Taiwanese Journal of Obstetrics & Gynecology 56 (2017) 581–582

Contents lists available at ScienceDirect

Taiwanese Journal of Obstetrics & Gynecology

journal homepage: www.tjog-online.com

Editorial

Outstanding female cancer research paper awards of the 2016 Taiwan Association of Obstetrics and Gynecology and Hsu Chien-Tien Cancer Foundation

In this October issue of the journal, we are glad to introduce the winners of the 2016 Taiwan Association of Obstetrics and Gynecology and Hsu Chien-Tien Cancer Foundation Outstanding Female Cancer Research Paper Awards. The awards were selected from among research papers addressing female cancers and being published in 2016, and the first author should be a member of the Taiwan Association of Obstetrics and Gynecology (TAOG). The 2016 Golden Award winner is Dr. Sung, for her excellent research paper entitled "Periostin in tumor microenvironment is associated with poor prognosis and platinum resistance in epithelial ovarian carcinoma" [1]. The 2016 Silver Award winner is Dr. Fu, for his research paper entitled "Increased expression of SKP2 is an independent predictor of locoregional recurrence in cervical cancer via promoting DNA-damage response after irradiation." [2]. The 2016 Cupper Award winner is Dr. Chao, for her research paper entitled "Implication of genomic characterization in synchronous endometrial and ovarian cancers of endometrioid histology" [3]. All winners received their honors at the *Annual Meeting of the Taiwan Association of Obstetrics and Gynecology* on March 18 and 19, 2016, held in Taipei, Taiwan.

The Golden award-winning research article was published in the January 2016 issue of the *Oncotaget* [1]. The authors pioneered to find that the interplay (for example, periostin) between microenvironment and epithelial ovarian cancer might cause chemoresistance and further result in the worse prognosis of patients with epithelial ovarian cancer [1]. Furthermore, the authors found the down-stream target of periostin was protein kinase B (AKT) pathway and concluded that AKT inhibitor might be beneficial to augment the efficacy of existing cancer treatment [1]. This concept—the combination of the targeted therapy and conventional chemotherapy is very important in the cancer treatment. For example, recent study showed that α2,3-linked silalylation inhibitor may be useful in future ovarian cancer therapy to synergize with tyrosine kinase inhibitors (or epidermal growth factor receptor-[EGFR] inhibitors) and/or conventional chemotherapy, since the following observations were found, including (1) cells treated with both soyasaponin I (SsaI) and EGFR inhibitor showed significant inhibition of tumor invasion in the Transwell invasion assay compared to cells treated with SsaI alone or the negative control; (2) EGF stimulation was suppressed by SsaI treatment in the Transwell matrigel assay; and (3) synergistic effects of the SsaI and EGFR inhibitor combination over several concentrations [4]. Our recent review showed limitations of the use of targeted therapy in the cancer treatment, because a big gap between basic research (bench) and clinical use (bed) should be crossed. However, a multi-targeted tyrosine kinases inhibitor, phosphatidylinositol 3-kinase/AKT/mammalian target of rapamycin (PI3K/AKT/mTOR) inhibitors, various kinds of growth factor and/or growth factor receptor inhibitors, and antiangiogenic agents, including vascular disrupting agents, and immune checkpoint inhibitors and/or immunotherapy, might represent promising drugs for the future cancer treatment [5].

The Silver award-winning research article by Dr. Hung-Chun Fu was published in the July 2016 issue of the *Oncotarget* [2]. Authors tried to investigate the cause of treatment failure in patients with cervical cancer treated by radiation. Cervical cancer, although the incidence declines dramatically due to the successful screening of precancer lesions and possible benefits of vaccination, is still a big challenge in the treatment for the loco-advanced stage [6]. Dr. Fu found that overexpression of S-phase kinase-associated protein 2 (SKP2) is associated with higher loco-regional recurrence rate (hazard ratio [HR]: 3.76, $p < 0.001$), higher recurrence rate (HR: 2.52, $p < 0.001$), and higher mortality rate (HR: 2.01, $p < 0.001$), suggesting that targeted SKP2 therapy could be used as a potential radiosensitizer for developing effective therapeutic strategies against cervical cancer [2].

The Cupper award-winning research article by Dr. Angel Chao was published in the October 2016 issue of the *Gynecologic Oncology* [3]. The authors used genomic study to show that most synchronous endometrial and ovarian cancers of endometrioid histology originated from a single tumor [3]. In fact, the other paper from the Dr. Angel Chao emphasized the importance of implication of genomic study to determine the further treatment on cancer patients [7]. The authors used next generation sequencing (NGS) to detect BRCA1/2 mutations of 99 patients with ovarian cancers (46 cases of serous carcinoma, 24 cases of endometrioid carcinoma, and 29 cases of clear cell carcinoma) and found deleterious BRCA1/2 mutations in 12.1% of Taiwanese patients and germline BRCA1/2 mutations in 8.1% of Taiwanese patients, suggesting that BRCA1/2 mutations are common in Taiwanese patients, which are similar to mutation rates in other ethnic groups [7]. The strength of Dr. Chao's study included (1) the use of NGS for screening; and (2) a relatively big number of patients with clear cell carcinoma [7]. It is very important that Asia population, including Taiwanese, have a very high percentage of endometriosis-associated ovarian cancers, especially clear cell carcinoma compared to Western

http://dx.doi.org/10.1016/j.tjog.2017.08.001

populations [8–10]. To evaluate the BRCA1 mutation is not new. In fact, in 2000, using single-strand conformation polymorphism method, we tested 68 patients with epithelial ovarian cancers to find only one BRCA1 germline stop mutations in these patients [11]. Originally, we supposed that the BRCA1/2 mutation rates might be lower. Based on the importance of personalized and precise medicine treatment for cancer, the therapeutic effect of some targeted agents is apparently promising; therefore, it is welcome that Dr. Chao re-tested BRCA1/2 mutations. According to the results of Dr. Chao [7], wide whole gene screening, including germline and somatic mutations, might be needed before the initiation of current therapy for cancer patients, although it needs much more evidence.

Finally, as a president of the *Taiwan Association of Obstetrics and Gynecology*, and an Editor-in-Chief and a Deputy Editor of the *Taiwanese Journal of Obstetrics and Gynecology*, we are pleased to congratulate all of our award-winning doctors on their winning of the *Outstanding Research Article Award* in Hsu Chien-Tien Cancer Foundation. We believe that with much more support and contribution by society, foundation, public, government, and of most importance, doctors in Taiwan [12–15], excellent and perfect women's care will be continuous.

Conflict of interest

All authors declare no conflict of interest.

Acknowledgments

Supported by grants from the Ministry of Science and Technology (MOST), Executive Yuan (MOST-103-2314-B-010-043-MY3 and MOST-106-2314-B-075 -061 -MY3 to P.H. Wang and MOST-103-2314-B-195-010 and MOST-104-2314-B-195-009 to C.P. Chen), Taipei Veterans General Hospital (V106C-129; V106D23-001-MY2-1; and V106A-012 to P.H. Wang) and Mackay Memorial Hospital (MMH-E-105-04 to C.P. Chen).

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