J Pharmacogenomics Pharmacoproteom 2018, Volume 9 DOI: 10.4172/2153-0645-C1-022

8th European Conference on

Predictive, Preventive and Personalized Medicine & Molecular Diagnostics

August 20-21, 2018 | Rome, Italy

Efficacy of metformin in treatment of patients with advanced prostate cancer: Single-arm phase II clinical study

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Aim: To evaluate the efficacy of metformin (Glucophage) in patients with advanced prostate cancer.

Methods: 26 patients with advanced prostate cancer either treatment naïve or previously treated were subjected to metformin therapy. Metformin was administered daily as Glucophage 1000 mg twice daily concomitantly with SOC treatment continuously till disease regression, drug toxicity or patient refusal.

Results: The median age of studied patients was 65 years, range (59-75) with median body mass index 25.75 range (17-40), 18 cases have ECOG PS of one and the remaining cases were ECOG 2. Of 26 patients, 17 are treatment naïve while 9 of them were subjected to previous SOC treatment. The overall response (CR, PR) was 53.8%, no response (SD, PD) represented 46.2% and the median time to tumor progression (TTP) was 18 weeks, but it was significantly differed in previously treated cases and treatment naïve cases, in which median TTP in previously treated case was 8 weeks compared to 32 weeks in treatment naïve cases [p:<0.001, HR (95%CI) 12.326 (3.212-47.306)].

Conclusion: Metformin was well tolerated and had encouraging results for patients with advanced prostate cancer.