**Drug Name [FORM]**	**Dose**	**Order**	**Comments**
OPTIONAL PRECHECK	**Granisetron IV**	**1000 mcg**	**Intravenously once**	Omit row if minimal emetic risk
	Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day**	Omit row if minimal emetic risk
	[Rx] Granisetron Oral [1 mg tablet]	**2 mg**	**orally every day as needed; Dispense: 6 tablet; Refills: 0**	
	Ondansetron IV	**8 mg**	**Intravenously once**	Omit row if minimal emetic risk
	Prochlorperazine IV	**10 mg**	**Intravenously Push once. Admin over: 10 minutes**	
	[Rx] Prochlorperazine Oral [10 mg tablet]	**10 mg**	**orally every 6 hours as needed for nausea. Dispense: 30 Tablet; Refills: 0.**	
	[Rx] Metoclopramide Oral [10 mg tablet]	**20 mg**	**Orally every 4 hours as needed for nausea. Dispense: 50 Tablet; Refills: 0.**	
OPTIONAL PRECHECK	**Acetaminophen Oral** [325 mg tablet]	**650 mg**	**Orally once. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Dose Range: 650-1000 mg. Administer 1 hour prior to daratumumab.**	First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	Acetaminophen Oral [325 mg tablet]	**650 mg**	**Orally once. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Dose Range: 650-1000 mg. Administer 1 hour prior to daratumumab.**	4th daratumumab dose and beyond
	Diphenhydramine IV	**25 mg**	**Intravenously once. Instructions: Dose Range: 25-50 mg. Administer IV or PO 1 hour prior to daratumumab.**	
OPTIONAL PRECHECK	**Diphenhydramine Oral** [25 mg capsule]	**25 mg**	**Orally once. Instructions: CYCLE [include first 3 daratumumab doses] ONLY. Dose Range: 25-50 mg. Administer IV or PO 1 hour prior to daratumumab.**	First 3 daratumumab doses ONLY Omit pre-check if 4th dose of daratumumab or beyond
	Diphenhydramine Oral [25 mg capsule]	**25 mg**	**Orally once. Instructions: CYCLE [include all subsequent daratumumab doses, 4th dose and beyond]. Dose Range: 25-50 mg. Administer IV or PO 1 hour prior to daratumumab.**	4th daratumumab dose and beyond
	Lorazepam IV	**0.5 mg**	**Intravenously once.**	

Daratumumab Pre- and Post-Medication Summary

- **The following tables include recommended pre- and post- medications per the product prescribing information.**
- **NOTE: See above daratumumab templates and corresponding CCC-Approved Standards for modifications of pre- and post-medications based on available literature and clinical experience.**

Recommended Concomitant Medications – IV DARATUMUMAB		
Pre-Infusion Medications	Monotherapy	Acetaminophen 650-1000 mg PO Diphenhydramine 25-50 mg PO/IV or equivalent Methylprednisolone 100 mg or equivalent administered **IV** • Following second infusion, dose of corticosteroid may be reduced (PO or IV methylprednisolone 60 mg)
	Combination Therapy	Acetaminophen 650-1000 mg PO Diphenhydramine 25-50 mg PO/IV or equivalent Dexamethasone 20 mg (or equivalent) prior to every daratumumab infusion • **Dexamethasone is given IV prior to the first daratumumab infusion and PO administration may be considered prior to subsequent infusions** • When dexamethasone is in the background regimen specific corticosteroid, the dexamethasone treatment dose will instead serve as premedication on daratumumab infusion days • Additional background regimen-specific corticosteroids (e.g., prednisone) should not be taken on daratumumab infusion days when patients receive dexamethasone (or equivalent) as a premedication
Post-Infusion Medications	Monotherapy	Administer PO corticosteroid (20 mg methylprednisolone or equivalent dose of an intermediate-acting or long-acting corticosteroid in accordance with local standards) on each of the 2 days following all daratumumab infusions (beginning the day after the infusion).
	Combination Therapy	Consider administering low-dose PO methylprednisolone (≤20 mg) or equivalent the day after daratumumab infusion • However, if a background regimen-specific corticosteroid (e.g., dexamethasone, prednisone) is administered the day after the daratumumab infusion, additional post-infusion medications may not be needed

Recommended Concomitant Medications – SQ DARATUMUMAB HYALURONIDASE-fihj		
Pre-Infusion Medications	Monotherapy	Acetaminophen 650-1000 mg PO Diphenhydramine 25-50 mg PO/IV or equivalent Methylprednisolone 100 mg or equivalent administered **PO or IV** • Following second injection, dose of corticosteroid may be reduced (PO or IV methylprednisolone 60 mg)
	Combination Therapy	Acetaminophen 650-1000 mg PO Diphenhydramine 25-50 mg PO/IV or equivalent Dexamethasone 20 mg (or equivalent) **PO or IV** prior to every daratumumab injection • When dexamethasone is in the background regimen specific corticosteroid, the dexamethasone treatment dose will instead serve as premedication on daratumumab injection days • Additional background regimen-specific corticosteroids (e.g., prednisone) should not be taken on daratumumab injection days when patients receive dexamethasone (or equivalent) as a premedication
Post-Infusion Medications	Monotherapy	Administer PO corticosteroid (20 mg methylprednisolone or equivalent dose of an intermediate-acting or long-acting corticosteroid in accordance with local standards) on each of the 2 days following all daratumumab injections (beginning the day after the injection). • If the patient does not experience a major system administration-related reaction after the first 3 doses of daratumumab, consider discontinuing the administration of corticosteroids (excluding any background regimen-specific corticosteroid)
	Combination Therapy	Consider administering low-dose PO methylprednisolone (≤20 mg) or equivalent the day after daratumumab injection • However, if a background regimen-specific corticosteroid (e.g., dexamethasone, prednisone) is administered the day after the daratumumab injection, additional post-infusion medications may not be needed • If the patient does not experience a major system administration-related reaction after the first 3 doses of daratumumab, consider discontinuing the administration of corticosteroids (excluding any background regimen-specific corticosteroid)

Regimen Library Moderate-High Emetic Risk Category

Revised December 2023

PURPOSE:
Define characteristics of the antiemetic category, Moderate-High, within iKnowMed Generation 1 and Generation 2.

SCOPE:
This document will address:

- Oncologic medications with an emetic risk of 30-90%
- Oncologic regimens with an overall emetic risk of 30-90%

BACKGROUND:
Current NCCN Guidelines for intravenous medications are divided into High Emetic Risk (>90% frequency of emesis), Moderate Emetic Risk (>30-90% frequency of emesis), Low Emetic Risk (10-30% frequency of emesis) and Minimal Emetic Risk (<10% frequency of emesis). In an effort to maintain emetic categories based on national standards but take into account regimen and disease-specific factors, CCC has designated a subset of the moderate emetogenic category as 'Moderate-High' Emetic Risk and has so indicated this subset with a new antiemetic category and prechecked premedications of palonosetron and dexamethasone IV. This change will only be recognized in the iKnowMed applications and is solely used to highlight those regimens whose place in therapy or medication combination warrant preselected premedication.

GOAL:
To ensure patients receive adequate and appropriate antiemetic therapy for their oncologic medications/regimens, specifically those deemed "Moderate Emetic Risk" by NCCN Antiemesis Guidelines.

MODERATE HIGH EMETIC RISK:
In an effort to identify medications/regimens at the high end of 'Moderate Emetic Risk', CCC has outlined criteria for a regimen to be classified as 'Moderate-High Emetic Risk' in iKnowMed

- 'Moderate-High' was created to encompass regimens that have at least one of the following characteristics:
  - Has an overall emetic risk potential of 60-90%
  - Contains one (or more) of the intravenous agents listed below
  - Place in therapy warrants preselected antiemetics (i.e., given before or after radiation, clinical scenario being treated)

INTRAVENOUS AGENTS CLASSIFIED AS MODERATE-HIGH (>60-90%) EMETIC RISK
Bendamustine
Cyclophosphamide 750-1500 mg/m^2
Daunorubicin (excluding weekly administration)
Doxorubicin <60 mg/m^2
Epirubicin ≤ 90 mg/m^2
Idarubicin (excluding weekly administration)
Ifosfamide < 2 grams/m^2/dose
Irinotecan ≥ 180 mg/m^2
Oxaliplatin

INTRAVENOUS AGENTS CLASSIFIED AS MODERATE (>30-60%) EMETIC RISK
Aldesleukin > 12-15 million IU/m^2
Amifostine > 300 mg/m^2
Busulfan
Carboplatin AUC < 4
Carmustine ≤ 250 mg/m^2
Clofarabine
Cyclophosphamide < 750 mg/m^2
Cytarabine > 200 mg/m^2
Cytarabine and Daunorubicin Liposomal (Vyxeos)
Dactinomycin
Daunorubicin (weekly dosing only)
Idarubicin (weekly dosing only)
Interferon alfa ≥ 10 million IU/m^2
Irinotecan < 180 mg/m^2
Irinotecan Liposomal
Lurbinectedin
Melphalan < 140 mg/m^2
Methotrexate ≥ 250 mg/m^2
Mirvetuximab soravtansine-gynx
Romidepsin
Temozolomide
Trabectedin

References:

1. NCCN Guidelines Antiemesis v.1.2024 [Accessed 12/2023].

Regimen Library Oral Oncolytic Dose Optimization

Revised January 2025

PURPOSE:
Define rationale and summarize CCC decisions to optimize oral oncolytic dosing in iKnowMed regimen templates.

SCOPE:
Oral oncolytic agents eligible for dose optimization must have supporting data that demonstrates a lower starting dose improves tolerability without impacting clinical outcomes.

BACKGROUND:
Historically, oncology agent dosing has been determined by the *maximum tolerable dose* rather than the *minimum effective dose*. There has been a push within the field of oncology to take a closer look at drug dosing and patient tolerability. The FDA's Project Optimus is focusing on dose optimization in clinical trials to emphasize selection of a dose that maximizes efficacy as well as safety and tolerability.

GOAL:
To implement lower starting doses within regimen templates for select oral oncolytic agents with high rates of dose interruptions and reductions due to toxicity.

CCC DECISIONS:

Drug or Combination	CCC Decision	Supporting Data	References
Cabozantinib (Cabometyx) Indications: RCC, HCC, DTC, uterine	• May 2024 • Add and pre-check a lower initial dose (40 mg daily) in regimens with a 60 mg daily starting dose • Dosing and Monitoring Guidance communication orders will inform providers of rationale for lower initial dose and monitoring recommendations • January 2025 Update – separate dose optimization regimen from standard dosing regimen	• Clinical trials demonstrate high rates of dose reductions (46-62%), dose interruptions (70-84%), and discontinuations due to adverse effects (8-21%) • Two retrospective cohort studies showed no statistically significant differences in clinical outcomes when cabozantinib was initiated at a lower starting dose • Review of iKnowMed cabozantinib prescription data support a starting dose of 40 mg daily	Cabometyx Prescribing Information Martini DJ, et al. *Clin Genitourin Cancer* 2022;20:53-9. Kian K, et al. HOPA Annual Conference 2024: abstr 047. Stitt TM, et al. *J Hematol Oncol Pharm* 2022;12:138-44.