Meetings International SciTechnol

International Conference on
CANCER THERAPY &
International Conference on
VACCINES & VACCINATION

July 23-24, 2018 | Osaka, Japan

J Clin Exp Oncol 2018, Volume: 7
DOI: 10.4172/2324-9110-C3-015

LCZ 696 is superior to Valsartan in the prevention of cardiotoxity induced by trastuzumab, pertuzumab and Trastuzumab-DM1 monoclonal antibodies

N. Maurea[1], R. Paciello[1], G. Piscopo[1], G. Sorrentino[1], C. Maurea[1], C. Coppola[1] and **C. De Lorenzo[2,3]**
[1]Division of Cardiology, Istituto Nazionale Tumori – IRCCS – FONDAZIONE G. PASCALE, NAPLES, ITALY
[2]Department of Molecular Medicine and Medical Biotechnology, University 'Federico II', Naples, Italy
[3]Ceinge – Advanced Biotechnology S.C.ar.l., Via Gaetano Salvatore, Naples, Italy

Cardiotoxic effects related to anticancer drugs are among the leading causes of morbidity and mortality in cancer patients treated with Trastuzumab (T), Pertuzumab (P) and Trastuzumab-DM1 (TDM1) [1-3]. Sacubitril-valsartan (LCZ 696), a drug used for the treatment of heart failure in patients with a reduced ejection fraction, is a combination drug, made up of neprilysin inhibitor sacubitril and angiotensin II receptor blocker valsartan. In this study, we aim to assess whether LCZ 696, administered during T, P or TDM1 treatment, reduces in vitro anticancer drugs-related cardiotoxicity, more efficiently respect to Valsartan (V). We used our in Vitro model, the H9C2 rat cardiomyoblasts, treated with 200 nM of T, P or TDM1 for 3 days, and then treated in the absence or presence of 10 μM of LCZ 696 or V for additional 3 days.

Our results show that LCZ 696 is superior respect to V in the reduction of the cardiotoxic effects of T, P and TDM1, when administered to cultures of H9C2 cardiomyoblasts after antineoplastic treatments. Indeed, LCZ 696 was significantly more effective than V in reducing T related cardiotoxicity, increasing cell viability of 25 % more, respect to V ($p<0.001$). LCZ 696 is more strong in the reduction of P related toxicity, increasing cell viability of 35% more respect to V, with $p<0.001$. And finally, again more effective than V in reducing TDM1 toxicity, increasing cell viability of 10 % ($p<0, 05$).

n.maurea@istitutotumori.na.it