

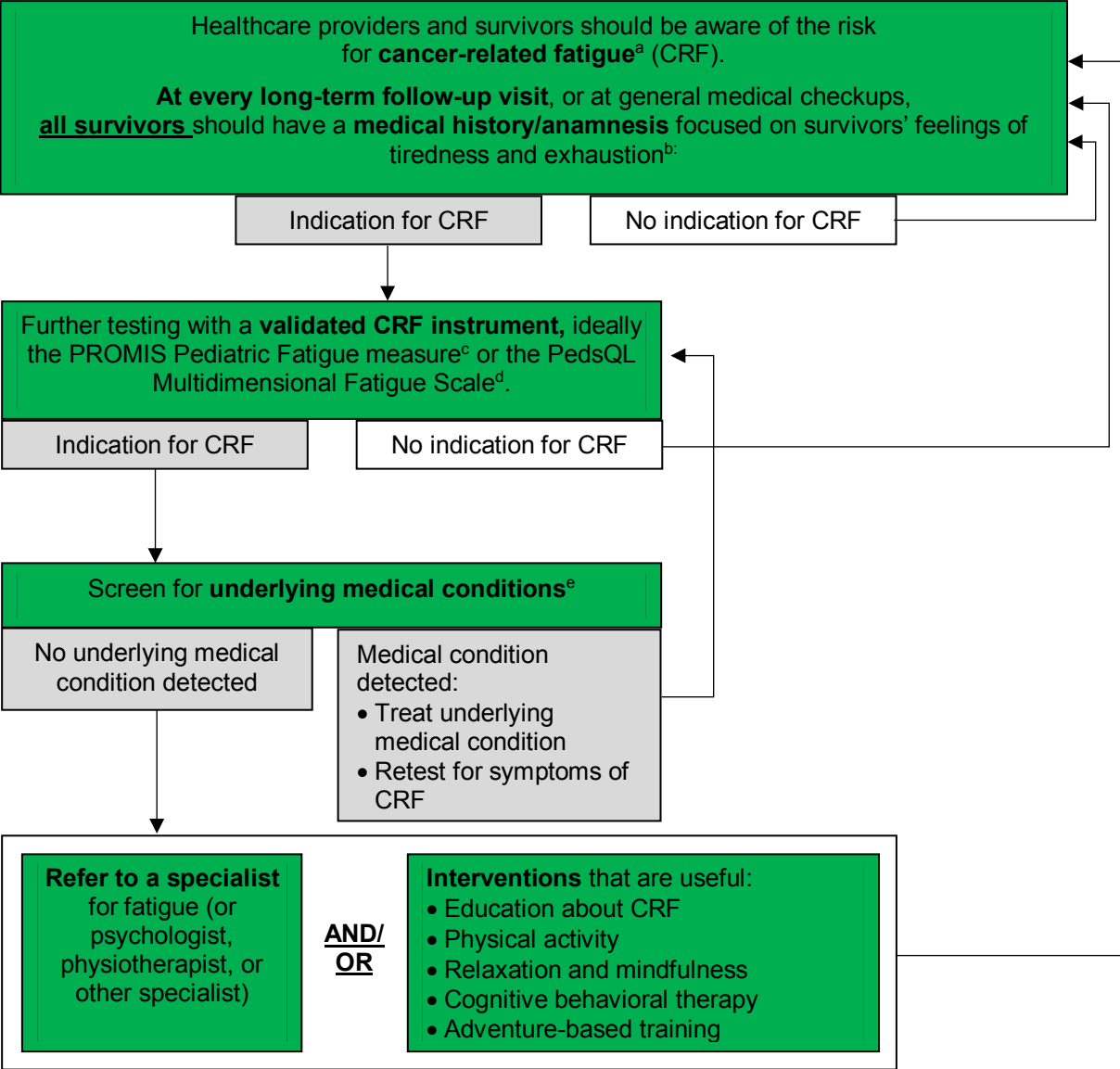
<p><b>Who needs surveillance?</b></p> <p>Healthcare providers and survivors of childhood, adolescent and young adult (CAYA) cancers <i>should be aware</i> that CAYA cancer survivors are risk for cancer-related fatigue<sup>a</sup> (CRF; Level A evidence).</p> <p>Main risk factors for CRF in CAYA cancer survivors are:</p> <ul style="list-style-type: none"> <li>• Psychological distress (Level A evidence),</li> <li>• Late effects or health problems, pain, relapse, older age at follow-up (Level B evidence),</li> <li>• Radiotherapy (Level C evidence).</li> </ul>
<p><b>What surveillance modality should be used and how often should surveillance be performed?</b></p> <p>For all CAYA cancer survivors: A medical history/anamnesis focused on survivors' feelings of tiredness and exhaustion <i>is recommended</i> to be performed regularly (at every long-term follow-up visit, or at general medical checkups) (expert opinion).</p> <ul style="list-style-type: none"> <li>• Questions to ask: "Do you get tired easily?", or "Are you too tired or exhausted to enjoy the things you like to do?"</li> </ul> <p>For CAYA cancer survivors with an indication for CRF from medical history/anamnesis:</p> <ul style="list-style-type: none"> <li>• Further testing with a validated fatigue measure<sup>b</sup> <i>is recommended</i> (Level B evidence, expert opinion).</li> <li>• Screening for underlying medical conditions<sup>c</sup> that may cause fatigue <i>is recommended</i> (expert opinion, existing guidelines)</li> </ul>
<p><b>What should be done if abnormalities are identified?</b></p> <p>If CRF is diagnosed with a validated fatigue measure and if no underlying medical condition is identified:</p> <ul style="list-style-type: none"> <li>• Referral to a specialist in fatigue (or more generic specialist such as psychologist, physiotherapist, or other relevant specialist) <i>is recommended</i> for CAYA cancer survivors (expert opinion).</li> <li>• Interventions that <i>are useful</i>: <ul style="list-style-type: none"> <li>○ Physical activity (Level B evidence);</li> <li>○ Education about CRF (Level B evidence);</li> <li>○ Relaxation and mindfulness (Level C evidence, existing guidelines);</li> <li>○ Cognitive behavioral therapy (Level C evidence, existing guidelines);</li> <li>○ Adventure-based training (Level C evidence).</li> </ul> </li> </ul>

<sup>a</sup> CRF is defined as "a distressing, persistent, subjective sense of physical, emotional and/or cognitive tiredness or exhaustion related to cancer or cancer treatment that is not proportional to recent activity and interferes with usual functioning".

<sup>b</sup> Ideally the PROMIS Pediatric Fatigue measure (<http://www.healthmeasures.net/index.php?Itemid=992> [accessed August 29<sup>th</sup> 2019]) or the PedsQL Multidimensional Fatigue Scale (<https://eprovide.mapi-trust.org/instruments/pediatric-quality-of-life-inventory-multidimensional-fatigue-scale> [accessed August 29<sup>th</sup> 2019]); see Table S13 for list of all measures validated in CAYA cancer patients and survivors.

<sup>c</sup> e.g. other late effects like cardiac dysfunction, endocrine dysfunction, pulmonary dysfunction, and renal dysfunction (IGHG guidelines under development); and/or other general causes like anemia, arthritis, neuromuscular complications, pain, fever and/or infection, and nutritional deficiencies (list not conclusive).

**Process of screening and interventions for cancer-related fatigue in survivors of childhood, adolescent and young adult cancers**



**Publication**

Christen S, Roser K, Mulder RL, Ilic A, Lie HC, Loonen JJ, Mellblom AV, Kremer LCM, Hudson MM, Constine LS, Skinner R, Scheinemann K, Gilleland Marchak J, Michel G; IGHG psychological late effects group. Recommendations for the surveillance of cancer-related fatigue in childhood, adolescent, and young adult cancer survivors: a report from the International Late Effects of Childhood Cancer Guideline Harmonization Group. *Journal of Cancer Survivorship* 2020;14:923–938.