



Slide 1



Memorial Sloan Kettering
Cancer Center

Bringing Fertility Preservation to the Bedside


Nora Love, MS, RN, CNS, CURN, OCN®
Nicole Krist MSN, CNS, AOCNS®, BMTCN®, OCN®
Department of Nursing - Clinical Nurse Specialist
Memorial Sloan Kettering Cancer Center



Slide 2

Objective

- Illustrate the process necessary for sperm banking.
- Understand the complications involved in obtaining a specimen from a patient admitted to an acute care hospital.
- Describe steps taken by CNS group to implement a successful Inpatient Sperm Banking Program.




Slide 3

Background & Significance


Cancer Treatment May Affect Fertility

- Chemotherapy and testicular radiation exposure can impair sperm production:
 - Some patients will recover sperm production, but cannot predict recovery with certainty
 - Extent of recovery varies
 - Timing of recovery varies



Slide 4

- Pelvic radiation and surgery may cause:
 - Injury to pelvic ducts, blood vessels, and/or nerves
 - Erectile Dysfunction or Retrograde Ejaculation
- Cranial radiation and surgery may cause pituitary gland dysfunction:
 - Hormonal changes
 - Tissue destruction

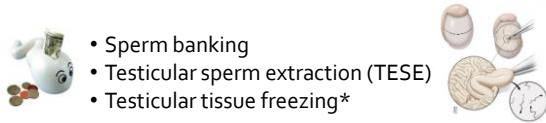


Slide 5

Fertility Preservation Techniques


Males:

- Sperm banking
- Testicular sperm extraction (TESE)
- Testicular tissue freezing*




Females:

- Embryo and egg freezing
- Ovarian transposition
- Ovarian tissue freezing*




(* experimental)



Slide 6

Sperm Banking


- The collection, freezing, and storage of sperm for possible future use.
 - To increase the likelihood of having a biologic child if the patient is infertile after treatment.
- An option only for adolescents & adults.
- Usually collected by masturbation at a specially licensed laboratory.



Slide 7

Fertility and the Cancer Patient


- Approximately 1 in 10 men diagnosed with cancer are below the age of 45.
- Testicular cancer, Hodgkin's disease, acute leukemia, non-Hodgkin's lymphoma and sarcoma are the most common cancers that affect males of reproductive age.
- Survival rates > 95% in early-stage disease with testicular cancer and Hodgkin's disease.
- Fertility is an important Quality of Life factor for these patients.



Slide 8

Attitudes About Sperm Banking


- The American Society of Clinical Oncology (ASCO) advocates sperm cryopreservation as an effective method of fertility preservation.
- Over one half of cancer patients desire future fertility.
 - Including 75% of those without children at time of diagnosis.
- Schover et al. (2002) showed that over 90% of oncologists believe sperm banking should be offered to all men undergoing cancer treatments
 - Half of these physicians failed to do so.
 - Only 10% claimed to offer to all eligible men.



Slide 9

Barriers to Sperm Banking

- Lack of knowledge among practitioners.
- Time required to obtain specimen.
- High cost associated with entire process of cryopreservation.
- Lack of convenient facilities.



Slide 10

Oncology nurses are identified as the key members of the healthcare team to discuss infertility and sperm banking with their patients.

(Koeppel 1995, Williams 2010)



Slide 11

Question




How can we provide sperm banking to the inpatient population?



Slide 12

Bridging the Gap at MSKCC

- Fertility Nurse Specialist contracts with Sperm Bank.
- Training a core group from the inpatient CNSs (GU/Urology, Hematology, BMT).
- Establish "On-Call Calendar" for complete house wide coverage.
- Electronic referral system to expedite procedure.
- Updated web page with links to educational material, forms and a check-list.



Slide 16

Electronic Referral System & Order Set

Immunized Devices: Immunized Device. Allergies: No known allergies. See Pt Info Tab for details. Visit Info: 06/05/2017 16:07 DSC

Options Panel: Chart Selection: This chart. All available charts. Date Range: Based on date. Ordered. From: 06/02/2017. To: . Retain selections for next patient. Display Format: Order Entry Session. Filters: Status/Priority: No Status/Priority Filter. Order Selection: No Order Selection Filter. Department: .

All orders for this chart for entry dates from 06/02/2017:
 Display Format: Order Entry Session: Grouped/Sorted by: Order Entry Session Date (# of 205 selected)

Order Summary	Order Date	Status	Step Date
Inpatient Semen Collection Sperm Bank Referral Inpatient - Diagnostic Test, Malignant Neoplasm Special Instructions: Patient is currently hospitalized and is too ill to leave. Semen collection must be completed before starting cancer treatment. Patient may collect multiple specimens. Special Instructions 2: If feasible, divide specimen into vials with at least 1 million motile sperm/vial. Call referring clinician if patient is oncogenetic...	06/06/2017	Completed/Ex	06/08/2017 03:29

WIPU2048 (Clinic) VSHSPCTXAG018 (0.2.430.7005) VSCSPMWBHE11 Love, Nora (RN) 1/23/2018 14:42 00024 Production

Slide 17

Web Page

OneMSK
 Home | Tables of Contents | Press & Papers | Policy Center | News Clippings | MSKCC.org

Clinical | Research | Education | Career & Benefits | Administrative | Tools & Apps

Cancer and Fertility
 About the Program
 For Males
 For Females
 Patient Education
 Clinician Resources
 Sexual Activity
 Contact Us
 My Favorites

Sperm Banking - Inpatient

Please note this content was updated 11/8/2017.

Hospitalized patients can obtain a semen specimen for sperm banking before starting treatment. The specimen will be picked up by Regiro Lab to be analyzed, frozen, and stored for the patient's possible use in the future.

To refer a patient for inpatient sperm banking:
 Submit a FERTILITY CONSULT - INPATIENT order in CSE.
 Release the order from hold to ensure notification is sent.

One of the Fertility Nurse Specialists (FNS) will review the order, discuss relevant issues with the referring team, and designate a member of the Inpatient Sperm Banking Team to assist the patient if needed.

Keep the following logistical issues in mind:
 Regiro Lab is open every day except Christmas and New Year's. On other holidays they are open weekend hours.
 Monday - Friday: select specimen pickup at 12:30 PM
 Family can transport specimen up until 3 PM
 Saturday - Sunday: no pickup is available
 Family can transport specimen up until 10 AM

If patients are scheduled for any exams using radioactive isotopes, they cannot collect semen until these isotopes are cleared from the body. Defer is a list of commonly ordered scans and the amount

Slide 18

Outcomes

- 19 referrals for sperm banking.


Team	Percentage
ISB	63%
FNS	37%

- ISB (Inpatient Sperm Banking Team) responsible for 63% of these referrals (remaining 37% by Fertility Specialists).

Slide 19

Future

- Expand ISB Team to include 4 additional CNSs (Pediatrics, Chemotherapy, Hematology).
- Revise and review current web-page.
- Develop addition education for front line staff to increase awareness.
- Increase awareness of ISB Team to include physician/LIP colleagues.



Slide 20

Power of the CNS


Team MSKCC....Clinical Nurse Specialists



Slide 21


Special Thanks to Our Fertility Nurse Specialist

Joanne Frankel Kelvin, MSN, RN, CNS, AOCN®




**Clinical Nurse Specialist,
Cancer and Fertility**

Survivorship Center
Memorial Sloan Kettering Cancer Center
485 Lexington Avenue
2nd Floor
New York, NY 10017




Slide 22

Questions



Nora Love, MS, RN, CURN, OCN®
Clinical Nurse Specialist
Memorial Sloan Kettering Cancer Center
loven@mskcc.org



Slide 23

Reference

Agarwal, A., Sharma, R. (2016). Sperm Banking for Cancer Patients. *Cancer and Fertility*, Current Clinical Urology.
https://one.mskcc.org/sites/pub/corp/fertility/Documents/RL_adult_initial_2.2016.pdf
<https://one.mskcc.org/sites/pub/corp/fertility/Pages/Sperm-Banking---Inpatients.aspx>
<https://www.cancer.org/treatment-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/fertility-and-men-with-cancer/preserving-fertility-in-men.html>

Koepfel, K.M. (1995). Sperm banking and patients with cancer. Issues concerning patients and healthcare professionals. *Cancer Nurs* 18: 306-312.

Lee, S.J., Schover, L.R., Partridge, A.H., Patrizio, P., Wallace, W.H., Hagerty, K., Beck, L.N., Brennan, L.V., Oktay, K. American Society of Clinical Oncology. American Society of Clinical Oncology recommendations on fertility preservation in cancer patients. *J Clin Oncol.* 2006;24(18):2917-31.

Schover, L.R., Brey, K., Lichtin, A., Lipshultz, L.I. and Jeha, S. (2002a). Knowledge and experience regarding cancer, infertility, and sperm banking in younger male survivors. *J Clin Oncol.* 20: 1880-1889.

Schover, L.R., Brey, K., Lichtin, A., Lipshultz, L.I. and Jeha, S. (2002b). Oncologists' attitudes and practices regarding banking sperm before cancer treatment. *J Clin Oncol.* 20: 1890-1897.

Williams IV, D.H. (2010). Sperm banking and the cancer patient. *Therapeutic Advances in Urology*, 2(1), 19-34.

