

Fertility-sparing surgery in high-risk ovarian cancer

To the editor: Ovarian cancer is considered one of the most lethal gynecological malignancy, characterized by a high death/incidence ratio [1,2]. Median age at diagnosis was 63 years (range, 55 to 64 years) [1]. However, it is estimated that about 10% of ovarian cancer cases will be diagnosed in women in reproductive age [1-3]. In fact, in the United States more than 10,000 new cases of ovarian cancer will occur in women younger than 40 years old [1,2]. Although, standard surgical procedure in ovarian cancer patients leads to permanent sterility (since it includes the execution of hysterectomy plus bilateral salpingo-oophorectomy), young women who wish to preserve their childbearing potential may benefit by conservative (with uterine and contralateral adnexal preservation) approach.

To date, no level A evidence comparing fertility sparing surgery (FSS) and radical comprehensive surgery (RCS) is available. The low proportion of young women diagnosed in the early stage of disease and ethical concerns are the main factor limiting the execution of a randomized trial comparing these two approaches. Growing evidence suggests that after comprehensive staging, FSS is a safe and effective procedure in low-risk ovarian cancer patients, those classified as stage IA and IB, grade 1 or 2 (according to the International Federation of Obstetricians and Gynecologists, FIGO) [2-6]. However, accumulating data support that FSS staging may be safe in high-risk early stage ovarian cancer (stage IC or stage IA or IB grade 3 ovarian cancer). Although a few authors reported concerns on the application of FSS in high-risk early stage ovarian cancer, no evidence support that the execution of RCS overcomes outcomes of a conservative treatment in young women [2,4,5].

Recently, Utrilla-Layna and Zapardiel [7] published a letter questioning the role of FSS in high-risk early stage ovarian cancer patients. Albeit FSS can not be considered as the standard treatment for these patients, their concerns are supported by any level of evidence. In particular, several investigations suggested that a conservative approach might be applied without long-term oncologic detriments [7]. Obviously, we acknowledge that patients affected by high-risk ovarian cancer experience bear worse oncologic outcomes than patients with low-risk ovarian cancer. However, a recently published

investigation from our study group including more than 300 patients affected by early stage ovarian cancer, suggested the safety of conservative approach in early stage ovarian cancer. Moreover, a sub-analysis of our data suggested that the execution of FSS rather than RCS does not influence outcomes of high-risk ovarian cancer [2]. Using a propensity-matched comparison (in order to minimize possible selection bias) we observed that high-risk ovarian cancers are characterized by similar disease-free and overall survivals than patients undergoing RCS [2]. Similarly, data of 221 patients, undergoing FSS in 30 institutions (belonging to the Gynecologic Cancer Study Group of the Japan Clinical Oncology Group), suggested that stage IC ovarian cancer or patients with unfavorable histology (e.g., clear cell) may benefit from conservative approach [5]. In agreement with others, this study reported that salvage therapy following local (ovarian) recurrence is highly effective, achieving an excellent oncologic control [5,6].

Therefore, owing the current evidence and the impact of RCS on quality of life of young women who wish to preserve their childbearing potential and endocrine function, we believe that FSS should not also be denied in high-risk ovarian cancer. Depriving a young woman of her reproductive function with unnecessary surgical procedures should be a real source of concerns. Accurate counseling and a strict follow-up are needed. Further multi-institutional prospective well-designed studies are warranted in order to improve patients' oncologic outcomes and their quality of life.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

REFERENCES

1. National Cancer Institute. SEER stat fact sheets: ovary cancer [Internet]. Bethesda, MD: National Cancer Institute; [cited 2015 Jun 29]. Available from: <http://seer.cancer.gov/statfacts/html/ovary.html>.
2. Ditto A, Martinelli F, Bogani G, Lorusso D, Carcangiu M, Chiappa V, et al. Long-term safety of fertility sparing surgery in early stage ovarian cancer: comparison to standard radical surgical procedures. *Gynecol Oncol* 2015;138:78-82.

3. Ditto A, Martinelli F, Lorusso D, Haeusler E, Carcangiu M, Raspagliesi F. Fertility sparing surgery in early stage epithelial ovarian cancer. *J Gynecol Oncol* 2014;25:320-7.
4. Raspagliesi F, Fontanelli R, Paladini D, di Re EM. Conservative surgery in high-risk epithelial ovarian carcinoma. *J Am Coll Surg* 1997;185:457-60.
5. Satoh T, Hatae M, Watanabe Y, Yaegashi N, Ishiko O, Kodama S, et al. Outcomes of fertility-sparing surgery for stage I epithelial ovarian cancer: a proposal for patient selection. *J Clin Oncol* 2010;28:1727-32.
6. Fruscio R, Corso S, Ceppi L, Garavaglia D, Garbi A, Floriani I, et al. Conservative management of early-stage epithelial ovarian cancer: results of a large retrospective series. *Ann Oncol* 2013;24:138-44.
7. Utrilla-Layna J, Zapardiel I. Are we ready for conservative treatment in ovarian cancer? *J Gynecol Oncol* 2015;26:75-6.

Antonino Ditto, Giorgio Bogani, Fabio Martinelli, Francesco Raspagliesi

Department of Gynecologic Oncology, IRCCS Foundation, National Cancer Institute, Milan, Italy

Correspondence to Giorgio Bogani

Department of Gynecologic Oncology, IRCCS Foundation, National Cancer Institute, Via Venezian 1, 20133 Milan, Italy. E-mail: giorgio.bogani@istitutotumori.mi.it

<http://dx.doi.org/10.3802/jgo.2015.26.4.350>

