

Routine use of OncoDoc2, a guideline-based decision support system for breast cancer: categorization and quantification of cases of non adherence with guidelines

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Abstract and Objective

Despite “multidisciplinary staff meetings” (MSMs) and the publication of clinical practice guidelines (CPGs), actual cancer management may still vary from CPG recommendations. Clinical decision support systems (CDSSs) are considered appropriate tools to promote adherence with CPGs. At the Tenon hospital (Paris, France), breast cancer MSMs occur once a week and local guidelines (CancerEst) were developed for breast cancer management. OncoDoc2 is a therapeutic CDSS that implements CancerEst CPGs. In 2005-2006, a before/after intervention study¹ has been performed with OncoDoc2 in Tenon's MSMs. The adherence rate of MSM decisions with CancerEst CPGs significantly increased from 79.2% to 93.4% when the system was used. Since then, OncoDoc2 has been routinely used in a quality management process. We propose a categorization of non-adherent decisions.

Keywords:

Clinical decision support system, Quality assurance, Health care, Guideline adherence, Breast cancer management.

Method

During each MSM, all participants can see the screen of OncoDoc2 which is videoprojected. For each patient, the patient profile made of a set of decision criteria and the corresponding recommended care plan are displayed to act as a reminder. Then, MSM members make their decision. When their decision differs from OncoDoc2's recommendations, they have to justify the reason why they do not apply them. To better understand non adherence, we propose a categorization of its possible causes as follows: “Particular case” when there exists an objective contraindication to the recommended care plan, “Patient preference” when the patient prefers an alternate therapy, “Evolution of practice” when the MSM considers new scientific results are more appropriate from now on, “MSM

preference” when the MSM decides another treatment would better benefit the patient, and “Other reason” otherwise.

Results

Between February 2007 and September 2009, 1,889 MSM decisions have been collected from the routine use data base of OncoDoc2 and analysed. The adherence rate with CancerEst CPGs for this period has been measured at 90.3%. Therefore, 9.7% of non-adherent decisions remained. The reasons for non-adherent decisions, sorted by frequency, are the following: 34.2% of “Particular cases”, e.g. BRCA1/2 mutations, pregnancy, elderly, prior surgery...; 33.2% of “MSM preferences”; 18.5% of “Evolution of practice”; 13.0% of “Patient preferences”, e.g. patients refusing mastectomy or, on the contrary, requesting radical surgery; 1.1% of “Other reasons”.

Conclusion

First of all, the high adherence rate with CancerEst CPGs observed during the initial before/after study was maintained above 90% over the routine use of OncoDoc2. As for non-adherent decisions, the part due to patient preferences cannot be anticipated or reduced. Some particular cases might be handled theoretically by CPGs and CDSSs but this would be an arbitrarily complex task. Evolution of practice signs the dating process of the CPGs which requires an update. Lastly, MSM preferences occurred in borderline cases the interpretation of which is not completely straightforward. MSM clinicians may assess the benefit/risk ratio of treatment options for a specific patient and decide not to adhere to what CPGs would formally recommend. This experiment also shows that a 100% adherence rate to CPGs is neither feasible nor desirable, at least for breast cancer management.

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