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**Preliminary results of continuation maintenance treatment with pemetrexed in advanced non-squamous non-small cell lung cancer (NSCLC) patients after prior induction chemotherapy– single-arm phase II study**

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**Statement of the Problem:** Lung cancer remains one of the leading causes of cancer-related death worldwide. Extending the duration of treatment with the initial platinum based chemotherapy beyond four to six cycles has been evaluated. The aim of this study is to investigate efficacy and toxicity of continuation maintenance treatment with pemetrexed (Alimta) in patients displaying disease control after four cycles of induction with cisplatin plus pemetrexed in advanced non-squamous (NSCLC).

**Methodology & Theoretical Orientation:** Between April 2013 and April 2015, 16 patients with pathologically proven stage III/IV, non-squamous NSCLC, in Clinical Oncology Department, Tanta University Hospital and Tanta Insurance Hospital who had received prior four cycles of induction with cisplatin (75 mg/m<sup>2</sup>) plus pemetrexed (500 mg/m<sup>2</sup>) every 21 days without disease progression were enrolled. Patients received continuation maintenance treatment with pemetrexed (500 mg/m<sup>2</sup>, every 21 days). The primary endpoints of the study were the overall survival and progression-free survival and the secondary endpoint was the safety profile.

**Finding:** A total of 64 chemotherapy cycles of continuation maintenance pemetrexed were administered. Patients were treated with a median number of 4 cycles (range 2-30 cycles). Two patients received no more than 2 cycles due to rapid disease progression. The estimated median PFS and OS were 7.5 and 17 months, respectively. Treatment-related adverse events were manageable with only 1 patient (6.25%) suffered from Grade 3 anemia and another 1 patient (6.25%) suffered from Grade 4 neutropenia. All patients received full doses of pemetrexed throughout the study. There was no treatment-related death.

**Conclusion & Significance:** Using the continuation maintenance regimen with pemetrexed preceded by four cycles of induction with cisplatin plus pemetrexed represents an obvious treatment advance with an acceptable clinical profile for patients with non-squamous NSCLC.

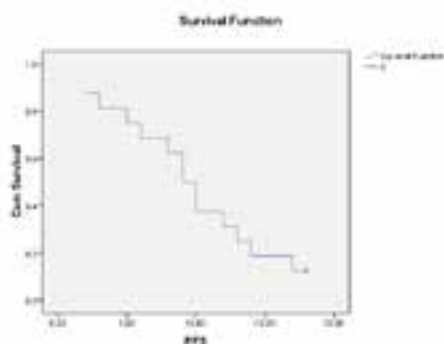


Figure 1: Kaplan–Meier curve of progression-free survival.

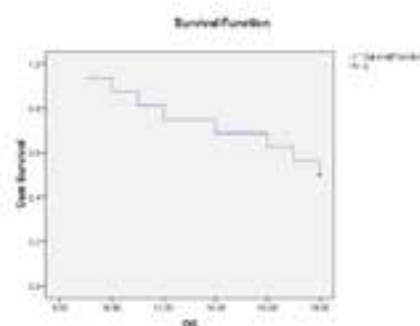


Figure 2: Kaplan–Meier curve of overall survival.

**Biography**

Nesreen Mohamed Sabry Afifi Mattar works as a Lecturer of Clinical Oncology at Tanta University Hospital and as a Consultant in Insurance Hospital. He has experience in Teaching to the Postgraduates. He completed his Master Degree in comparative study between chemoradiation and surgery in bladder cancer. His MD was about comparative study between R-CHOP and CHOP in DLBC NHL according to biomarker mutation (bcl2, p53). Recently, he has published a paper about the role of lapatinib in combination with letrozole in postmenopausal breast cancer women.

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