

Synopsis of ILROG Recommendations for Administering Radiotherapy for Hematological Malignancies During Emergency Conditions of the COVID-19 Pandemic

- We are facing an increased demand for RT to substitute or complement systemic therapy deemed immunosuppressive or too toxic in the current high-risk environment for patients with hematological malignancies, particularly if old and frail
- Resources for delivering RT may be under stress due to machine time and staff shortages
- It is important to reduce travel and time in medical facilities for both patients and staff
- ILROG leadership convened a task force to address these issues and produced a document that included principles that will allow a reduction in treatment time while maintaining according to team's best judgement efficacy without increased toxicity
- ILROG task force composed an Emergency Guidelines paper that will be very soon published in **BLOOD** with background radiobiological and more detailed information to cover most clinical scenarios for shorter treatment courses or for possible delays of treatment. When available to view and/or download we will communicate the link to our ILROG community
- Please keep a log of patients treated with the emergency schedule (in accordance with institutional guidelines) for future collaborative data collection and analysis by ILROG

Strategies

- *Omitting RT: when the COVID-19 case-fatality rate may outweigh the benefit of RT*
To be considered in the following situations:
 - Palliation - where alternatives are available (e.g. optimizing pain control)
 - Completely excised localized low-grade lymphomas or NLPHL
 - Consolidation RT for aggressive lymphoma in CR after full chemotherapy course
- *Delaying RT: when no or little expected adverse effect on outcome from the delay*
 - Localized indolent lymphomas or NLPHL
 - Palliation for stable indolent lymphoma
- *Hypofractionated RT Course when RT could not be omitted or delayed*
 - HL favorable: 5 Gy X 3 as an alternative to 2 Gy X 10 (if mediastinum or other critical organs use 3 Gy X 6)
 - HL unfavorable, or aggressive NHL in CR: 5 Gy X 5 as an alternative to standard of 2 Gy X 15 (if mediastinum/critical organs use 3 Gy X 9)
 - HL or aggressive NHL in PR: 5 Gy X 6 to replace standard of 36 Gy in 2 Gy fractions (if mediastinum 3 Gy X 11)
 - HL/Aggressive NHL refractory to chemo: 5Gy X 6 to replace 40-50 Gy in standard fractionation (mediastinum 3 Gy X 12)
 - Indolent lymphomas (localized): start with 4 Gy X 1 - reevaluate. If insufficient response proceed with 4 Gy X 5
 - Symptomatic aggressive NHL (no chemo options): 5 Gy X 5

- Symptomatic multiple myeloma: 8 Gy X 1 (for cord compression 4 Gy X 5)
- Symptomatic indolent lymphoma: 4 Gy X 1
 - ❖ When using 5 Gy per fraction to 25-30 Gy, we recommend keeping Dmax to < 25 Gy for optic nerves, optic chiasm, cochlea, brainstem, brachial plexus, spinal cord and cauda; V25 < 5cc for stomach, duodenum, and other small bowel; mean liver dose < 20 Gy; and mean dose < 6 Gy for kidney (bilateral, but optimal if one kidney can be spared). If these dose constraints cannot be met, we recommend using 3 Gy per fraction to 30 Gy, if CR, 33 Gy if PR, 36 Gy if refractory.