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From a waiting list to a priority list: a computerized model for an easy-to-manage and automatically updated priority list in the booking of patients waiting for radiotherapy

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ABSTRACT

Aims and background. Waiting time for radiotherapy is a major problem in clinical practice. We developed a model to create a priority list of patients waiting for radiotherapy according to clinical criteria, where booking of patients is not on a "first-come, first-served" basis and where prioritization has not been left up to individual discretion.

Methods. The system is based on an algorithm that assigns to each patient a personal code (priority code, PC) that can be used as a continuous variable to have a priority list. $PC_{patient} = D0_{patient} + PWT_{subgroup\ of\ treatment}$. Palliative treatments were categorized according to the clinical urgency. Radical treatments were stratified by primary tumors, by the setting of treatment (preoperative, curative, postoperative) and by the main prognostic factors. Each subgroup of patients has a "priority waiting time" (PWT subgroup of treatment). Calculation of the PC starts from a differentiated date according to clinical scenario [Reference date (D0)], which is taken from the clinical history of the patient.

Results. Patients are differentiated according to clinical criteria and according to time elapsed from diagnosis. The priority list can be automatically updated day by day. Delays in patient referral or imaging availability are minimized.

Conclusions. The model represents a tool for an objective and automatic prioritization of the patients who are waiting for radiotherapy.

Key words: radiotherapy, treatment delay, waiting list, waiting time.

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