

### **Approach to Chemotherapy- Induced Nausea and Vomiting: New Strategy**

LISA HOLLAND, RN, MSN, ACNP, AOCN

For the past 20 years, patients have ranked nausea and vomiting at the top of the list for the worst side effects from chemotherapy. As newer agents are approved and utilized in practice, we have improved nausea and vomiting control rates from the 40% range to the 80% range. Every day clinicians have the opportunity to lessen this fear and to prevent nausea and vomiting due to a large number of effective anti-emetics available.

One of the objectives of this discussion is to describe the pathophysiology of nausea and vomiting. This includes review of the function of the vagus nerve, the chemotherapy trigger zone, and the vomiting center as applicable to chemotherapy-induced nausea and vomiting. This topic will include explanation of the neurotransmitters that have a role in emesis, including histamine, dopamine, acetylcholine, GABA, serotonin, and substance P. Further discussion will review historical treatments and new therapies available, including

agents that are histamine blockers, acetylcholine receptor antagonists, GABA receptor antagonists, dopamine antagonists, 5HT3 receptor antagonists, and the Neurokinin-1 receptor antagonist.

Anti-emetics should be individually tailored to each patient. Prior to the start of chemotherapy, it is helpful to ask the patient pertinent history questions to assess for their individual risk for emesis. It is also useful to review the chemotherapy regimen to help identify the potential a regimen has to induce emesis if no pre-medication is given. Lastly, it is beneficial to review guidelines that are readily available that help guide which anti-emetics are suggested for each type of regimen. With this information you will be ready to choose an anti-emetic regimen that is tailored to your patient and scientifically based.

### **Advances in Early Stage Breast Cancer**

DR. STEFAN GLÜCK

Early detection and adjuvant (post surgery) systemic therapy (Tamoxifen, Aromatase inhibitors

and Chemotherapy) led to a drastic decrease of mortality from breast cancer over the last 2 decades. Initially, CMF chemotherapy, later with the addition of anthracyclins and more recently, taxanes further improved clinical outcomes.

Compared with AC-T (T = Taxol® = paclitaxel) (whether delivered every 3 or 2 weeks = dose dense) where patients with ER + breast cancer experienced less efficacy, the concurrent combination of Docetaxel (Taxotere®) with AC = TAC showed the major benefit irrespective of the expression of estrogen receptor (BCRIG001). Although toxicities were present, most of them were only grade 1 and 2. The incidence of neutropenic fever was high but without G-CSF = filgrastim (Neulasta®). On 2 other studies filgrastim was shown to reduce neutropenic fever below 10%. The relative risk of recurrences compared with FAC, was reduced by 22%; and for deaths was reduced by 35%. At 5 years, overall survival with TAC was 87%, 6% better and statistically significant than the standard FAC regimen. The PACS01 study resulted in a similar improvement of survival from 86% (with standard 6 cycles of FEC) to

