

fertility preservation for young people



the women's
the royal women's hospital

the national ovarian and testicular tissue
cryopreservation service (NOTTCS)



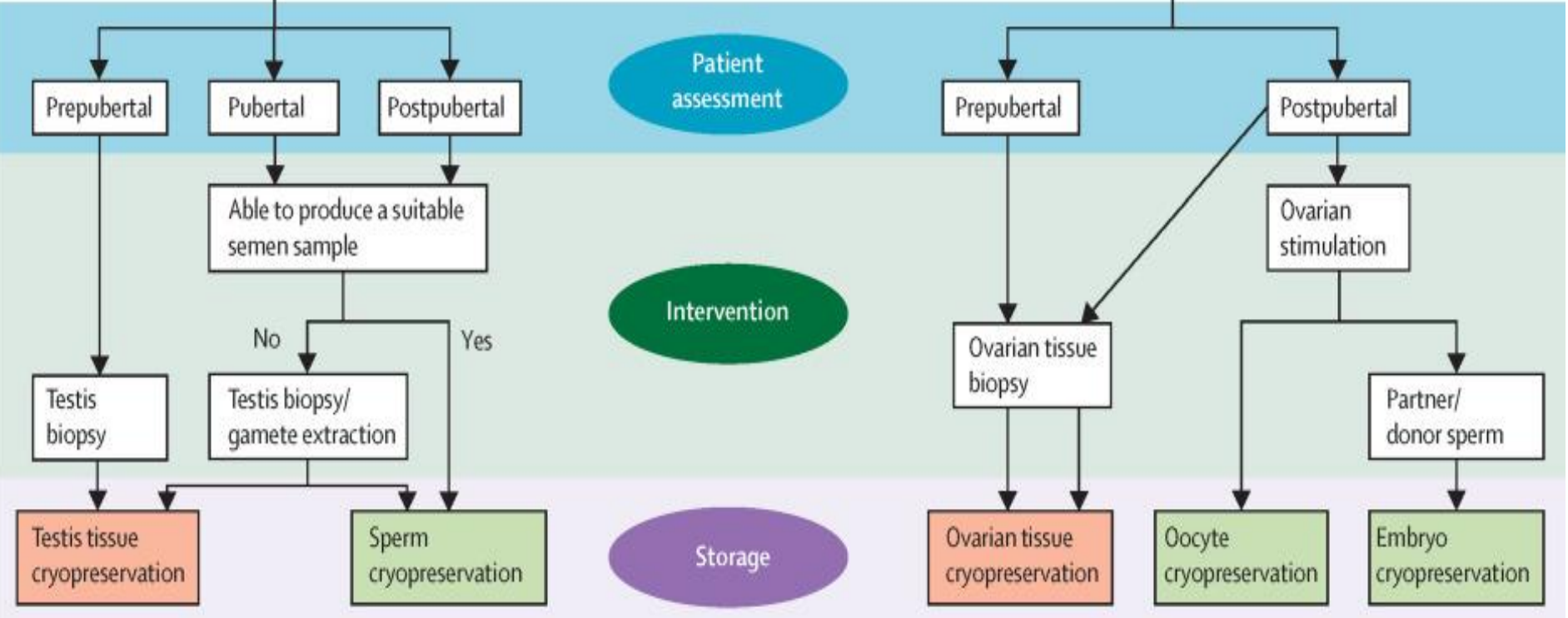
medical fertility preservation

- treatments for cancer and other serious diseases can cause infertility (inability to have children in the future)
- all patients/families should have opportunity for discussion about :
 - 1) risk of infertility from their treatment
 - 2) options for fertility preservation ideally before treatment starts
- **regardless of location** we can now offer urgent fertility preservation for young cancer patients who need to have ovarian or testicular tissue taken, transported and stored for safe-keeping

what is NOTTCS?

- NOTTCS is the national ovarian and testicular tissue transport and cryopreservation (freezing) service
- all young patients, regardless of their location, now have access to the most advanced fertility preservation options to safeguard their reproductive future

Fertility risk assessment
(includes intrinsic and extrinsic factors)



Update on fertility preservation from the Barcelona International Society for Fertility Preservation–ESHRE–ASRM 2015 expert meeting: indications, results and future perspectives^{†‡}

Francisca Martinez*, on behalf of the International Society for Fertility Preservation–ESHRE–ASRM Expert Working Group¹

“cumulative evidence of restoration of ovarian function and spontaneous pregnancies after ART following transplantation of cryopreserved ovarian tissue supports its future consideration as an open clinical application”

“testicular tissue cryopreservation should be recommended in prepubertal boys even though fertility restoration strategies by autotransplantation of cryopreserved testicular tissue have not yet been tested for safe clinical use in humans”

“the establishment of international registries on the short- and long term outcomes of FP techniques is strongly recommended”

indications for ovarian tissue freezing

- only option for prepubertal girls
- high risk of ovarian failure
eg pre transplant/pelvicXRT
- not enough time to do stimulation cycle
- oncologists not happy for stimulation
- may allow spontaneous pregnancy in future
- in association with oocyte freezing
- possibility of in-vitro-activation (akt stimulators) in POI



indications for testicular tissue cryopreservation

- prepubertal
- not able to produce ejac sample
- too sick to produce ejac sample



ethical framework RCH



THE ETHICS OF A CHILD'S FUTURE FERTILITY

Chemotherapy can leave young patients infertile; a University of Melbourne bioethicist has created the world's first ethical framework for decision-making about a child's future fertility

x 2 Royal Children's Hospital, Melbourne ethics framework for prepubertal fertility preservation
The series of questions explicitly prompt reflection on the ethical concerns associated with the procedure. The clinician is asked:

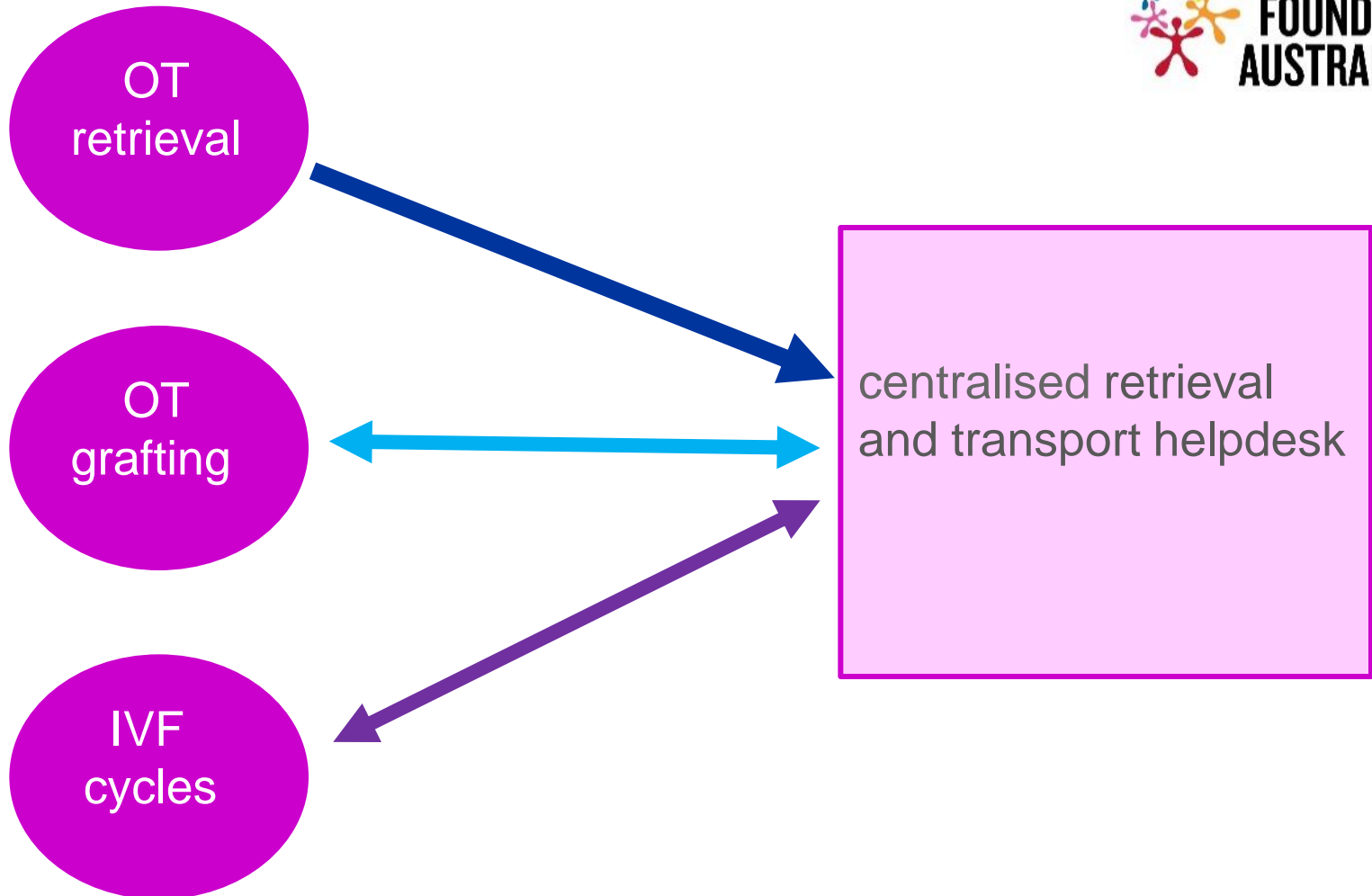
- *About the child's condition, proposed treatment and expected outcome*
- *To specify the level of risk to fertility posed by the treatment; and then*
 - Is there reduced potential for retrieving viable tissue from this child? (eg, damage to gonadal tissue by previous treatment or the underlying condition)
 - Will the fertility preservation procedure take place at the same time as a treatment procedure?
 - Will fertility preservation delay the start of treatment?
 - What risks or possible complications are associated with the fertility preservation procedure for this child?
 - Do the parents have a good understanding (A) that the procedure will not guarantee fertility in the future but simply offers a possibility, dependent on future technology and (B) that it has some degree of risk?
 - If the child is old enough to understand the procedure, even in basic terms, (A) has the procedure been explained to the child and (B) does the child have any objections or worries?
 - Are there any other relevant matters or concerns?

If the answers indicate any ethical concerns (eg, yes to 1, 3 or 6B, or no to 2, 5 or 6A), this triggers further formal clinical ethics consultation.

<https://jme.bmj.com/content/44/1/27>

<https://pursuit.unimelb.edu.au/articles/the-ethics-of-a-child-s-future-fertility>

RWH NOTTCS program



referral

- local FS/gynae/haem/onc
- phone/fax/email

coordination

- information/instructions/consents
- telco-consultation with patient/family/local medical team

retrieval

- scheduling for tissue surgery
- shipper and further instructions dispatched

processing

- path testing of tissue sample
- cryopreservation

reporting

- tissue report
- instructions for storage and follow up
- counselling pt/family if required

contact

- local FS/gynae/haem/onc
- phone/fax/email

**fertility
assessment**

- local team
- telco-consultation with patient/family/local medical team

**surgery
plan**

- local or RWH grafting procedure

**graft
function**

- regular endocrine and US assessment
- liaison between RWH and local team

fertility

- spontaneous
- IVF modified protocol

program

- contact hotline
- education/instruction materials for patient and physician'
- clear instructions
- reliable transport
- prompt reportage
- opportunity for patient counselling
- examples of ethical frameworks for paediatric cases
- data storage and collection RTAC/Oncofertility Register



NOTTCS contact us

phone +61 383453227
after hrs +61 393893799

email nottcs@thewomens.org.au

fax +61 383453259

A/P Stern kate.stern@mivf.com.au

online resources online resources available:

<https://www.thewomens.org.au/health-professionals/sexual-reproductive-health/reproductive-services-main/fertility-preservation-service>

<https://www.thewomens.org.au/patients-visitors/clinics-and-services/fertility-genetics/fertility-preservation>

<https://www.thewomens.org.au/NOTTCS> under construction