**Policy Statements:** It is the policy of Metro Infusion Center that chemotherapy/biotherapy and immunotherapy will be administered safely in accordance with the American Society of Clinical Oncology, the Oncology Nursing Society and IV Therapy Nursing Society's Standards of Care.

**Definition of Terms:**

***Chemotherapy:*** Medication that is cytotoxic that **uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping them from dividing. This treatment targets DNA, tubulin or cellular division to kill the cancer.**

***Targeted Therapy (previously referred to as biotherapy):*** The treatment of cancer using molecularly targeted anticancer agents that selectively target molecular pathways as opposed to traditional cytotoxic chemotherapy agents.

***Immunotherapy:*** The treatment of cancer using the patient's own immune system to manage or eradicate diverse cancer types.

***Cancer Treatment:*** Is the terminology that will be used within this policy to encompass all 3 of the above definitions. Given that Metro Infusion Centers administer chemotherapy and targeted biotherapy for other conditions, this term will refer to treatments that will be given for purposes of killing cancer. The doses are often different and the assessment surrounding this treatment may be different than other treatments administered.

| **Order Writing** | |
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| 1. Who can write the order | • Referral orders will be accepted from either the oncology physician or the oncology advanced practice provider as per the accepted practices within the practice and state regulations. |
| 2. Cancer Treatment should be written on a preprinted and approved order form. | • The referring provider will complete the approved preprinted orders located on the metro infusion site<br>• The order will then be reviewed for completeness by the intake/biologic RN; transcribed and signed off by one of the physicians employed by Metro Infusion |
| 3. Order corrections | • If an order needs correction based on changes in patient condition or notation of something missing, the order should be resubmitted fully corrected.<br>• KEY POINT: If this is an emergent situation (the patient is in the center and the provider is unavailable to rewrite the corrected order), a verbal order will be taken on a "Oncology Order Clarification" form by the biotherapy or clinic RN or pharmacist with verbal readback noted on the form. |
| 4. All cancer treatment orders will include:<br>• Patient name<br>• DOB<br>• Date of order | • The Ht and weight should be measured not stated.<br>• Any weight variation of 10% or greater during treatment should be called to the physician unless otherwise specified on the order or patients clinical |

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| • Diagnosis<br>• Ht/Wt and calculated BSA if applicable<br>• BSA Calculator used<br>• Testing to be done prior and time frame it can be done before treatment<br>• Parameters to hold<br>• Premedication and any other supportive medication as needed<br>• Drug name, dose, route, rate of infusion, fluid diluents if appropriate<br>• Dates of treatment initiation<br>• Reasons to call the provider<br>• Signature of licensed provider<br>• Phone number/fax for the provider; their NP and nurse if they have one | condition warrants it inappropriate to change the dose (ascites; swelling).<br>KEY NOTE: This variation will be documented in the medical record.<br>• BSA Calculation to be used (Mostellar is the preferred formula, although other formula's such as Dubois may be used)<br>• Dose variation of 10% will be called to the MD/APN<br>• Pharmacy will round the dose to the vial<br>• Preceding zeros should be used (0.5mg)<br>• Terminal zeroes should NOT be used (i.e. 5.0mg)<br>• If any of the necessary components of the order are missing or inaccurate, a licensed provider will be called for clarification/correction. |
| **Oncology Certification for Chemotherapy** | |
| 1. Only Registered Nurses(RN) who have been appropriately educated and skills validated will administer cancer treatment | The skills portion of the competency can be done via simulation in combination with actual observation of administration. |
| 2. Didactic component will consist of a Metro Infusion approved cancer treatment course (this could include an oncology nursing society course). Course contents will include cancer basics; chemotherapy, targeted therapy and immunotherapy concepts. Drug calculations session; safe administration; safe handling and symptoms management. | • New staff with extensive chemotherapy administration experience may not need to attend the course, but will need to pass a basic cancer treatment competency test with a score of 80% and complete skills simulation validation assuring that they know the standards at Metro Infusion. |
| 3. Skills validation will be verified by a staff member or consultant who is versed in administration of cancer treatments OR can be simulated utilizing the skills checklist..<br>A checklist will be completed and placed in the employee file. | Initial competency will include (as per ONS guidelines)<br>• The administration or simulation of administration of 2-3 different medications with various routes of administration (if applicable) |
| 4. Ongoing cancer treatment competency will be validated annually via exam and assurance of some hands on experience over the last year. | • A score of 80% is considered passing on the annual competency exam<br>• The staff should administer at least 3 cancer treatment drugs per year.<br>KEY POINT: If the staff is unable to administer 3 cancer treatments in a year, they will be required to do a skills simulation as well as the competency exam. |

| **Cancer Treatment Verification** | |
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| 1. The biologic/intake RN will review any cancer treatment orders that come in | • Will perform an independent calculation of the BSA/Dose and document as 1st check on the treatment form<br>• Will review the order to assure that all aspects of the order are filled out and clear.<br>• If any part of the order is not completed or it is unclear, they will reach out the provider/staff to ask for resubmission<br>Key Point: The referring provider will be notified of dose variations greater than 10%. |
| 2. The RN administering the cancer treatment will ensure that the weight has not changed from original order. | • If the weight has changed by 10%, the RN will evaluate if there is an error in weight.<br>• If the weight is off by >10% and the order says to call for wt change, then the RN will call the provider/team<br>• The RN will need to inform the pharmacy if there is a discrepancy for any drugs they will be mixing as well as to adjust the label |
| 3. Pharmacy will perform an independent double check before cancer treatment label dispensed. | |
| 4. The RN administering the cancer treatment will do an independent calculation of the BSA and dose. And verify that the biologic/intake RN has done the first check. | This will be the 2nd RN check as the Biologic/Intake RN should have done the first<br>KEY POINT: For serial recurring orders, unless there is a weight change or submission of new order, the dose will only need to be recalculated by the administering RN while referencing the original 1st check notation. |
| 5. A second clinician will double check the medication at the chairside to assure accurate administration of medication.<br><br>Key Note: This 2nd check can be via virtual platform | • Have the patient state name and date of birth<br>• One RN will read the order and the other RN will read the label. Double check the following;<br>o Correct patient name and date of birth<br>KEY POINT: If the patient has expressive aphasia r/t disease, the patient can show their ID card for their identity check<br>o Correct interval of time between treatments<br>o The name and dose<br>o Correct diluent and volume<br>o The correct dates of infusion<br>o Check expiration date/time of drug<br>• Verify that all premedications ordered for the day have been administered.<br>• The primary nurse will program the pump.<br>o The 2nd clinician will verify the correct rate of infusion |

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| | • Both staff members will document the cancer treatment check on the treatment documentation sheet |
| **Mixing of cancer treatments** | • All hazardous drugs will be mixed under the approved biologic safety cabinet by the pharmacist<br>• All non hazardous drugs will be mixed by the RN |
| **Safe Handling of Hazardous Drugs** | |
| 1. All staff handling hazardous drugs will wear appropriate apparel and take appropriate safety precautions when administering and handling hazardous drugs in accordance with the USP 800 Standards | Metro infusion will follow guidelines set out by USP800 and any other regulatory agency. |
| 2. All hazardous and reproductive risk drugs will come with safe handling engineering devices already attached. | These devices are utilized to decrease the risk of exposure to the hazardous drug. |
| **Patient Assessment** | |
| 1. All patients undergoing cancer treatment will have a symptom assessment to evaluate for treatment and disease r/t symptoms. | • It will be encouraged that ALL patients go to get their labs and see their oncology providers within 72 hours prior to the treatment visit to "clear the patient" for the treatment<br>• The intake/biologic RN will call the day before to assure that this is done and to review the symptom assessment sheet and labs with the referring office. KEY POINT: If the patient did not go to the oncology office, the biologic/intake RN will need to call the patient to do this pre assessment.<br>• Review symptom assessment as per specific treatment and as outlined on the treatment worksheet.<br>• Symptoms that could impact treatment will be called to the referring provider office. |
| 2. Assess allergies | |
| 3. Assess laboratory data | • Labs for cancer treatments must have been drawn within the last 72 hours<br>KEY POINT: For any patient of childbearing potential who is receiving cancer treatment, will need to add a pregnancy test onto the pre treatment labs<br>• The biologic/intake RN will review labs to ensure that they are within parameters set on the order at least 24 hours before the cancer treatment.<br>• If any laboratory values are outside an acceptable level, call referring provider/staff further direction. |
| 4. Assess appropriate test results | Some examples include:<br>• MUGA/ECHO for trastuzumab, pertuzumab, ado traztuzumab. |

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| 5. Assess reproductive history<br>• For women of child bearing age/potential; assure that the pregnancy test is negative within 72 hours of the treatment | • Cancer treatments may have teratogenic effects on the unborn child.<br>• Some physicians will place menstruating females on birth control prophylaxis while receiving cancer treatment<br>• . |
| **Cancer Treatment Administration** | |
| 1.Back up fluids will be used as needed for cancer treatment infusions. | This can be used in case of reaction so that there are fluids ready for infusion. |
| 2. Stopcocks can be utilized:<br>• If the drug ordered is known to have a potential to cause a reaction<br>• If the patient has history that indicates possible reaction. | • The RN administering the cancer treatment will assess the risk of reaction.<br>• Stopcocks can quickly turn off drug and turn on back up fluid at time of suspected infusion reaction.<br>• Only 1 stopcock is recommended to reduce the risk of infection and error. |
| 4. Securing the IV tubing to the patient with tape on the arm/clothing | • This ensures that if the IV is pulled the "torque" is at the taped site instead of the IV/Port insertion site. |
| ***IV Infusions- Peripheral*** | |
| 1. Peripheral IV sites must be initiated with good technique. | • If there is any puncturing of the vein, cancer treatment can leak into the tissue. |
| 2. When administering a cancer treatment avoid sites that are high risk for complications if extravasated. | • Antecubital fossa (should be a last resort as medication can infiltrate without knowing)<br>• Injured or sclerosed veins<br>• Areas of flexion<br>• Small, fragile, tortuous veins<br>• An extremity with altered venous return or lymph flow (i.e. on the side of axillary lymph dissection with breast cancer; lymphoma or melanoma)<br>• An extremity with decreased sensation or paresthesia<br>• Lower extremity |
| 3. When administering cancer treatment through a peripheral IV, apply a clear, occlusive dressing unless the patient is allergic. | This stabilizes the IV. |
| ***IV Infusions- Central Venous Catheter (CVC)*** | |
| 1. A brisk blood return must be obtained prior to giving any cancer treatment through a CVC as per ONS and INS guidelines | • If there is no blood return from the CVC; the RN should:<br>o Reposition the patient to see if the blood will come out<br>o Assure the proper needle position for an implanted port |

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| | ○ Utilize alteplase 2mg/2ml instillation as needed to dissolve fibrin sheath<br>KEY POINT: Alteplase should be instilled for 30 min-2 hours and may be repeated x 1 if no blood return obtained after 2 hours. If there still is not blood return, or if the line requires alteplase routinely, the line should be evaluated for other causes for lack of blood return.<br>Alteplase should NOT be flushed into the line before 2 hours; after 2 hours the drug is inactive.<br>• If there is no blood return and it is not a vesicant, the staff will review the risks associated with infusing through the CVC without blood return (broken line; retrograde flow out to the tissue or erosion of the CVC through the SVC) and consent will be obtained to proceed with these risks as low as they may be. |
| ***SQ injections*** | • Rotate sites when administering SQ injections<br>KEY POINT: Bortezomib is recommended to only be given in the abdomen and thigh. To reduce the risk of skin reaction- use an air lock; inject at 90 degree angle and administer SQ slowly over at least 10 seconds<br>• Ideally, no more than 2ml should be administered into a single SQ site<br>KEY POINT: There are a few drugs that are now being administered with hyaluronidase and these drugs are acceptable to be given in a larger volume b/c the hyaluronidase opens up the tissue to allow for the larger volume. |
| **Patient Education** | |
| All patients will have a consent form or notation of informed consent that will be completed by their referring provider | The biologic/intake RN will assure that this comes in with the referral documents and order. If the provider does not routinely do consents for cancer treatment, documentation in the note that cancer treatment education has been completed and the patent gives consent to proceed. |
| Patient education material can be given additionally by the Metro Infusion RN if the patient has lost/misplaced their education given by their provider | Chemocare.com is the preferred source to print out cancer treatment sheets. |
| **Documentation** | Documentation will be done in Cerner and on the Treatment Documentation Sheet<br>The treatment documentation sheet will be faxed to the referring oncologist |

## References

Olsen, M, LeFabvre, K, & Brassil, K (Eds). (2019). Chemotherapy and Immunotherapy Guidelines: And recommendations for practice, 2nd Edition. Oncology Nursing Society, Pittsburgh, PA.

Neuss, M. et al.. (2017). 2016 Updated American Society of Clinical Oncology/ Oncology Nursing Society Chemotherapy Administration Safety Standards, Including Standards for Pediatric Oncology. ONF, 44(1), A1–A13. doi: 10.1200/JOP.2016.017905