Title: Combination of erlotinib and bevacizumab in non small cell lung cancer patients

Mrs. Efimia 20641 Boutsikou efimi_b@yahoo.gr MD , Prof. Theodoros 20642 Kontakiotis kontak@auth.gr MD , Mr. Pavlos 20643 Zarogoulidis pzarog@hotmail.com MD , Prof. Dr Paraskevi 20644 Pataka pataka@med.auth.gr MD and Prof. Dr Kostas 20645 Zarogoulidis zarog@med.auth.gr MD . ¹ Pulmonary Department of Aristotle University of Thessaloniki, G. Papanikolaou Hospital, Thessaloniki, Greece .

Body: Bevacizumab and Erlotinib have recently been demonstrated to prolong overall survival in patients with non squamous NSCLC. We present the results of α 4 arm trial we designed to evaluate the efficacy and toxicity of the combination of docitaxel, carboplatin, bevacizumab(B) and erlotinib(E) in the first-line treatment of patients with NSCLC. 229, stage IIIb-IV, non squamous NSCLC patients were treated with 2 cycles of carboplatin (AUC5.5)and docitaxel (100 mg/m²)(CT). After completion of two treatment cycles, pts were evaluated for response and divided into 4 groups: 61/229 continued with 4 more cycles of CT(control group), 52/229 received CT plus E 150mg daily,56/229 received CT plus B 7.5mg/kg and 60/229 were treated with the combination of CT, E and B until disease progression. The primary endpoint was overall survival(OS). In the 4 years follow up of the study, there was no statistical difference in survival and time to progression among four groups. After division of pts according to their response in responders and non responders after 2 cycles of chemotherapy, non-responders who received additional therapy with bevacizumab or combination therapy had a survival benefit(657d (349-970)and 681(315-912)retrospectively),which is statistically significant compared with the continuation of treatment with cytotoxic chemotherapy(p<0.001). The combination therapy had a comparable safety profile with that of B and E taken individually. Administration of B+E in combination with first-line chemotherapy, followed by bevacizumab and erlotinib monotherapy as maintenance, has shown promising results in pts with NSCLC, with reduced toxicity as compared with chemotherapy alone, but did not translate into a longer OS.