

Non-myeloablative Allogeneic HSCT (no TBI)* Pediatric Surveillance & Follow-up Guidelines

| | Months/ Years from end of therapy | Date | H&P | CBC, retics LDH | Chem | Chimerism | Metabolic | LH, FSH, estradiol or testost | Urine tests | ECHO# | DEXA BMD | Eye Exam | Dentistry | Hearing | Neuropsych assessment | Other | |
|---------------------|--|------|-----|-----------------------|--|-----------|---|--|--|---|-------------|---------------------------|---------------------------|--|---|---|----------------|
| Early EUL Clinic | 24 | | + | + | + | + | + | | + | | | | | | | | Live vaccine * |
| | 30 | | + | + | | | | | | | | | | | | | |
| | 36 | | + | + | + | + | | | | | | | | | | | |
| | 42 | | + | + | | | | | | | | | | | | | |
| | 48 | | + | + | + | | | | | | | | | | | | |
| | 60 | | + | + | + | + | + | | + | | | | | | | | |
| Late Effects Clinic | 6 years | | + | | | | | | | | | | | | | | |
| | 7 | | + | | | | | | | | | | | | | | |
| | 8 | | + | | | | | | | | | | | | | | |
| | 9 | | + | | | | | | | | | | | | | | |
| | 10 | | + | | | | | | | | | | | | | | |
| | 11 | | + | | | | | | | | | | | | | | |
| | 12 | | + | | | | | | | | | | | | | | |
| | 13 | | + | | | | | | | | | | | | | | |
| | 14 | | + | | | | | | | | | | | | | | |
| | 15 | | + | | | | | | | | | | | | | | |
| | 16 | | + | | | | | | | | | | | | | | |
| | 17 | | + | | | | | | | | | | | | | | |
| | 18 | | + | | | | | | | | | | | | | | |
| Notes | | | | | Lytes, Ca, Mg, PO4, Cr, urea, LFTs | | Fasting glucose, HbA1C, TSH, T4 and lipids. Q2y if clinical concerns | Baseline age 12 y if CED ≥4 or clinical concerns. Rpt Q1y | U/A, urine Prot:Cr & Alb:Cr ratio | #Insert added frequency based on cardiac guidelines (see over) | | As per routine care | As per routine care | If cisplatin or cranial RT >30Gy, annual x5y or until age 10y | PRN and repeat at school transitions if ongoing concerns | * Live vaccine re- immunizations at 2y if no active GVHD or ongoing immune suppression | |

* If diagnosed with GVHD, use "Myeloablative with GVHD" screening schedule

If patient on study, refer to study protocol for additional testing

| | |
|-----------------------------|--|
| Further Surveillance | |
| Gynecology | PRN |
| Semen Analysis | From age 18y in males |
| Anti-Mullerian Hormone | From age 16y in females if CED > 6 g/m2 OR pelvic RT or early if clinical concerns |

Cardiac Surveillance Guidelines (BC)

| Anthracycline Dose* | Radiation Dose** | Recommended Frequency of Echo |
|-------------------------|------------------|-------------------------------|
| None | < 15 Gy or none | No Screening |
| | 15 - < 35 Gy | Every 5 years |
| | 35 Gy | Every 2 years |
| < 250 mg/m ² | < 15 Gy or none | Every 5 years |
| | 15 Gy | Every 2 years |
| 250 mg/m ² | Any or none | Every 2 years |

*Based on total doses of doxorubicin or the equivalent doses of other anthracyclines

**Based on radiation dose with potential impact to heart (radiation to chest, abdomen, spine [thoracic, whole], total body [TBI])

COG LTFU Guidelines version 5.0 (Oct 2018)

Anthracycline Equivalent Dose

| Agent | Correction factor |
|--------------|-------------------|
| Doxorubicin | 1.0 |
| Daunorubicin | 0.5 |
| Epirubicin | 0.67 |
| Mitoxantrone | 4.0 |
| Idarubicin | 5.0 |

Chow J Clin Oncol 2015;33(5):394-402

Risk of Prolonged Oligospermia or Azoospermia

| Agent | Possible Risk | High Risk |
|--------------------|-------------------------|-------------------------|
| Cyclophosphamide | > 4g/m ² | > 7.5 g/m ² |
| Busulphan | | > 600 mg/m ² |
| Melphalan | | > 140 mg/m ² |
| Ifosfamide | > 42 g/m ² | > 60 g/m ² |
| Procarbazine | > 3 g/m ² | > 4 g/m ² |
| Chlorambucil | | > 1.4 g/m ² |
| BCNU | > 300 mg/m ² | > 1 g/m ² |
| CCNU | | > 500 mg/m ² |
| Cisplatin | > 300 mg/m ² | > 600 mg/m ² |
| Testicular RT dose | > 200 cGy | > 1200 cGy |

*Lower doses are still possible risk

1. Green J Clin Oncol 2010;28:332-9
2. Meistrich Pediatr Blood Cancer 2009;53:261-6
3. Wynn Human Reprod Update 2010;16(3):312-328

Risk of Premature Ovarian Insufficiency or Infertility

| Agent | Possible Risk | High Risk | Ref |
|------------------|-------------------------|----------------------|-----|
| CED | > 4 g/m ² | > 8 g/m ² | 1 |
| Procarbazine | > 2 g/m ² | > 4 g/m ² | 2 |
| Cisplatin | > 300 mg/m ² | | 3 |
| Dactinomycin | >12.2 mg/m ² | | 4 |
| Ovarian RT dose* | > 100 cGy | > 1000 cGy | 5 |

*Age dependent (see nomogram⁵)

[^]Bevacizumab can cause ovarian failure; possibly acute and transient only⁶

1. Green Pediatr Blood Cancer 2014;61(1):53-67
2. Van der Kaaij J Clin Oncol 2012;30(3):291-299
3. Solheim Gyne Oncol 2015;136(2):224-229
4. Van Den Berg Hum Reprod 2018; 33(8):1474-1488
5. Wallace Int J Radiat Oncol;62(3):738-744
6. Imai Molec Clin Oncol 2017;6:807-810

Cyclophosphamide Equivalent Dose (CED)

| Agent | Correction factor |
|------------------|-------------------|
| Cyclophosphamide | 1.0 |
| Ifosfamide | 0.244 |
| Procarbazine | 0.857 |
| Chlorambucil | 14.286 |
| BCNU | 15 |
| CCNU | 16 |
| Melphalan | 40 |
| Thiotepa | 50 |
| Nitrogen Mustard | 100 |
| Busulphan | 8.823 |

Green Pediatr Blood Ca 2014;61:53-67