Treatment Option for Chronic Lymphocytic Leukemia Tumors Via Chimeric Antigen Receptor Modified T Cells Therapy (CART-19) Felicia Morrison MSN, MBA, RN

Problem Statement

- NCI estimates 18,960 new cases of CLL in 2016
- 4660 of these will die of disease
- Median survival 5 years
- Improved treatment options with sustained remissions are urgently needed

Purpose

The purpose of this poster presentation is to increase awareness of a new treatment options

Goal

Educate novice and new beginner oncology nurses on a new treatment option for CLL patients.

Learning Objectives

- Describe the role of CART-19 therapy in the care of CLL patients,
- identify eligibility criteria for CART-19 clinical trial,
- recognize possible side effects from CART-19 infusion,
- discuss nursing management and antidote for cytokine release syndrome (CRS),
- evaluate knowledge gained.

Significance

Chimeric Antigen Receptor T-cells therapy (CART-19) are genetically enhanced T-cells (white blood cells) that have the ability to: distinguish, and execute cancer cells. (Blood Journal, 2015).

- Novel therapy still in the clinical trial phase
- Most nurses not familiar with this treatment, therefore they are unable to share knowledge, or care for a patient CART-19 recipients.
- Hence, this educational module for novice and new beginner oncology nurses is significant in order to increase awareness and promote health literacy.

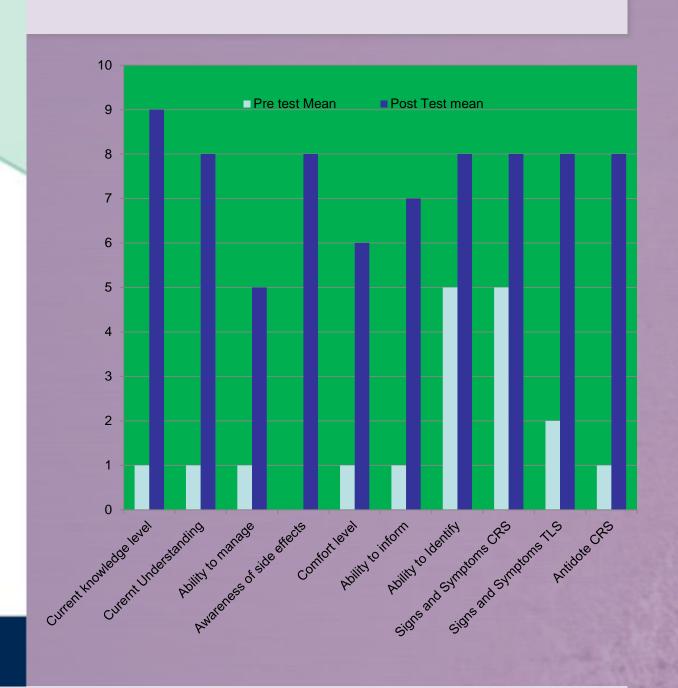
Evaluation

Designed to test knowledge, understanding, ability to manage, awareness, side effects, comfort level and antidote for patients undergoing CART-19 therapy

- Pre-test, followed by
- In Service, followed by
- Post test

RESULTS

Pretest proficiency 10% Posttest proficiency 80%



Reference

American Cancer Society (2016). Chemotherapy. Retrieved September 28, 2016 from: <a href="http://www.cancer.org/treatment/trea

Benner P. (2002). From novice to expert. The American Journal of Nursing. 82(3). 402-407 doi:1. Retrieved from http://www.jstor.org/stable/3462928 doi:1

2 Autolus engineers the T-cells to express

Engineered T-cells are administered back to patient

Chimeric Antigen Receptors (CARs)

Blood Journal. (2015). CD19-targeted chimeric antigen receptor T-cell therapy for acute

3 Engineered CAR T-cells recognise and destroy malignant cells

Lymphoblastic leukemia. Retrieved September 8, 2016 from: http://www.bloodjournal.org/content/bloodjournal/125/26/4017.full.pdf?sso-checked=true

D Porter. (2013, December 2). CART Therapy for CLL. Retrieved from: https://www.youtube.com/watch?feature=player_detailpage&v=nlMh9ieG58E

A cancer patient's immune system (T-cells)

fails to recognise malignant cells

Jean, G.W.. & Comeau, J.M. (2015). Role of obinutuzumab in the treatment of chronic lymphocytic leukemia. *American Journal Of Health- System Pharmacy*, 72(11), 933-942. doi:10.2146/ajhp140282

Leukemia and Lymphoma Society (2016). Chimeric Antigen Receptor (CAR) T-Cell Therapy. Retrieved September 28, 2016 from: https://www.lls.org/treatment/types-of-treatment/immunotherapy/chimeric-antigen-receptor-car-t-cell-therapy

National Cancer Institute (2016). Chronic Lymphocytic Leukemia. Retrieved October 7, 2016 from: https://www.cancer.gov/publications/dictionaries/cancer-terms?cdrid=346545

Rytting, M. E. (2016). Acute Leukemia Overview. Retrieved September 28, 2016 from: https://www.merckmanuals.com/professional/hematology-and- oncology/leukemias/acute-lymphocytic-leukemia-all

SEER Cancer Statistics Factsheets: Chronic Lymphocytic Leukemia. National Cancer Institute. Bethesda, MD, http://seer.cancer.gov/statfacts/html/clyl.html

