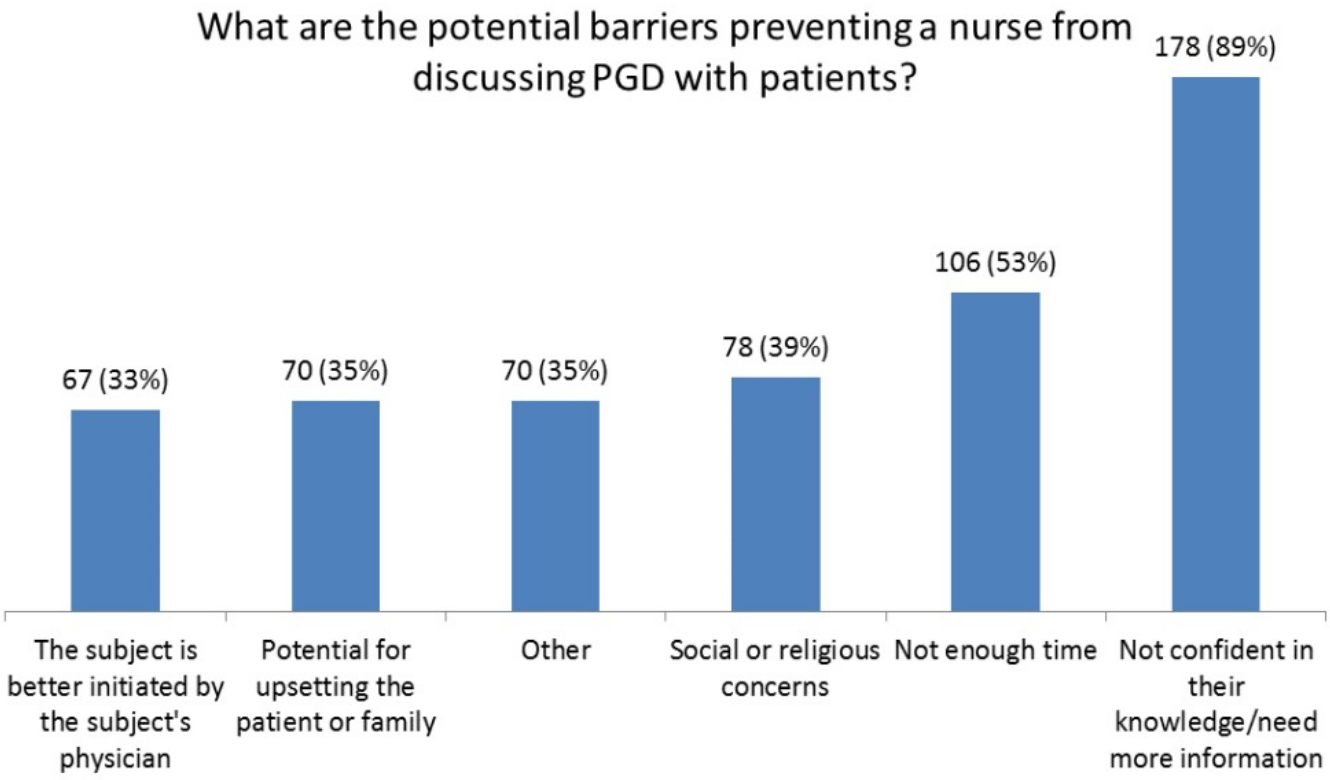
A reproductive technology to reduce cancer risk

Preimplantation Genetic Diagnosis (PGD) is a type of assisted reproductive technology (ART) allowing individuals/ couples to choose which fertilized embryos, created through in vitro fertilization (IVF), are implanted into a woman's uterus for further gestation. Since its introduction, PGD has been most commonly used to test embryos, prior to implantation, for genetic disorders. More recently, PGD has expanded to the examination of the embryo's genome for mutations, allowing screening for serious diseases, like Tay Sachs, prior to prenatal testing and to avoid pregnancy termination. In addition, PGD can also be used to test for inherited cancer susceptibility syndromes, such as Familial Adenomous Polypopsis (FAP) or Hereditary Breast Ovarian Cancer (HBOC) Syndrome,. Based on PGD results, some couples may select to implant only those embryos without the mutation present. Many high-risk individuals have concerns about transferring these mutations to their offspring and may avoid or delay childbearing, especially if they are unaware of these options. Therefore, those who are affected by or are at risk for hereditary disease are increasingly turning to genetic counseling and testing.

Oncology Healthcare professionals are in an ideal position to provide key information for decision-making as well as clinical care, and support regarding reproductive health concerns. A member of oncology care teams is the nurse, who often is the first point of contact and has multiple interactions with patients. As such, they are well positioned to provide reproductive health resources, including discussions and referrals, for patients about sensitive quality of life issues, such as PGD, however; there are limited studies examining nurses' knowledge and attitudes regarding PGD.

At Moffitt Cancer Center in Tampa, Florida, a 32-item survey was distributed to 402 nurses via an institutional listserv. This survey was divided into three sections that measured demographics, knowledge and awareness, and educational needs regarding PGD among oncology nurses. Two hundred and one nurses (50%) completed the survey. The majority were female (n = 188), white (n = 175), Catholic (n = 81) or Atheist (n = 63), held a RN/BSN degree (n = 83), and provided outpatient care at the Cancer Center (n = 102). Respondents worked in a variety of clinic/cancer sites. More than half (64%) of respondents were aware of a genetic counseling program where a cancer patient could be referred for more information about hereditary cancers, while only 6% had previously personally had a cancer-related genetic test to identify potential mutations. Prior to the survey, 78% of respondents had not heard of PGD. Among those reporting prior knowledge of PGD, over half (59%) rated their knowledge as limited. However, 29% of the nurses indicated they themselves would consider using PGD.

The majority (89%) indicated a primary barrier preventing them from discussing PGD with patients was a lack of confidence in their knowledge on the subject. Additionally, nurses perceived they did not have enough time to talk about PGD (53%), had social or religious concerns about discussing PGD with patients (39%), felt the subject was better initiated by a physician (35%), and believed there was potential for upsetting the patient or family (33%) (Fig. 1).



Nurses who participated in this survey had limited knowledge and some reservations about use of PGD due to their lack of knowledge and discomfort. It is essential that oncology nurses are educated about PGD so they can provide information and resources to interested patients and families. Thus, there is a need to develop targeted training about PGD, which should include education and communication skill building to improve the unbiased and ethical provision of information and resources.

Publication

Knowledge and Educational Needs about Pre-Implantation Genetic Diagnosis (PGD) among Oncology Nurses.
Quinn GP, Knapp C, Sehovic I, Ung D, Bowman M, Gonzalez L, Vadaparampil ST
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