**Presentation Category**: Original - Research Complete

**Abstract Title**

Evaluation of Abraxane Dosing in Gynecology Oncology Malignancies

**Learning Objective**

Describe the use of nab-paclitaxel in gynecology malignancies in terms of dosing patterns, outcomes and safety.


**Abstract**

**Purpose**

Paclitaxel-based regimens are recommended as first-line therapy for most gynecology oncology malignancies. However, hypersensitivity reactions occur in approximately 10% of these patients despite receiving premedication. Nab-paclitaxel (Abraxane) is a solvent-free formulation of paclitaxel associated with a lower rate (<1%) of hypersensitivity reactions. Although it may be a suitable alternative for patient with conventional paclitaxel (Taxol) hypersensitivity, there is minimal data on dosing in the gynecology oncology setting. According to the dosing recommendations in other solid tumors, paclitaxel is not substituted with nab-paclitaxel with 1:1 ratio. For example, in the treatment of metastatic breast cancer, the recommended doses for nab-paclitaxel and paclitaxel when given every 3 weeks are 260 mg/m$^2$ and 175 mg/m$^2$, respectively. For the same indication, the studied weekly dosing for nab-paclitaxel ranges from 100 to 150 mg/m$^2$, and for paclitaxel, it is 80 mg/m$^2$. Additionally, there is limited data on the safety profile of nab-paclitaxel in the gynecology oncology population compared to paclitaxel. We reviewed the use of nab-paclitaxel and paclitaxel at the University of Chicago Medicine (UCM) to assess the dosing patterns as well as the efficacy and safety outcomes of paclitaxel-based regimens in the gynecology oncology population.

**Methods**

This was a single-center, retrospective study that included adult patients treated with nab-paclitaxel or paclitaxel for gynecologic malignancies in both early and metastatic settings at UCM from January 1, 2011 to August 30, 2023. Based on the total number of nab-paclitaxel patients, a same number of paclitaxel patients were randomly selected as a control group. The primary endpoint of this study was the median initial dose of nab-paclitaxel and paclitaxel in mg/m2. The secondary endpoints included response rates for early and metastatic disease, as well as safety measures such as rates of neutropenia, anemia, thrombocytopenia, and peripheral neuropathy.

**Results**

There is no statistically significant difference in the median initial dose between paclitaxel and nab-paclitaxel (175 [135-175] mg/m2 vs. 125 [90-175] mg/m2, p=0.052). Both of the drugs were given every 3 weeks in combination with other agents such as carboplatin. There were 28 patients each in nab-paclitaxel and paclitaxel groups. 13 out of 28 (46%) of patients in each group had metastatic disease. The paclitaxel group had a greater rate of complete response than the nab-paclitaxel group (48.2% [13/27] vs. 29.6% [8/27], p=0.015). The paclitaxel and nab-paclitaxel groups had comparable rates of all grades of neutropenia (37% [10/27] vs. 25.9% [7/27], p=0.379), nausea (63% [17/27] vs. 48.2% [13/27], p=0.273), vomiting (40.7% [11/27] vs. 18.5% [5/27], p=0.135), anemia (70.4% [19/27] vs. 74.1 [20/27], p=0.761), thrombocytopenia (18.5% [5/28] vs. 0%, p=0.051), and peripheral neuropathy (74.1% [20/27] vs. 55.6% [15/27], p=0.154).

**Conclusions**

At UCM, patients received similar initial doses of paclitaxel and nab-paclitaxel in the treatment of early or metastatic gynecologic malignancies, demonstrating a comparable safety profile. The complete response rate in paclitaxel group was higher than nab-paclitaxel, suggesting that patients in nab-paclitaxel group might be underdosed.

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