Unknown risk of the reintroduction of malignant cells in a Danish cohort of women autotransplanted with ovarian tissue

To the Editor:

Ovarian cryopreservation appears to hold much promise for fertility preservation of women undergoing gonadotoxic therapy. In the Netherlands, cryopreservation of ovarian tissue has been performed for a number of cancer patients. No autotransplantation of ovarian tissue has been performed thus far because of the risk of reintroducing the malignancy with the transplant, among other concerns. The available literature on this subject is not unequivocal. For example, Shaw et al. (1) have shown in a mouse model that lymphoma can be transmitted to the recipient by both fresh and frozen ovarian tissue grafts. Kim et al. (2), on the other hand, reassuringly demonstrated that none of the mice that were xenografted with human ovarian tissue fragments derived from patients with (non)Hodgkin lymphoma developed the disease.

It is therefore with great interest that we read the recent article by Schmidt et al. (3), describing their results with the autotransplantation of cryopreserved ovarian tissue in a heterogeneous cohort (with regard to their disease) of Danish women with radiotherapy- or chemotherapy-induced premature ovarian failure. Remarkably, the authors did not provide any data on whether screening for residual disease was actually performed, and if so, by which method(s). This is even more striking considering the paper by the same research group, in which Rosendahl et al. (4) reported that ovarian cortex was actually found to harbor leukemic cells, as determined by polymerase chain reaction. As a consequence, these authors recommended no autotransplantation of ovarian tissue in these patients.

We realize that, inherent to their diffuse growth pattern, leukemic tumors are much more likely to disseminate to ovarian tissue compared with solid tumors. However, we still think that in patients with solid tumors the risk of metastases in the transplant deserves to be properly addressed as well. In addition, we are very much interested in how the patients were counseled before the autotransplantation on the risk of reintroducing the malignancy.

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