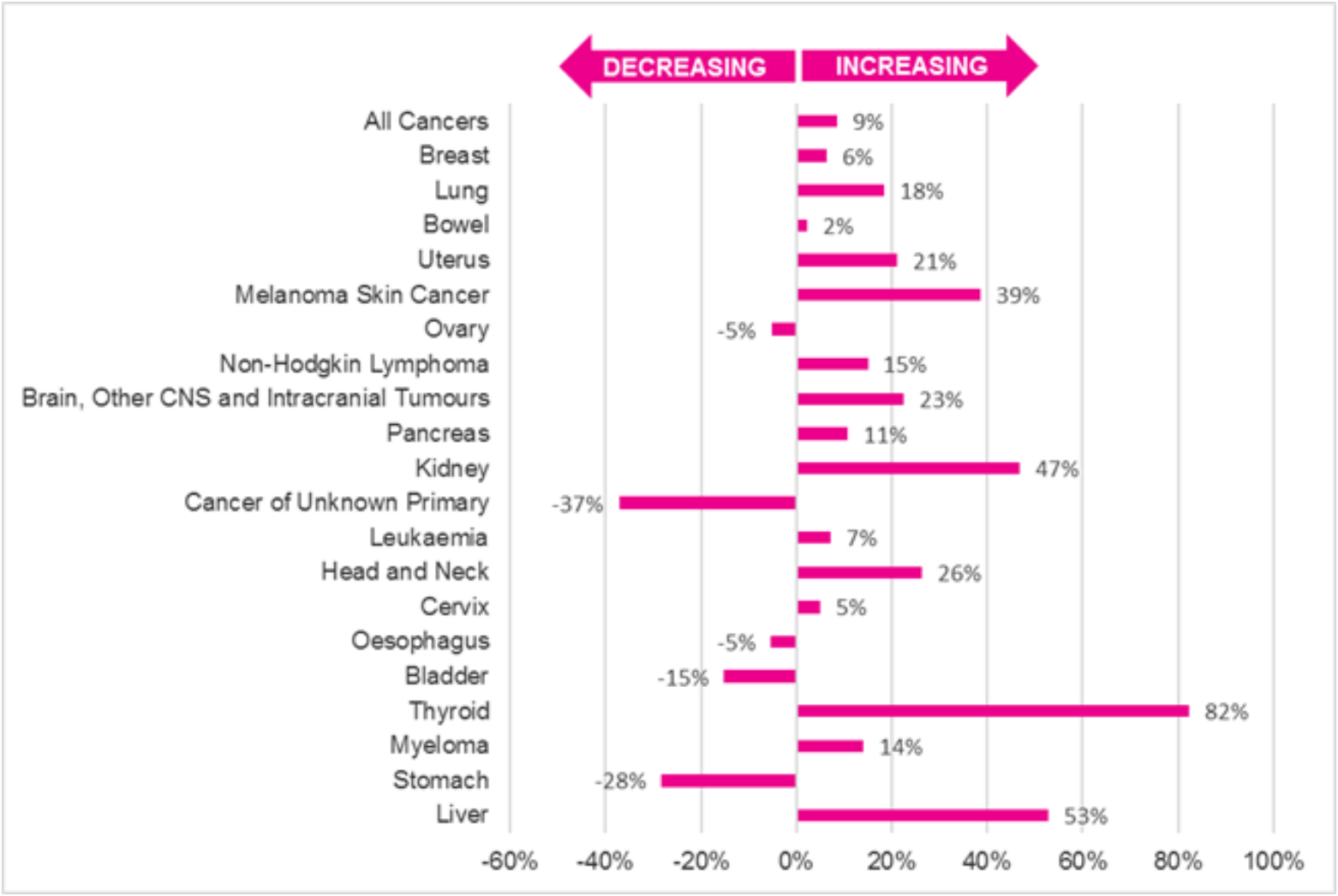


Preservazione della fertilità nella paziente oncologica

Dott.ssa Raffaella Fabbri
Unità Operativa Ginecologia e Fisiopatologia della Riproduzione Umana

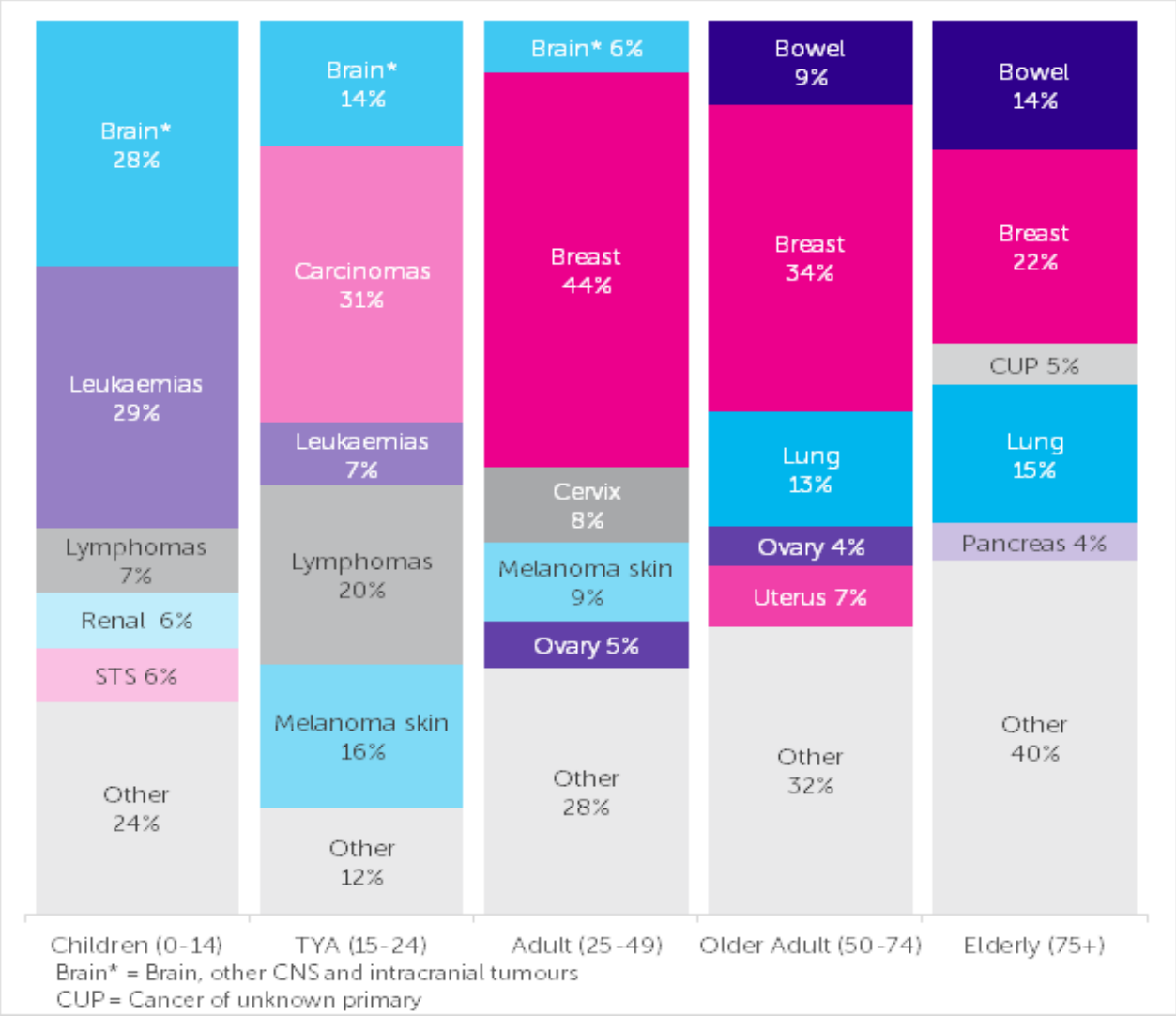
Università degli Studi di Bologna
Policlinico S. Orsola - Malpighi

FEMALE TUMORS
THE SIZE OF THE PROBLEM



CANCER RESEARCH UK

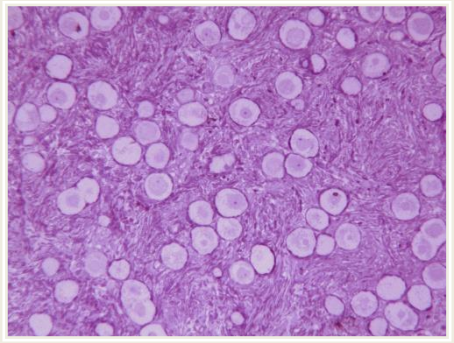
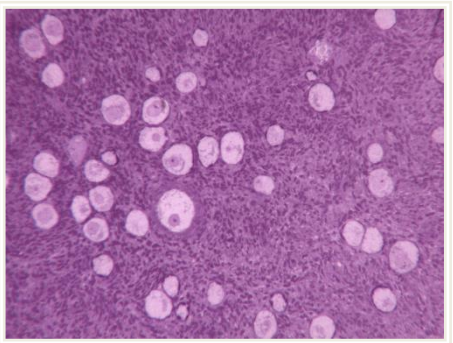
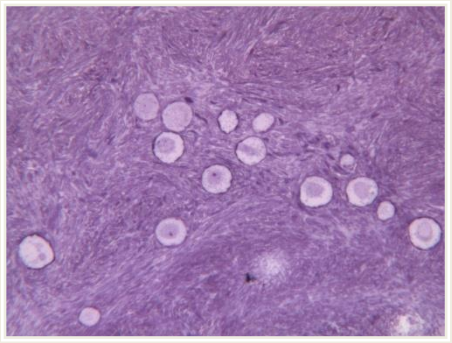
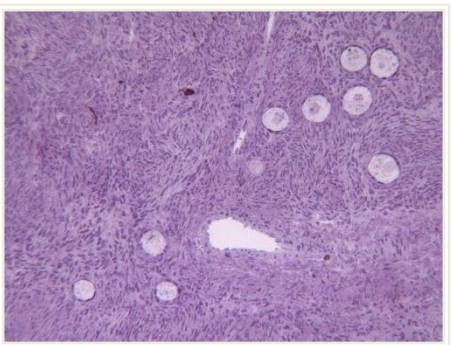
FEMALE TUMORS
THE SIZE OF THE PROBLEM

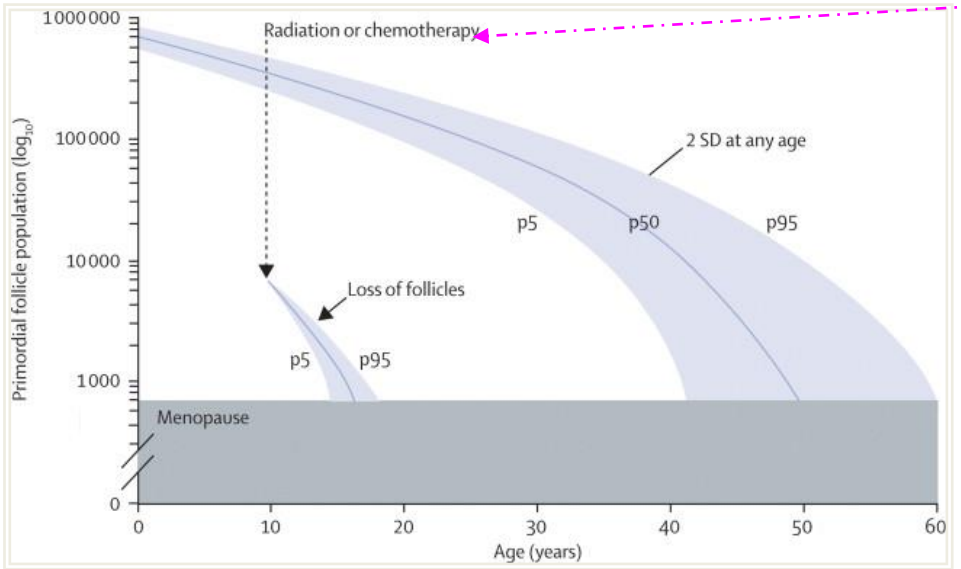


CANCER RESEARCH UK

AGE DEPENDENT DECLINE OF FOLLICLE NUMBER

0 – 10 years | 11 - 20 years | 21 – 30 years | 31 – 40 years

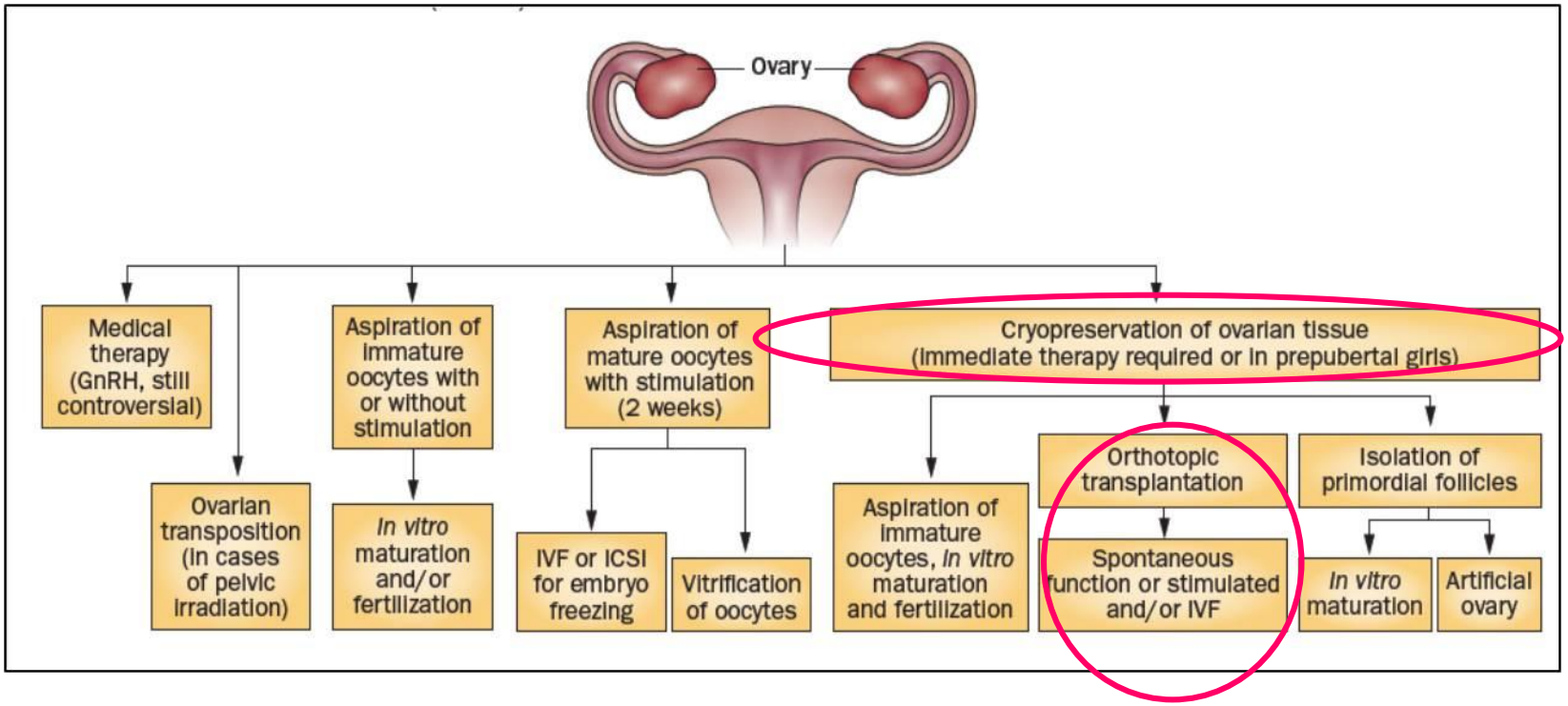







CHEMOTHERAPY/RADIOTHERAPY INDUCE AN IRREVERSIBLE DESTRUCTION OF GERM CELLS AND AN ACCELERATED DISAPPEARANCE OF OVARIAN FOLLICLES IN MID-LIFE

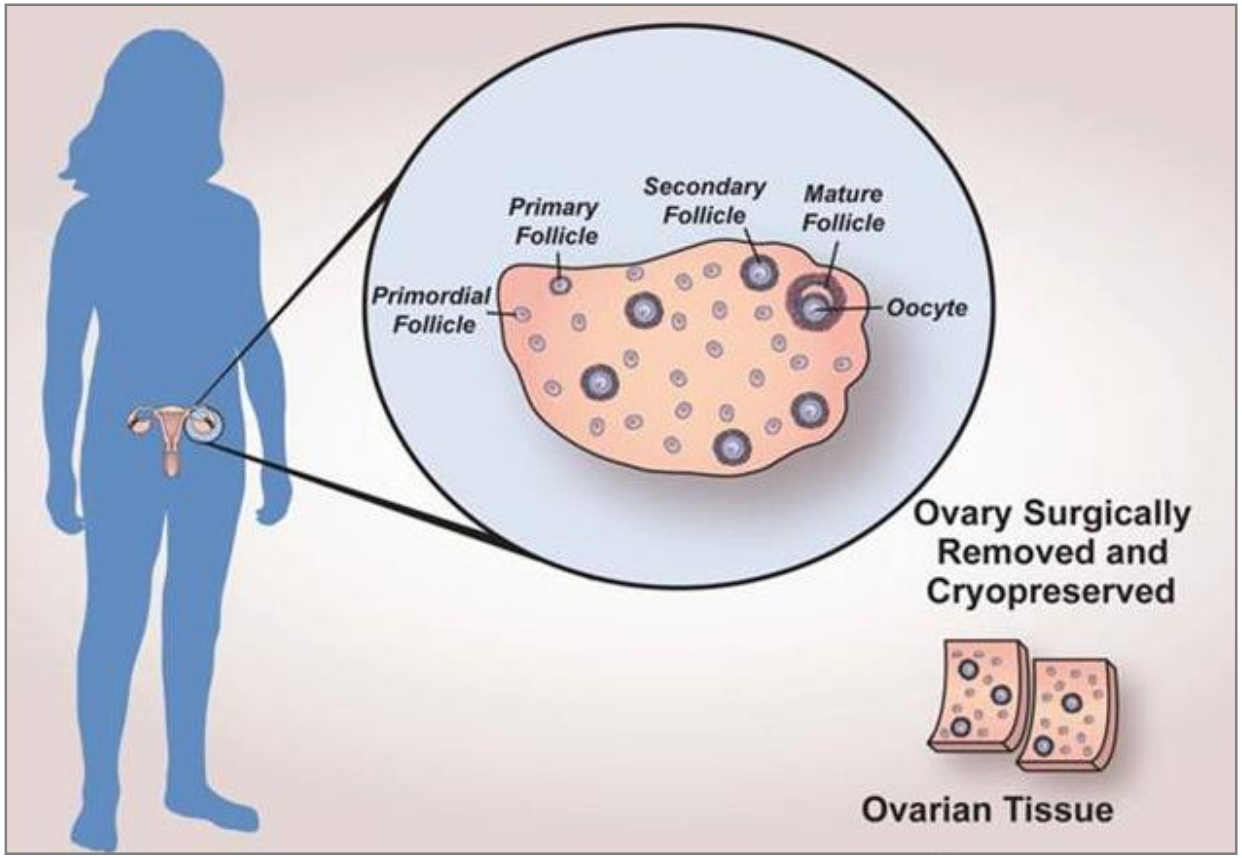
(Faddy, 1992)

FERTILITY PRESERVATION TECHNIQUES



(Donnez and Dolmans, Nature End, 2013)

OVARIAN TISSUE CRYOPRESERVATION



OVARIAN TISSUE CRYOPRESERVATION

FUNCTION

GAMETOGENIC ← → **ENDOCRINE**

- **CAN BE PERFORMED AT ANY TIME OF THE MENSTRUAL CYCLE**
- **NO OVARIAN STIMULATION IS REQUIRED**
- **ALLOWS TO RETRIEVE A HIGH NUMBER OF PRIMORDIAL FOLLICLES**

ONLY OPTION

PRE-MENARCHEAL GIRLS



POST-MENARCHEAL GIRLS YOUNG WOMEN

- **WHO CANNOT DELAY CHEMO/ RADIOTHERAPY**
- **WHO CANNOT UNDERTAKE HORMONE STIMULATION (hormone-sensitive tumors)**

OVARIAN TISSUE CRYOPRESERVATION

INDICATIONS

MALIGNANT DISEASES		
PELVIC	Non Gynecological	Gynecological
	Sarcoblastoma Rabdomyosarcoma Sacral Cancer Recto-Sygmoidal Cancer	Cervical Cancer Vaginal Cancer Vulvar Cancer
EXTRAPELVIC	Ewing /Osteo Sarcoma Breast Cancer Kidney,Thyroid Cancer Melanoma Neuroblastoma	
SYSTEMIC	Hodgkin/ non-Hodgkin Lymphoma Myeloma Myelodisplasia	

BENIGN DISEASES	
BONE MARROW TRANSPLANTATION	Drepanocytosis Thalassemia Aplastic Anemia
AUTOIMMUNE DISEASE	Lupus Erythematosus Rheumatoid arthritis Multiple sclerosis
RISK OF POF	Turner's Syndrome Family History
BI/UNILATERAL OOPHORECTOMY	Severe Endometriosis Recurrent Ovarian Cysts Ovarian Torsion

EXCLUSION CRITERIA

- POSITIVITY FOR HBV, HCV, HIV, TREPONEMA PALLIDUM
- OVARIAN CANCER
- CONTRAINDICATION FOR LAPAROSCOPY

HOW MUCH OVARIAN CORTEX SHOULD BE HARVESTED FOR CRYOPRESERVATION ?

- **IT DEPENDS ON THE ESTIMATED RISK OF POF RELATIVE TO :**

  1. **CHEMO/RADIOTHERAPY**
  2. **FOLLICULAR DENSITY**

- **OOPHORECTOMY SHOULD BE PERFORMED:**

  1. **IN PATIENTS UNDERGOING PELVIC OR TOTAL BODY IRRADIATION**
  2. **IN VERY YOUNG GIRLS (Pre-pubertal Girls) BECAUSE OF THE SMALL SIZE OF THEIR OVARIES**

- **ADULT CORTICAL BIOPSY SHOULD BE APPROSIMATELY:**

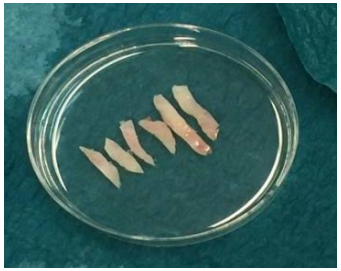
  2.5 cm in lenght - 2.0 cm in width - 1.0-1.5 mm in depth

CRYOPRESERVATION PROCEDURE

SLOW FREEZING



1. BIOPSY BY LAPAROSCOPY



2. SMALL STRIPS



3. FREEZING SOLUTION

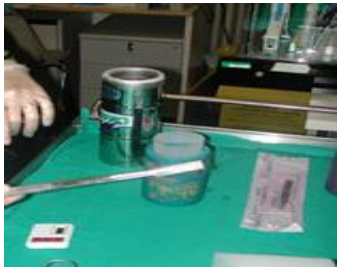


4. PROGRAMMABLE FREEZER



5. NH2 TANK STORING

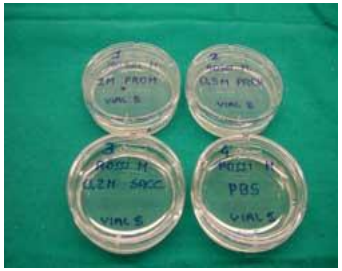
RAPID THAWING



1.VIALS AIR-WARMED FOR 30 secs



2. IMMERSED IN A 37°C WATER BATH FOR 2 mins

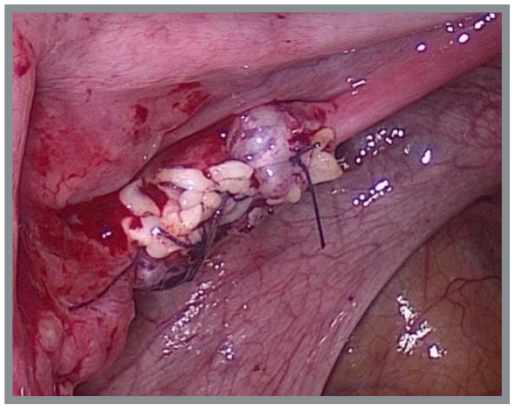


3. CRYOPROTECTANT REMOVAL BY STEPWISE DILUTIONS

R Fabbri et al. Reproductive BioMedicine Online (2010) 21, 819–828

OVARIAN TISSUE CRYOPRESERVATION APPLICATION

ORTHOTOPIC TRANSPLANTATION



HETEROTOPIC TRANSPLANTATION



RESUMPTION OF CYCLICITY

SPONTANEOUS CONCEPTION

ASSISTED REPRODUCTIVE TECHNOLOGIES

ORTHOTOPIC TRANSPLANTATION

- IF OVARY PRESENT: DECORTICATION AND SUTURE OF OVARIAN FRAGMENTS





(Donnez, J, 2006)

- IF OVARY ABSENT: PERITONEAL WINDOW

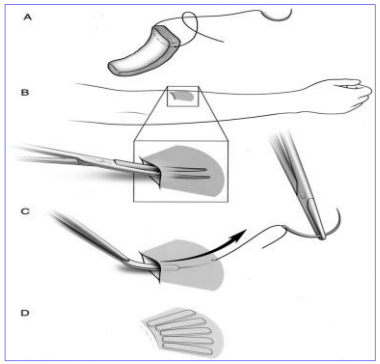


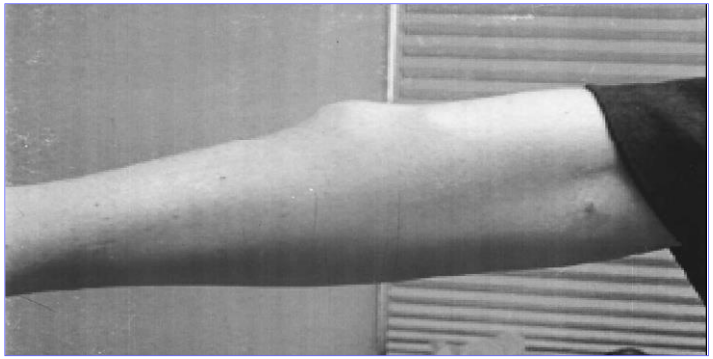


(Donnez J, 2012)

HETEROTOPIC TRANSPLANTATION

- **SUBCUTANEOUS TISSUE OF FOREARM**





(Oktay, 2003)

- **SUBCUTANEOUS TISSUE OF ABDOMINAL WALL**







(Kim, 2009)

Curr Opin Obstet Gynecol. 2015 Jun;27(3):222-30. doi: 10.1097/GCO.0000000000000171.

Ovarian tissue freezing: current status.

Donnez J[1], Dolmans MM.

Results of 4 Centres (Denmark, Spain, Belgium, Germany)

Table 2. Results from four centers, allowing evaluation of pregnancy and live birth rates, as the number of transplants is known

Teams	Number of transplanted women	Women who conceived	Women who gave birth	Number of live births	Miscarriages
Donnez, Dolmans	13	3	3	6 (*)(**)	
Andersen, Macklon	25	6	4	6(*)(**)	2
Pellicer	22	4	3	4	1
Dittrich	20	7	4 (+2***)	4 (+2***)	1
	80	20 (25%)	14 (20%)	20	4 (20%)

*One woman delivered twice.
**One woman delivered three times.
***Two ongoing pregnancies.

Am J Obstet Gynecol. 2016 Jan;214(1):94.e1-9. doi: 10.1016/j.ajog.2015.10.001. Epub 2015 Nov 18.

First pregnancies, live birth, and in vitro fertilization outcomes after transplantation of frozen-banked ovarian tissue with a human extracellular matrix scaffold using robot-assisted minimally invasive surgery.

Oktay K[1], Bedoschi G[2], Pacheco F[3], Turan V[4], Emirdar V[5].

Current outcomes and success rates with transplantation of cryopreserved ovarian tissue

Age at Cryopreservation (range)	23.5 ± 4.7 years (17–36)
Age at Transplantation[a] (range)	30 ± 4.2 years (21–38)
Maternal Age at Delivery	35.6 ± 1.9 years (25–39)
Gestational Age at Delivery[b]	38.1 ± 1.6 weeks (33–41)
Clinical Pregnancy/Patient (%)	24/66[c] (36.3%)
Live + Ongoing Pregnancy/Patient (%)	18/66[c] (27.2%)
Endocrine Function/Patient	62/66[d], (93.9%)

OVARIAN TISSUE TRASPLANTATION
(WORLWIDE OCTOBER 2016)

	Breast cancer	Mb. Hodgkin	Non-Hodgkin	Ewing & other Sarcoma	Brain tumour	Colon, rectal & Anal cancer	Ova-rian cancer	Cervi-cal cancer	CML, AML, ALL	Lym-pho-ma	Haemato-logical malignancies	Malig-nant without haemato-logical	Non-malig nant	Total
	2	3		1	1			3	1				5	16
	16	16	3			4	3			1		2	2	47
	3	9	4	2					2					20
	2	2	3	1			1	5					7	21
	1	5	2		1			1	1			2	6	19
											8	13	1	22
	2	2		3				1					2	10
	1	2	1			1							1	6
UK, Norway		2								1				3
	29	9	9	5	1	2	1	6	0				15	77
Total	56	50	22	12	3	7	5	16	4	2	8	17	39	241

Andersen CY, SIGO 2016

36.9%

Children born from transplantation of frozen/thawed ovarian tissue (N=89)



Andersen CY, SIGO 2016

Children born up to 2017

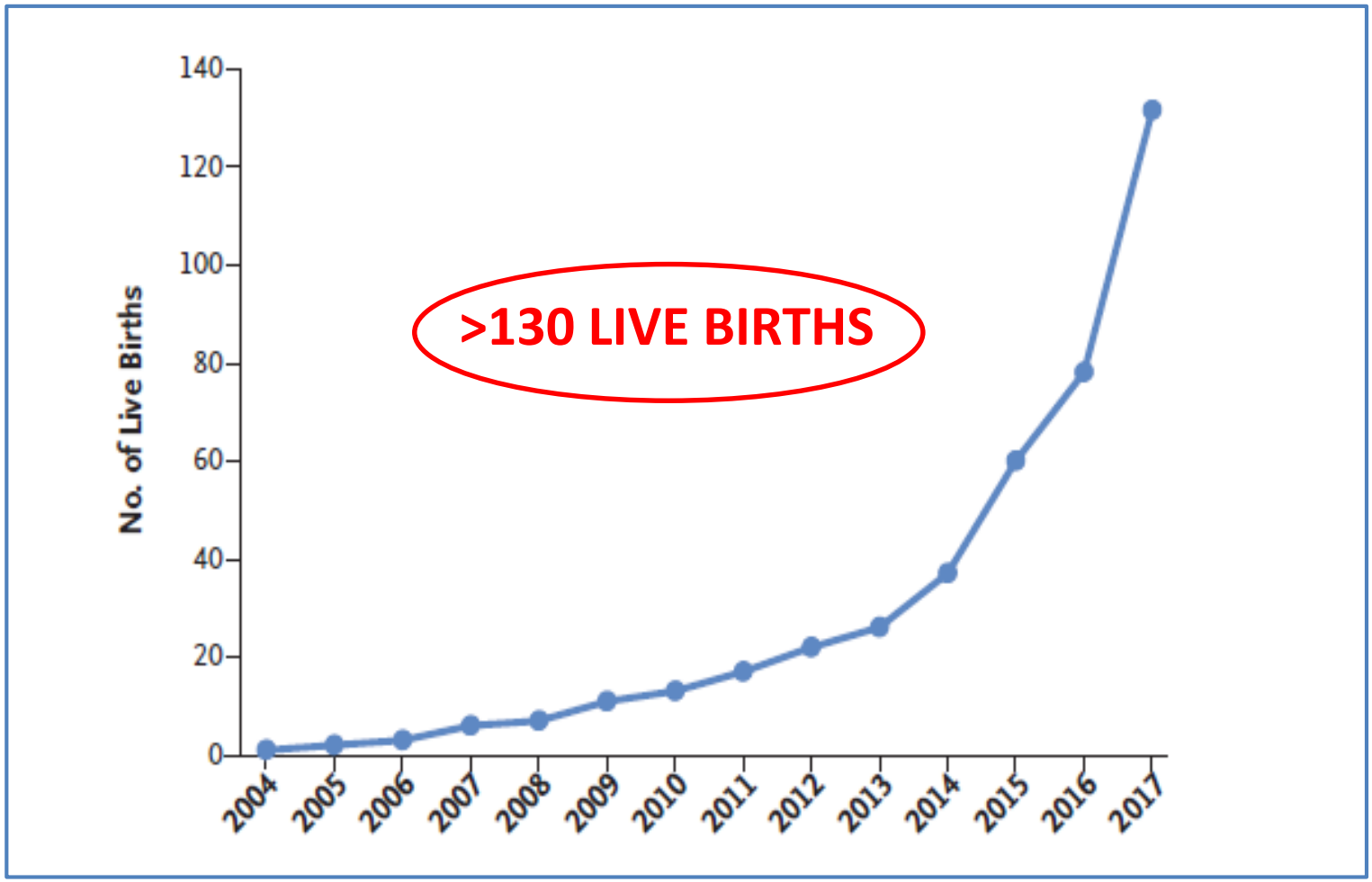
>101

(unpublished data)

N Engl J Med. 2017 Oct 26;377(17):1657-1665. doi: 10.1056/NEJMra1614676.

Fertility Preservation in Women.

Donnez J[1], Dolmans MM[1].



OVARIAN TISSUE CRYOPRESERVATION
PUBERTY INDUCTION



HETEROTOPIC

Lancet. 2012 Feb 11;379(9815):588. doi: 10.1016/S0140-6736(11)61781-9.

Induction of puberty by autograft of cryopreserved ovarian tissue.

Poirot C[1], Abirached F, Prades M, Coussieu C, Bernaudin F, Piver P.

SICKLE-CELL DISEASE (10 yrs)

ALLOGENIC TRANSPLANTATION

ORTHOTOPIC

Eur J Cancer. 2013 Mar;49(4):911-4. doi: 10.1016/j.ejca.2012.09.028. Epub 2012 Oct 16.

Case report: stimulation of puberty in a girl with chemo- and radiation therapy induced ovarian failure by transplantation of a small part of her frozen/thawed ovarian tissue.

Ernst E[1], Kjærsgaard M, Birkebæk NH, Clausen N, Andersen CY.

EWING SARCOMA (9 yrs)

PELVIC IRRADIATION

Hum Reprod. 2015 Sep;30(9):2107-9. doi: 10.1093/humrep/dev128. Epub 2015 Jun 9.

Live birth after autograft of ovarian tissue cryopreserved during childhood.

Demeestere I[1], Simon P[2], Dedeken L[3], Moffa F[4], Tsépélidis S[5], Brachet C[6], Delbaere A[7], Devreker F[8], Ferster A[3].

- 5 yrs: sickle-cell anemia diagnosis
- 14 yrs: ovarian tissue cryopreservation
- Chemotherapy with HSCT was required
- No menstruation
- 25 yrs: ovarian tissue orthotopic/ heterotopic transplantation

  1st menstruation 5 months post-transplantation

  regular menstrual cycles thereafter
- Spontaneous pregnancy 2 yrs post-transplantation
- Live birth of a healthy baby

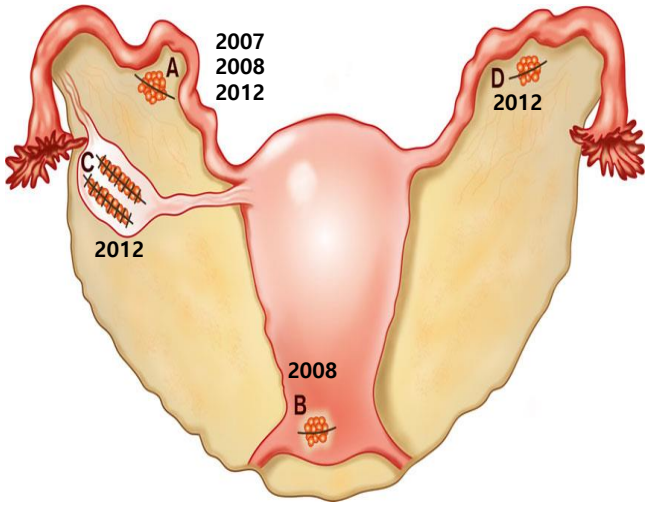


Acta Obstet Gynecol Scand. 2015 Mar;94(3):324-8. doi: 10.1111/aogs.12568. Epub 2015 Feb 2.

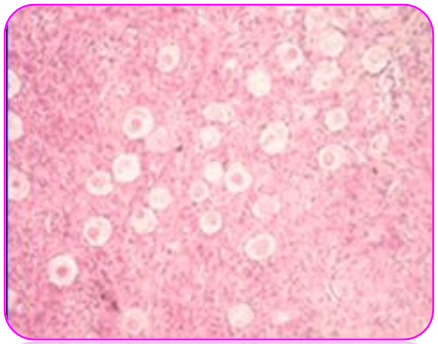
Full-term newborn after repeated ovarian tissue transplants in a patient treated for Ewing sarcoma by sterilizing pelvic irradiation and chemotherapy.

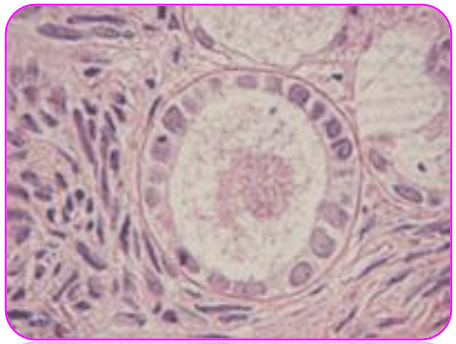
Rodriguez-Wallberg KA[1], Karlström PO, Rezapour M, Castellanos E, Hreinsson J, Rasmussen C, Sheikhi M, Ouvrier B, Bozóky B, Olofsson JI, Lundqvist M, Hovatta O.

- **1999 (23 yrs): Oophorectomy for cryopreservation (97 pieces)**
- **Pelvic radiothterapy (54Gy) and chemotherapy (ISG/SSG III) → POF**
- **2007 and 2008: 1° and 2° transplant**
- **Endocrine function recovery**
- **6 IVF failures**
- **2012: 3° transplant**
- **3 oocytes from orthotopic site**
- **Pregnancy without signs of uterus growth restriction**
- **Birth of healthy child at full-term**



OVARIAN TISSUE CRYOPRESERVATION RISK





OVARIAN TISSUE IS USUALLY HARVESTED PRIOR TO CHEMO/RADIOTHERAPY

POSSIBLE MALIGNANT CELL CONTAMINATION IN CRYOPRESERVED OVARIAN TISSUE

REINTRODUCTION OF DISEASE UPON GRAFTING

Curr Opin Obstet Gynecol. 2015 Jun;27(3):222-30. doi: 10.1097/GCO.0000000000000171.

Ovarian tissue freezing: current status.

Donnez J[1], Dolmans MM.

High risk (>11%)	Moderate risk (0.2–11%)	Low risk (<0.2%)
Leukemia	Breast cancer	Breast cancer
	Stage IV	Stages I–II
	Infiltrating lobular subtype	Infiltrating ductal subtype
Neuroblastoma	Colon cancer	Squamous cell carcinoma of the cervix
Burkitt lymphoma	Adenocarcinoma of the cervix	Hodgkin's lymphoma
	Non-Hodgkin's lymphoma	Osteogenic carcinoma
	Ewing's sarcoma	Nongenital rhabdomyosarcoma
		Wilm's tumor

FOR ALL PATHOLOGIES IT IS VERY IMPORTANT TO DISCUSS THIS RISK WITH PATIENTS BEFORE GOING AHEAD REIMPLANTATION

SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA
Azienda Ospedaliero - Universitaria di Bologna

Policlinico S. Orsola-Malpighi
Dipartimento Attività Integrate
Salute della Donna, del Bambino e dell'Adolescente
Unità Operativa Ginecologia
e Fisiopatologia della Riproduzione Umana - Prof. S. Venturoli

ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

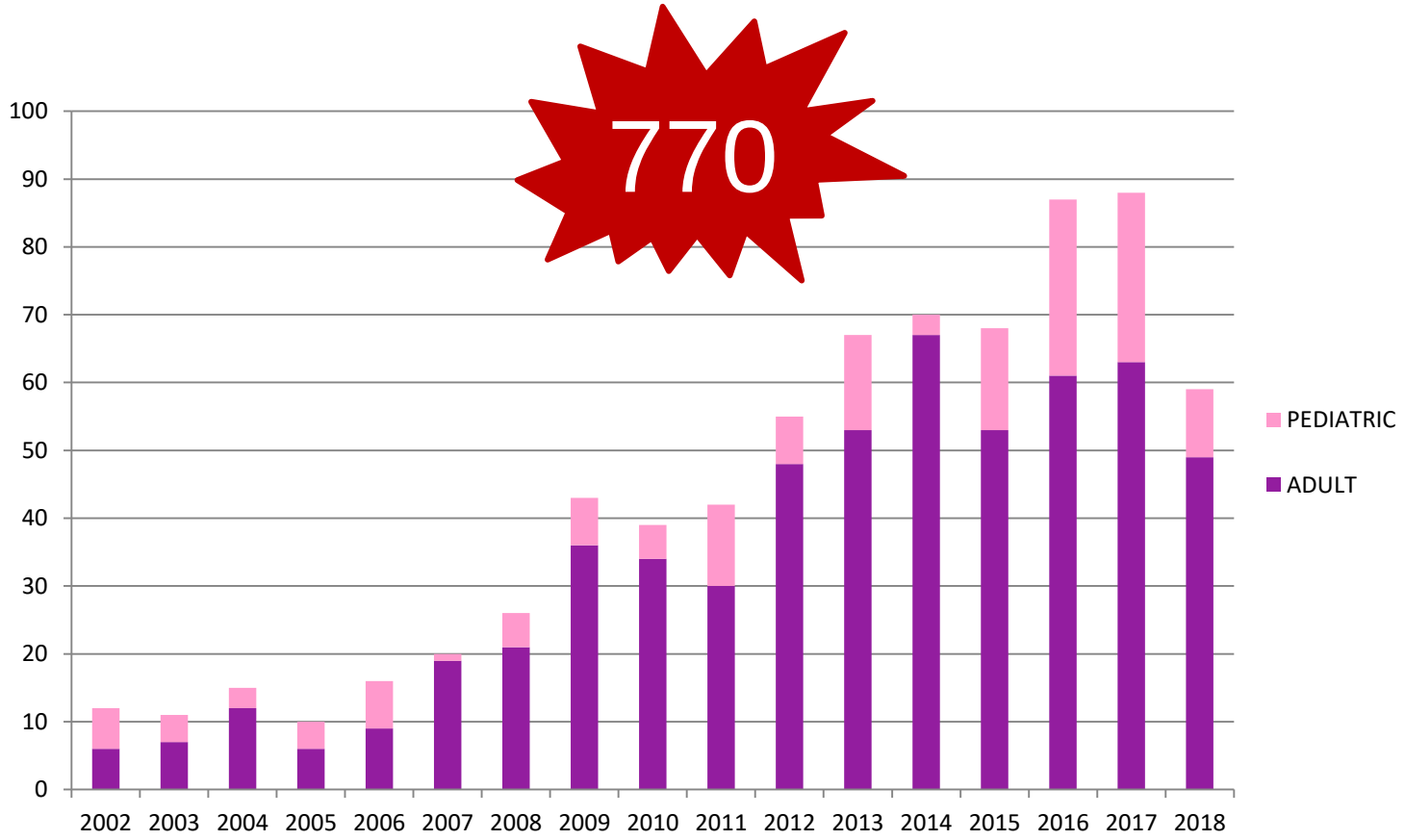
LA NOSTRA ESPERIENZA DAL 2002



Percorso
«Preservare la Fertilità»

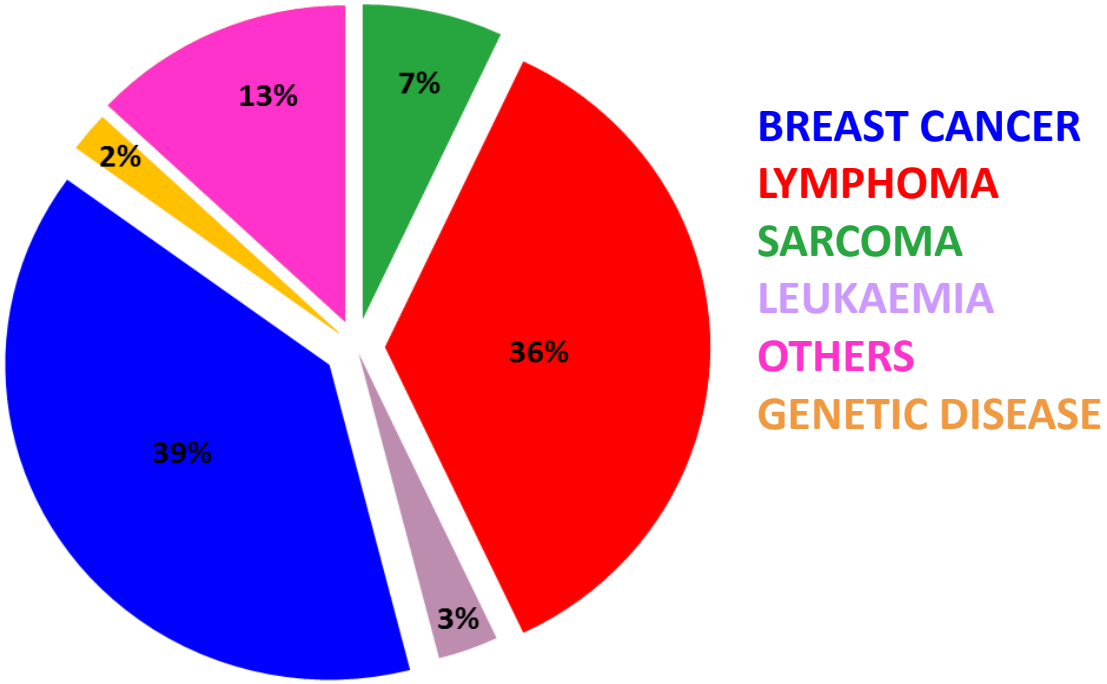
OVARIAN TISSUE CRYOPRESERVATION

HOW MANY?



Gynecology and Pysiopathology of Human Reproduction Unit
S. Orsola-Malpighi Hospital, University of Bologna, Italy

602 ADULTS (28.44 ± 5.76 years)



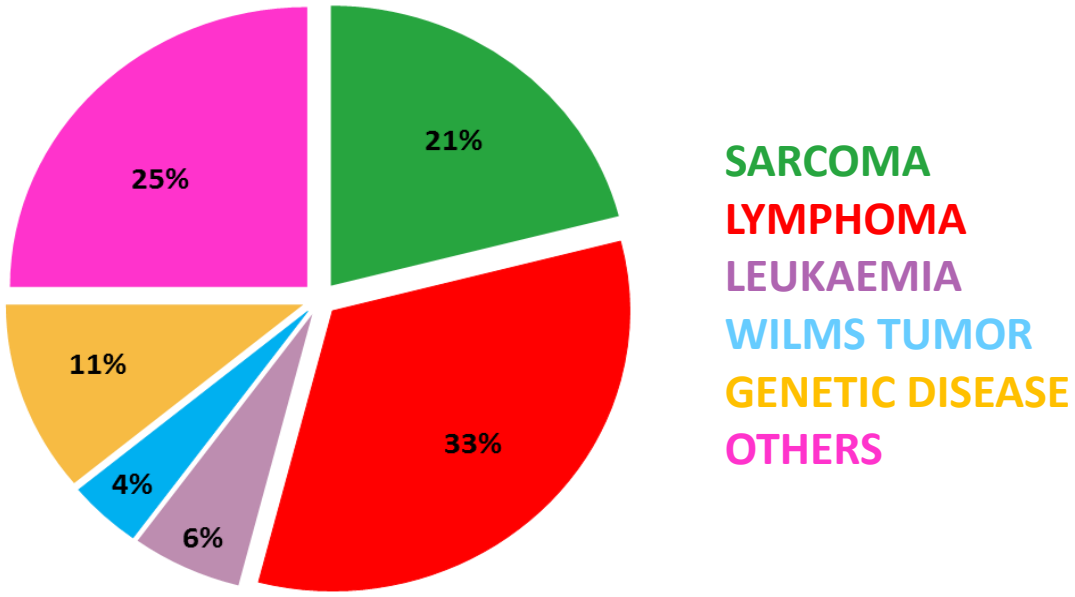
Gynecology and Pysiopathology of Human Reproduction Unit
S. Orsola-Malpighi Hospital, University of Bologna, Italy

Obstet Gynecol Int. 2012;2012:910698. doi: 10.1155/2012/910698. Epub 2012 Feb 13.

Cryopreservation of ovarian tissue in pediatric patients.

Fabbri R[1], Vicenti R, Macciocca M, Pasquinelli G, Lima M, Parazza I, Magnani V, Venturoli S.

168 PEDIATRICS (13.03 ± 4.1 years)



Gynecology and Pysiopathology of Human Reproduction Unit
S. Orsola-Malpighi Hospital, University of Bologna, Italy

OVARIAN TISSUE RECOVERY

by laparoscopy



OVARIAN TISSUE PROCESSING



OVARIAN TISSUE TRANSPLANTATION



OVARIAN TISSUE TRANSPLANTATION

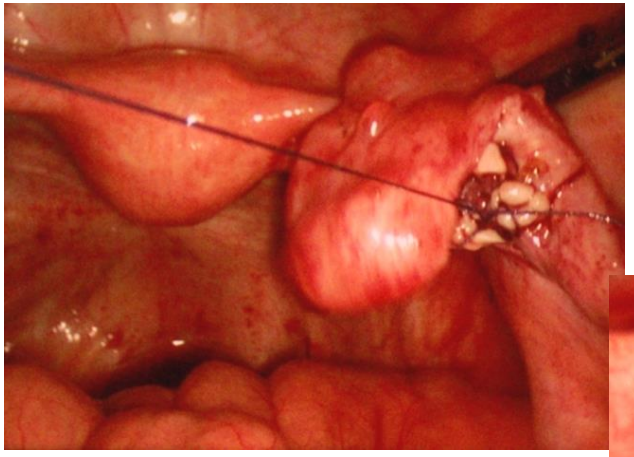
PATHOLOGY	PATIENTS	GRAFT SITE
COLORECTAL CANCER	2	2 ORTHOTOPIC
BREAST CANCER	5	6 ORTHOTOPIC
MULTIPLE MYELOMA	1	ORTHOTOPIC
MEDULLOBLATOMA	1	ORTHOTOPIC
EWING SARCOMA	2	1 ORTHOTOPIC–1 HETEROTOPIC
NON-HODGKIN LYMPHOMA	2	3 ORTHOTOPIC
HODGKIN LYMOHOMA	2	2 ORTHOTOPIC – 2 HETEROTOPIC
STRUMA OVARII	1	1 ORTHOTOPIC–1 HETEROTOPIC
TOTAL	**16**	**21**

Gynecology and Pysiopathology of Human Reproduction Unit
S. Orsola-Malpighi Hospital, University of Bologna, Italy

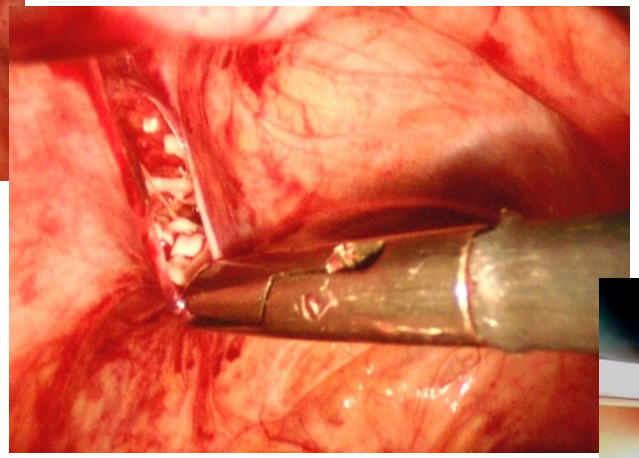
Future Oncol. 2014 Mar;10(4):549-61. doi: 10.2217/fon.13.234.

Autotransplantation of cryopreserved ovarian tissue in oncological patients: recovery of ovarian function.

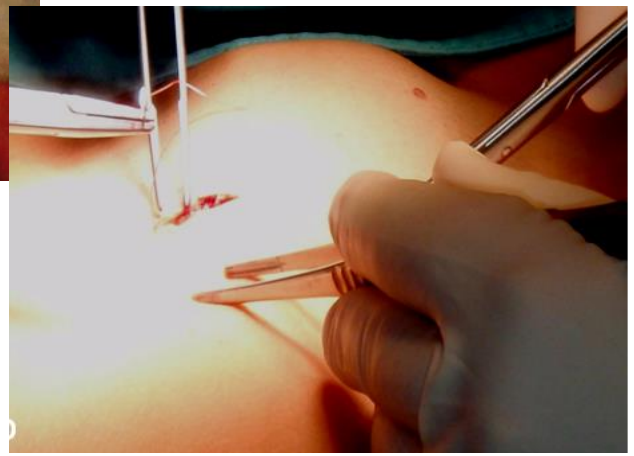
Fabbri R[1], Pasquinelli G, Magnani V, Macciocca M, Vicenti R, Parazza I, Paradisi R, Battaglia C, Rossi S, Venturoli S.



ORTHOTOPIC TRANSPLANTATION IN THE ATROPHIC OVARY



ORTHOTOPIC TRANSPLANTATION IN A PERITONEAL WINDOW



HETEROTOPIC TRANSPLANTATION IN THE SUBCUTANEOUS ABDOMINAL WALL

PATIENT 1 (A. P.): COLORECTAL CANCER

- **COLORECTAL CANCER (23 yrs)**
- **CHEMOTHERAPY (5 FU - 3 CYCLES)**
- **OVARIAN TISSUE CRYOPRESERVATION**
- **CHEMOTHERAPY (5FU – 9 CYCLES)**
- **PELVIC RADIOTHERAPY (4500 Gy) + BOOST (540 Gy)**

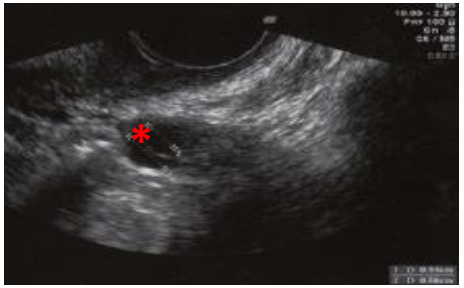
POF

PRE TRANSPLANTATION:

- **FOLLICULAR DENSITY 8 FOLLICLES / mm^2**
- **IMMUNOHISTOCHEMISTRY → CAM 5.2 → NO MALIGNANT CELLS**

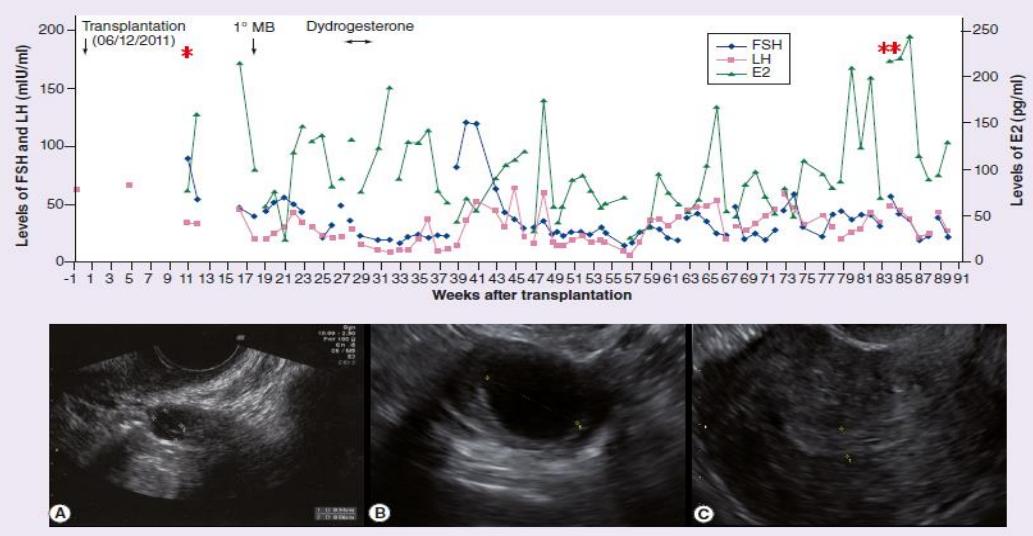
RESULTS

- **OVARIAN FUNCTION RECOVERY:** 2.5 MONTHS POST TRANSPLANTATION



	TRANSPLANT	
HORMONE LEVELS	PRE	POST*
FSH mIU/mL	134.6	55.1
E2 pg/mL	<12	159

- **1° MENSTRUAL CYCLE:** 4 MONTHS POST TRANSPLANTATION



OVARIAN FUNCTION LASTED 23 MONTHS

PATIENT 2 (A. R.): BREAST CANCER

- **BREAST CANCER (34 yrs)**
- **OVARIAN TISSUE CRYOPRESERVATION**
- **CHEMOTHERAPY (AC – 5 CYCLES)**
- **RADIOTHERAPY BOOST (60 Gy)**
- **TAMOXIFEN AND LEUPRORELIN (for 2 yrs)**
- **IRREGULAR MENSTRUAL CYCLES**

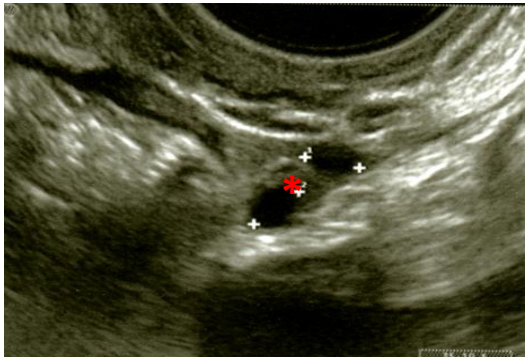
POF

PRE TRANSPLANTATION:

- **FOLLICULAR DENSITY: 1 FOLLICLE / mm^2**
- **IMMUNOHISTOCHEMISTRY → CAM 5.2; WT1 → NO MALIGNANT CELLS**

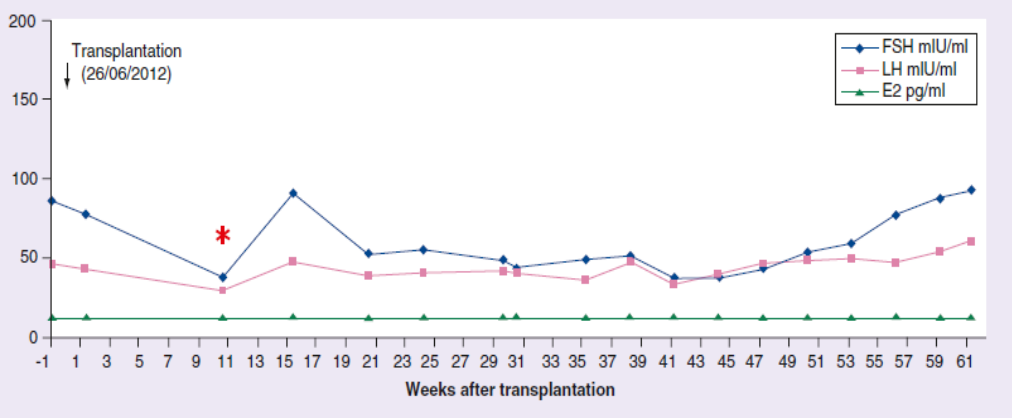
RESULTS

- **OVARIAN FUNCTION RECOVERY: 2 MONTHS POST TRANSPLANTATION**



	TRANSPLANT	
HORMONE LEVELS	PRE	POST*
FSH mIU/mL	86.1	37.1
E2 pg/mL	<12	<12

- **NO HOT FLUSHING**
- **NO MENSTRUAL CYCLES**



OVARIAN FUNCTION LASTED 7 MONTHS

PATIENT 3 (M. S.): STRUMA OVARII

- RIGHT OOPHORECTOMY (12 yrs)
- 1st LEFT CYST ENUCLEATION (20 yrs)
- 2nd LEFT CYST ENUCLEATION (21 yrs)
- PELVIC PERITONEUM, VESCICAL , LIVER STRUMA OVARII NODULES
- 3rd 2 LEFT CYST ENUCLEATION (24 yrs)
- OVARIAN TISSUE RETRIEVAL (24 yrs) → FROM ANOTHER HOSPITAL AND TRANSPORTED TO BOLOGNA
- METABOLIC RADIOTHERAPY

POF



PRE TRANSPLANTATION:

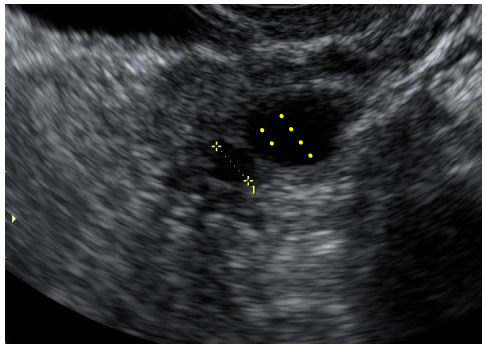
- FOLLICULAR DENSITY: 9 FOLLICLES / mm^2
- IMMUNOHISTOCHEMISTRY → CYTOKERATIN, TIREOGLOBULIN, TTF1, GALECTYN 3
  → NO MALIGNANT CELLS

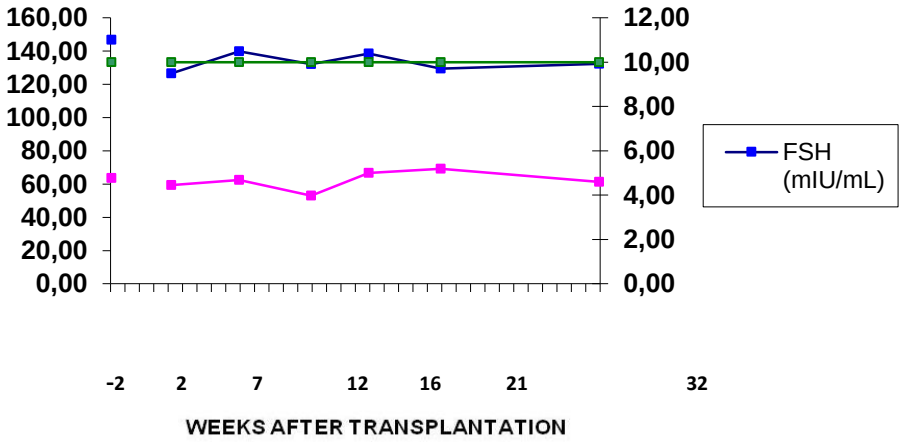
Gynecol Endocrinol. 2018 Jul;34(7):558-562. doi: 10.1080/09513590.2017.1423468. Epub 2018 Jan 10.

Transplantation of cryopreserved ovarian tissue in a patient affected by metastatic struma ovarii and endometriosis.

Fabbri R[1], Vicenti R[1], Paradisi R[1], Rossi S[1], De Meis L[1], Seracchioli R[1], Macciocca M[1].

- **FOLLICULAR DEVELOPMENT: 5 MONTHS POST TRANSPLANTATION**





- **NO MENSTRUAL CYCLES**

2nd HETEROTOPIC TRANSPLANTATION

- **NO OVARIAN FUNCTION RECOVERY**

HETEROTOPIC
(subcutaneous abdominal wall)

PATIENT 4 (F. A.): HODGKIN LYMPHOMA

- **HODGKIN LYMPHOMA (29 yrs)**
- **OVARIAN TISSUE CRYOPRESERVATION**
- **CHEMOTHERAPY (ABVD - 6 CYCLES)**
- **SUPRA- (92 Gy) and SUB-DIAPHRAGRAMATIC (67 Gy) RADIOTHERAPY**
- **IRREGULAR MENSTRUAL CYCLES**
- **2 SPONTANEOUS PREGNANCIES**

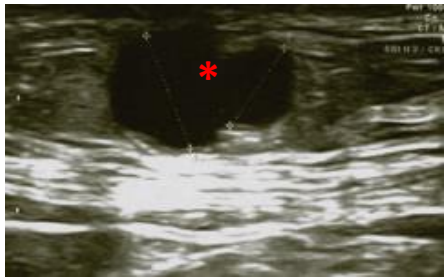
POF (38 yrs) : HOT FLUSHING AND SEVERE OSTEOPOROSIS

PRE TRANSPLANTATION:

- **FOLLICULAR DENSITY: 8 FOLLICLES / mm^2**
- **IMMUNOHISTOCHEMISTRY → CD30 → NO MALIGNANT CELLS**

RESULTS

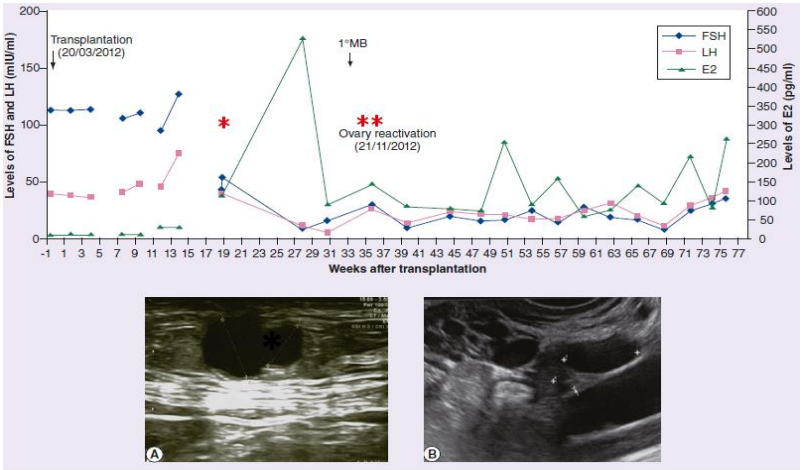
- **OVARIAN FUNCTION RECOVERY:** **4 MONTHS POST TRANSPLANTATION**



	TRANSPLANT	
HORMONE LEVELS	PRE	POST*
FSH mIU/mL	113.1	43.2
E2 pg/mL	<12	112.8

NO HOT FLUSHING

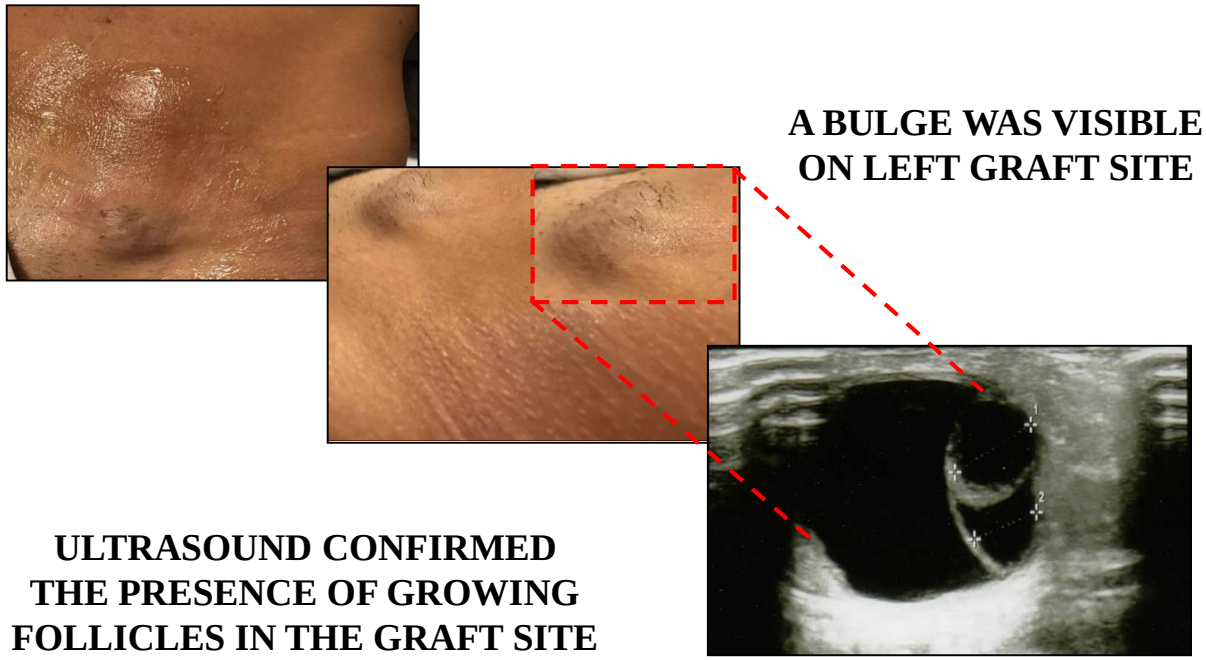
- **1° MENSTRUAL CYCLE:** **7.5 MONTHS POST TRANSPLANTATION**
- **CYCLES EVERY 26 DAYS**



OVARIAN FUNCTION LASTED 36 MONTHS

2nd HETEROTOPIC TRANSPLANTATION

- **OVARIAN FUNCTION RECOVERY: 4 MONTHS POST TRANSPLANTATION**



A BULGE WAS VISIBLE ON LEFT GRAFT SITE

ULTRASOUND CONFIRMED THE PRESENCE OF GROWING FOLLICLES IN THE GRAFT SITE

- **1° MENSTRUAL CYCLE: 4.5 MONTHS POST 2ndTRANSPLANTATION**

MONITORING IS ONGOING

ORTHOTOPIC

PATIENT 5 (E. C.): NON-HODGKIN LYMPHOMA

- NON-HODGKIN LYMPHOMA (29 yrs)
- OVARIAN TISSUE CRYOPRESERVATION
- CHEMOTHERAPY (R-CHOP, MAD, BEAM)
- HEMATOPOIETIC STEM CELL TRANSPLANTATION
- MEDIASTINAL RADIOTHERAPY (44Gy)

POF

PRE TRANSPLANTATION:

- **FOLLICULAR DENSITY: 8 FOLLICLES / mm^2**
- **IMMUNOHISTOCHEMISTRY → CD30,CD20,PAX5 → NO MALIGNANT CELLS**

RESULTS

- **NO OVARIAN FUNCTION RECOVERY : 6 MONTHS POST TRANPLANTATION**

2nd ORTHOTOPIC TRANSPLANTATION



SPONTANEOUS PREGNANCY
4 MONTHS POST 2nd TRANSPLANTATION



BIRTH OF A HEALTHY CHILD
(WEIGHT: 3,3 Kg; LENGTH51 cm)

AVEC
Sezione:AOSP BO

il Resto del Carlino
Bologna
Dir. Resp. Paolo Giacomin
Tiratura: 90.800 Diffusione: 122.031 Lettori: 1.032.000

Edizione del 19/09/18
Estratto da pag.:1,47
Foglio:1/2

SANT'ORSOLA

Donna guarisce dal tumore e partorisce dopo aver congelato il tessuto ovarico

A pagina 11

Tessuto ovarico congelato per il tumore «Ho un figlio grazie al reimpianto»

È la prima italiana diventata madre con la nuova tecnica dopo la chemio

di DONATELLA BARBETTA

È UNA mamma da primato, ma sembra ancora incredula per quello che le è accaduto: è la prima donna, in Italia, ad aver partorito un bimbo dopo avere crioconservato il proprio tessuto ovarico in modo da poter combattere e superare un tumore.

«Non avrei sperato di poter avere un figlio – dice la trentacinquenne – eppure è accaduto e oggi sono orgogliosa di essere finita nella letteratura scientifica. Era il 2012 quando i medici mi dissero che avevo un linfoma non Hodgkin. Mi ero sposata un anno prima e così gli specialisti di Brescia, città dove a luglio è nato mio figlio, mi indirizzarono subito al Sant'Orsola per il prelievo del tessuto ovarico in modo da lasciarmi, dopo le cure, la possibilità di procreare». E così è iniziato il percorso di preservazione della fertilità.

«Una tecnica per me nuova – precisa la mamma lombarda –. Mi hanno sottoposto al prelievo attraverso la laparoscopia, in anestesia totale. Due giorni dopo ero a casa e iniziavo la terapia. È stato pesante: chemio, autotrapianto di midollo e radio, ma è andato tutto bene. Così, dopo quattro anni, sono tornata di nuovo a Bologna». Era venuto il momento di prelevare dalla biobanca il tessuto ovarico congelato.

LA STESSA tecnica, usata nel 2011 all'ospedale Sant'Anna di Torino, ha portato alla nascita di una bimba figlia di una donna talassemica. Invece, la mamma di Brescia, è stata colpita da un tumore. «Con il primo reimpianto il mio apparato ginecologico ha dato segni di ripresa, ma senza gli effetti sperati – ricorda la giovane mamma – e allora è stato fatto un secondo reimpianto: nel giro di un paio di mesi è ricomparso il ciclo e dopo altri due mesi sono rimasta incinta. L'ho scoperto con un test di gravidanza fatto in casa e allora, dopo i primi momenti di gioia, ho inviato un messaggio alla dottoressa Fabbri: sapevo che la situazione era delicata».

QUANDO la biologa, responsabile del laboratorio di crioconservazione di tessuto ovarico e colture cellulari del Policlinico, ha letto il testo, ha chiamato subito la paziente. «Le ho detto di fare un esame del sangue per avere la certezza della gravidanza – spiega Raffaella Fabbri – e poi di venire da noi. L'abbiamo sottoposta a un'ecografia: era tutto a posto. Certo, per noi è stata una grande soddisfazione aver fatto diventare madre, per la prima volta nel nostro Paese, una donna che è stata una paziente oncologica».

Renato Seracchioli, direttore dell'unità operativa ginecologia e fisiopatologia della riproduzione umana del Sant'Orsola, è il chirurgo che ha seguito questo caso da primato: «Sappiamo che nel mondo, grazie a questa tecnica, finora ci sono state 130 nascite da ex pazienti oncologiche Noi, finora, abbiamo eseguito altri 16 reimpianti e cinque donne stanno cercando una gravidanza. È una tecnica promettente, anche perché evita alle pazienti una menopausa precoce con i problemi di salute ad essa associate».

SOGNO AVVERATO

«Ho scoperto la gravidanza con un test fatto in casa Poi ho avvisato il Policlinico»



Peso:1-4%,47-64%

Il presente documento è ad uso esclusivo del committente.

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AVEC
Sezione:AOSP BO

il Resto del Carlino
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NELLA BIOBANCA 770 PROVETTE

Casi pediatrici

Nella biobanca del Sant'Orsola sono conservati tessuti ovarici di 168 pazienti pediatriche che in questo modo preservano la loro fertilità

Pazienti adulte

Attualmente sono congelati i tessuti ovarici prelevati a 602 donne Nel centro del Sant'Orsola si esegue questo tipo di prelievi dal 2002

SPECIALISTI
In alto, il professor Renato Seracchioli, direttore dell'unità operativa ginecologia e fisiopatologia della riproduzione umana; a sinistra, la biologa Raffaella Fabbri, responsabile del laboratorio di crioconservazione di tessuto ovarico e colture cellulari



ORA SPERANO ALTRE CINQUE DONNE

IL PROFESSOR RENATO SERACCHIOLI: «ABBIAMO ESEGUITO ALTRI SEDICI REIMPIANTI, ORA CINQUE DONNE CERCANO UNA GRAVIDANZA»





Peso:1-4%,47-64%

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CONCLUSIONS

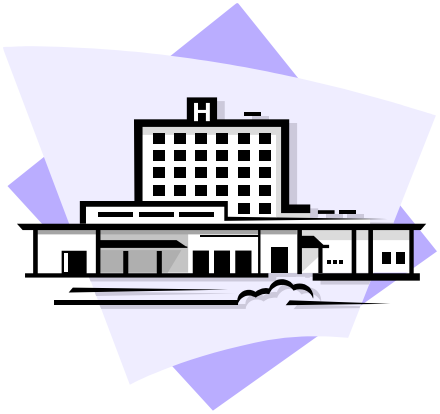
1st ITALIAN BIRTH AFTER OVARIAN TISSUE TRANSPLANTATION IN CANCER PATIENT

MORE THAN 130 LIVE BIRTHS - SUCCESS RATES 30-40%:

OVARIAN TISSUE CRYOPRESERVATION AND TRANSPLANTATION SHOULD NO LONGER BE CONSIDERED EXPERIMENTAL

THESE FINDINGS ARE ALSO NOTEWORTHY FOR THE SAFETY OF LONG-TERM BANKING IN ONCOFERTILITY PROGRAMS

CONCLUSIONS



SPECIALIZED CENTRE

PATIENT COUNSELLING
SURGICAL PROCEDURES
CRYOPRESERVATION PROTOCOL
QUALITY CONTROL
FOLLOW-UP



NETWORK
ONCOLOGISTS - PATIENTS

GRAZIE





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