**Supplemental Digital Content 2.** Risk of bias assessment criteria for observational studies

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| **Study group** | **Selection bias** |
|  | Is the study group representative?  |
|  | yes/no/unclear |
|  | Yes if:•the study group consists of more than 75% of the original cohort of patients curative treated for childhood cancer with external beam three dimensional planned radiotherapy and survived at least 90 days after radiotherapyor•it was a random sample with respect to the cancer treatment | No if:•the study group consists of less than 75% of the original cohort of patients curative treated for childhood cancer with external beam three dimensional planned radiotherapy and survived at least 90 days after radiotherapyor•if it was not a random sample with respect to cancer treatment | Unclear if: no or incomplete numbers are mentioned about the study group to enable full assessment according to these criteria  |
|  |  |  |  |
| **Follow-up** | **Attrition bias**  |
|  | Is the follow-up adequate?  |
|  | yes/no/unclear |
|  | Yes if:the outcome was assessed for more than 75% of the study group  | No if:the outcome was assessed for less than 75% of the study group (irrespective of reason for missing outcome assessment; can include death) | Unclear if:no numbers are mentioned |
|  |  |  |  |
| **Outcome** | **Detection bias** |
|  | Are the outcome assessors blinded for important determinants related to the outcome?  |
|  | yes/no/unclear |
|  | Yes if:the outcome assessors were blinded for important determinantsa related to the outcome | No if:it is mentioned that the outcome assessors were not-blinded for important determinantsa related to the outcome | Unclear if: it is not mentioned of the assessors are blinded for the important determinantsa  |
|  | a: Determinants are defined as: type of radiotherapy, radiotherapy field and radiotherapy dose |
|  |  |  |  |
| **Risk estimation** | **Confounding** |
|  | Are the analyses adjusted for important confounding factors?  |
|  | yes/no/unclear/not applicable |
|  | Yes if:important prognostic factors (i.e. age, gender, co-treatment, follow-up) were taken adequately into account  | No if:important prognostic factors (i.e. age, gender, co-treatment, follow-up) were not taken adequately into account  | Unclear if: it is not mentioned if the analyses are adjusted for important confounding factors. | Not applicable (NA) if: no risk estimation has been performed on the adverse outcomes |