# Myeloablative Allogeneic HSCT with GVHD (Received TBI) *

## Pediatric Surveillance & Follow-up Guidelines

<table>
<thead>
<tr>
<th>Months/ Years from end of therapy</th>
<th>Date</th>
<th>H&amp;P</th>
<th>CBC, retics LDH</th>
<th>Chem</th>
<th>Metabolic</th>
<th>TSH/ T4</th>
<th>LH, FSH, Test or Est</th>
<th>Urine tests</th>
<th>ECHO#</th>
<th>PFTs</th>
<th>DEXA BMD</th>
<th>Thyroid</th>
<th>Ophtho</th>
<th>Brain MRI</th>
<th>Neuropsych assessment</th>
<th>Other</th>
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### Further Surveillance

<table>
<thead>
<tr>
<th>Dentistry</th>
<th>Annual</th>
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<tbody>
<tr>
<td>Gynecology</td>
<td>PRN</td>
</tr>
<tr>
<td>Semen Analysis</td>
<td>From age 18y in males</td>
</tr>
<tr>
<td>Anti-Mullerian Hormone</td>
<td>From age 16y in females if CED ≥ 6 g/m² or pelvic RT; or earlier if clinical concerns</td>
</tr>
<tr>
<td>Breast MRI and Mammogram</td>
<td>From later of age 25y or 8y after exposure if chest RT</td>
</tr>
<tr>
<td>Coloscopy</td>
<td>From later of age 30y or 5y after exposure to abdominal RT</td>
</tr>
</tbody>
</table>

* See alternate screening schedule if no Graft-vs-Host Disease
* If patient on study, refer to study protocol for additional testing

**Notes**

- **Then PRN**
- **Lytes, Ca, Mg, PO4, Cr, urea, LFTs, Fasting glucose, HbA1C, and lipids. Continue Q6mo if ongoing immune therapy; Q1y if high BMI**
- **Baseline age 12 y Rpt Q1y**
- **U/A, urine Prot: Cr & Alb: Cr ratio**
- **#Insert added frequency based on cardiac guidelines (see over)**
- **Refer to Resp if age < 6y.**

- **First assessment prior to school entry. Repeat at school transitions if ongoing concerns**
- **First assessment at 2y if no active GVHD or ongoing immune suppression**

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* ATTACH PATIENT ID
**Cardiac Surveillance Guidelines (BC)**

<table>
<thead>
<tr>
<th>Anthracycline Dose*</th>
<th>Radiation Dose**</th>
<th>Recommended Frequency of Echo</th>
</tr>
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<tbody>
<tr>
<td>None</td>
<td>&lt;15 Gy or none</td>
<td>No Screening</td>
</tr>
<tr>
<td></td>
<td>15 - &lt; 35 Gy</td>
<td>Every 5 years</td>
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<tr>
<td></td>
<td>35 Gy</td>
<td>Every 2 years</td>
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<tr>
<td>&lt; 250 mg/m²</td>
<td>&lt;15 Gy or none</td>
<td>Every 5 years</td>
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<tr>
<td></td>
<td>15 Gy</td>
<td>Every 2 years</td>
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<tr>
<td>250 mg/m²</td>
<td>Any or none</td>
<td>Every 2 years</td>
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*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**

<table>
<thead>
<tr>
<th>Agent</th>
<th>Correction factor</th>
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<tbody>
<tr>
<td>Doxorubicin</td>
<td>1.0</td>
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<tr>
<td>Daunorubicin</td>
<td>0.5</td>
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<tr>
<td>Epirubicin</td>
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<tr>
<td>Mitoxantrone</td>
<td>4.0</td>
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<tr>
<td>Idarubicin</td>
<td>5.0</td>
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Chow J Clin Oncol 2015;33(5);394-402

**Risk of Prolonged Oligospermia or Azoospermia**

<table>
<thead>
<tr>
<th>Agent</th>
<th>Possible Risk</th>
<th>High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclophosphamide</td>
<td>&gt; 4g/m²</td>
<td>&gt; 7.5 g/m²</td>
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<tr>
<td>Busulphan</td>
<td>&gt; 600 mg/m²</td>
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<td>Melphalan</td>
<td>&gt; 140 mg/m²</td>
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<td>Ifosfamide</td>
<td>&gt; 42 g/m²</td>
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<tr>
<td>Procarbazine</td>
<td>&gt; 3 g/m²</td>
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<td>Chlorambucil</td>
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<td>&gt; 300 mg/m²</td>
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<tr>
<td>CCNU</td>
<td>&gt; 500 mg/m²</td>
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<tr>
<td>Cisplatin</td>
<td>&gt; 300 mg/m²</td>
<td>&gt; 600 mg/m²</td>
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<tr>
<td>Testicular RT dose</td>
<td>&gt; 200 cGy</td>
<td>&gt; 1200 cGy</td>
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*Lower doses are still possible risk

**Risk of Premature Ovarian Insufficiency or Infertility**

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<tr>
<th>Agent</th>
<th>Possible Risk</th>
<th>High Risk</th>
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<tbody>
<tr>
<td>CED</td>
<td>&gt; 4 g/m²</td>
<td>&gt; 8 g/m²</td>
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<td>Procarbazine</td>
<td>&gt; 2 g/m²</td>
<td>&gt; 4 g/m²</td>
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<tr>
<td>Cisplatin</td>
<td>&gt; 300 mg/m²</td>
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<td>Dactinomycin</td>
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<td>Ovarian RT dose*</td>
<td>&gt; 100 cGy</td>
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*Age dependent (see nomogram)
*Bevacizumab can cause ovarian failure; possibly acute and transient only

4. Van Den Berg Hum Reprod 2018; 33(8):1474-1488
6. Imai Molec Clin Oncol 2017;6:807-810

**Cyclophosphamide Equivalent Dose (CED)**

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<td>Busulphan</td>
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Jan 2020 v4