

Creating a Recipe for Success: Chemotherapy Education

Jillian Dooley, RN, BSN

BIDMC- Unit Based Educator on 11 Reisman

Introduction/Problem

11 Reisman is a busy inpatient oncology unit where high risk chemotherapy is administered every shift. Most of our new hire RNs possess little knowledge of chemotherapy administration. Our education tools used to train nurses on safe practice were outdated and stagnant; nurses were rarely using the unit based resources resulting in a knowledge deficit and potential harm when administering high risk medications and caring for patients post chemotherapy administration.

Aim/Goal

Our goals were to create a tool that would not only provide the information nurses need to administer chemotherapy regimens safely, but to also make learning fun and engaging. We enlisted the help of more experienced nurses in building this tool, along with the Unit Based Educator, to further their knowledge of these chemotherapy regimens and enhance their level of expertise.

The Team

Jillian Dooley, RN, UBE	Jake Kenney, RN
Victoria Avery, RN	Stephanie Konz, RN
Marisa Fiore, RN	Gillian Re, RN

The Interventions

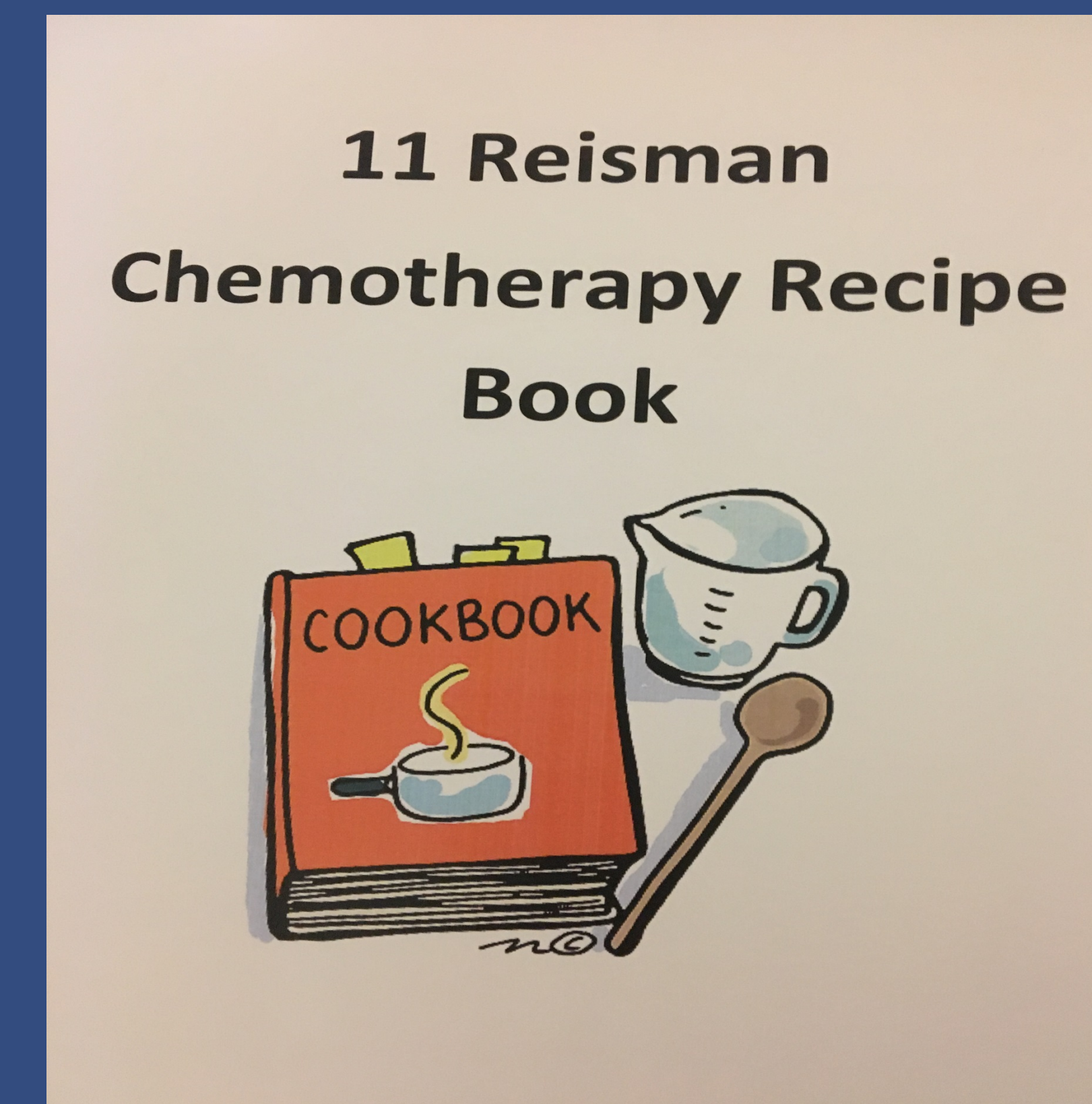
- Group formed an initial meeting to discuss current process of chemotherapy education and ideas for improvement. It was decided to create an easy-to-follow “Recipe Book” for the most common chemotherapy regimens given on 11 Reisman.
- Group members were assigned which chemo regimen ‘recipes’ to create.

Lessons Learned

Each team member had a unique writing style! It quickly became apparent that standardization was necessary as uniformity would be more suitable and appealing to the learner. We agreed upon a template which will be used for all recipes going forward.

Results/Progress to Date

21 recipe cards have been created to date . Recipes are compiled in a “cook” book which has been well received by nurses, especially newer nurses who are starting their chemotherapy certification.



Next Steps

- Continue to make new recipe cards as additional regimens are approved to be administered inpatient.
- Update current recipe cards as needed.





For more information, contact:
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More Results/Progress to Date

 Regimen Name: AIM		
 Diagnosis: Sarcoma	 Time of Infusion: 24 hours and an IV push	 Central Access: Yes

PREP-WORK:

Labs: CBC/Diff, electrolytes, kidney function, LFTs, and TBili
For Doxorubicin: Obtain baseline echo & check patient’s cumulative dose prior to each treatment.
(Lifetime dosing at BI= 400mg/m2)
For Ifosfamide: Obtain baseline UA

INGREDIENTS:

A:Adriamycin/Doxorubicin 25mg/m2 on Days 1,2 and 3- IV Push
I: Ifosfamide 2500mg/m2 on Days 1,2, and 3- Continuous Infusion
M: Mesna 2500 mg/m2 on Days 1,2 and 3- Continuous Infusion followed by 800 mg/m2 over 8hours

SUPPORTIVE INGREDIENTS:


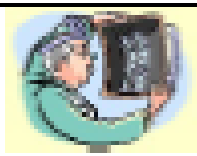


Antiemetics
Prehydration/IVF- Continue to monitor for symptoms of fluid overload. *Don’t forget a daily weight!*
Mesna- Bladder protectant given concurrently with Ifosfamide to help prevent hemorrhagic cystitis. It binds to and inactivates Ifosfamide metabolites. We give additional Mesna after Ifosfamide infusion is complete to keep protecting the bladder since Ifosfamide has a longer half-life than Mesna and stays in your system longer.

NOTES/STEPS:

Doxorubicin- Can be cardio toxic. Patients usually need a baseline echo prior to treatment. At discharge teach patients about signs and symptoms of congestive heart failure. This drug is also a potent vesicant which is why we give it through a central line. For extravasation management see policy: [1200-19 Vascular Vesicant/Irritant Administration and Extravasation](#).
This drug is red and may turn the patient’s urine red!

Ifosfamide- At risk for the Oncologic Emergency: Hemorrhagic Cystitis. This is lower urinary tract symptoms that include dysuria, hematuria, and hemorrhage.
Nursing interventions: Monitor urine output (goal 2-3 liters per day), maintain patient’s hydration, obtain a daily UA, and notify physician immediately if any blood in urine is visualized. Always administer Ifosfamide with Mesna (bladder protectant).

We are so focused on the bladder, we sometimes forget that Ifosfamide can also cause neurotoxicity (confusion, activity intolerance, fatigue).

 Regimen Name: FOLFOX		
 Diagnosis: Colorectal Cancer	 Time of Infusion: 2 hours plus 46 hour continuous infusion	 Central Access: Yes

PREP-WORK:

Labs: CBC/Diff, electrolytes, kidney function, LFTs, TBili
Central line (Oxaliplatin is a vesicant and infused over 2 hours, per our policy, any vesicant infusion over 1 hour requires a central line).

INGREDIENTS:

FOLinic acid (Leucovorin): Day 1 over 2 hours given concurrently with Oxaliplatin
Fluorouracil (5-FU): IV push followed by 46 hour continuous infusion
OXaliplatin: Day 1 over 2 hours
*Multiple Variations of FOLFOX, dosing will vary

SUPPORTIVE INGREDIENTS:

Antiemetics on Day 1 and PRN (Typically Patients do not get pre-medicated on Day 2)

NOTES/STEPS:

Baby It’s Cold Outside! **Oxaliplatin** acute neurotoxicity can be precipitated by cold exposure. Teach patients to avoid exposure to cold for 3-5 days after drug administration such as wearing scarves over face in winter, wearing gloves when going into the fridge or freezer, avoiding cold beverages.
Fun Fact: Patients who react to Oxaliplatin, usually do so in later cycles, not cycle 1

5FU: Inpatient administration will be given in 1 liter NS bags over 23 hours on Day 1 and Day 2. Outpatient administration will be given via CADD pump over 46 hours. If patient is admitted, patient may stay on CADD pump if clinically appropriate. MD will need to change orders from outpatient to inpatient. Be sure to instruct patients to avoid sun exposure because of increased photosensitivity and be aware of signs and symptoms of hand-foot syndrome.

Don’t forget! *Leucovorin* helps potentiate the effects of 5-FU, it does not act like rescue drug like it does for MTX.

FYI: DPD, dihydropyrimidine dehydrogenase is an enzyme our bodies make that helps us process thymine and uracil, which make up part of the structure of our genes. DPD also helps us break down the chemotherapy drugs fluorouracil and capecitabine. If you have low levels (a deficiency) of DPD you are more likely to have severe side effects from these chemotherapy drugs. Without DPD, the chemotherapy drug builds up in the body. These patients cannot receive 5-FU. The antidote when this happens is Uridine Triacetate.

For more information, contact:
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