**Aim:** Metastatic melanoma usually has a dismal prognosis, also because its treatment options have been deluding for long time: until recently, systemic therapies were limited, with poor response rates and survival advantage. Ipilimumab is a monoclonal anticytotoxic T-lymphocyte antigen 4 antibody that was demonstrated to improve survival of metastatic melanoma patients, but may be associated with immunological toxicities. This is an independent pilot study aimed to identify predictors of response to therapy with ipilimumab in the metastatic melanoma setting.

**Methods:** Prospectively collected data of 93 consecutive patients with metastatic melanoma, who received therapy with ipilimumab (3mg/kg, q3w), were analysed under a Cox regression model to identify prognostic factors. We analyzed clinical data (sex, melanoma characteristics, age at recurrence, relapse-free interval (RFI), metastasis characteristics, previous therapies, baseline biological data (blood levels of LDH, C-reactive protein (CRP), beta2-MG, VEGF, IL2, IL6, S-100, ALP, transaminases, circulating total leucocytes and subpopulations) and the same biological data before the second cycle of therapy. Multivariate analysis of variance was performed with Wald method.

**Results:** After a mean survival of 8.27 months from first ipilimumab administration, 54 patients were dead, 12 month survival was 31.7%. Resulted associated with prognosis: sex (male HR = 0.09, 95%CI 0.004-0.182), trunk as primary site of melanoma (HR = .31, 95%CI .09-.97), RFI (protective effect of long RFI, HR = .93, 95%CI .90-.97), baseline eosinophyls (HR = 9.71 for eosinophylia, 95%CI 6.24-150.80); difference of total mature T-lymphocyte (better prognosis if increasing, HR = .68, 95%CI .50-.91), difference of T-suppressor/cytotoxic (CD8) (worse prognosis if increasing, HR=.96, 95%CI 1.0-1.5), difference of NK (protective effect of increase, HR= .77, 95%CI .59-.99). A worse prognosis was conferred by LDH increase (HR = 1.10, 95%CI 1.01-1.10), CRP decrease (HR = .94, 95%CI .90-.98), IL6 increase (HR = 1.15, 95%CI 1.01-1.36). After ANOVA only sex (<.001), CD8 (p = .021), NK (p = .048) and IL6 increase (p = .032) were associated with survival.

**Conclusions:** The predictors are feasible for every center and could be proposed for further validation to identify patients who would benefit from therapy with ipilimumab.

**Disclosure:** All authors have declared no conflicts of interest.