



# Challenge of implementing clinical practice guidelines. Getting ESMO's guidelines even closer to the bedside: introducing the ESMO Practising Oncologists' checklists and knowledge and practice questions

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## AN INTRODUCTION TO CLINICAL PRACTICE GUIDELINES

In an ever more rapidly evolving and complex medical landscape, guidelines are paramount for even the most experienced practitioner to ensure delivery of optimal and safe care for patients. There is no doubt that modern clinical practice guidelines (CPG) can make life a lot easier for practising physicians, and a lot safer for their patients, as they often provide a stepwise algorithm which will walk physicians through the important steps of decision-making during the diagnostic and therapeutic management of their patients.

Medical guidelines have already been established thousands of years ago, as witness papyrus finds dated back from the times of the Pharaohs of Egypt. Some may have been empiric. Most were based on authority, beliefs, rituals or tradition.<sup>1</sup>

The modern era of CPGs begins in 1992, with the Institute of Medicine's definition: "Clinical Practice Guidelines are systematically developed statements to assist practitioner's decision about appropriate health care for specific clinical circumstances".<sup>2</sup> They are supposed to bridge the gap between research and current practice, and thus to reduce inappropriate variability in practice.<sup>3</sup>

Modern clinical guidelines should be based on the *highest quality* of evidence according to *current* data, leading to a general *consensus* in state-of-the-art diagnosis and therapy of diseases, and a *standardised approach* to patient care. This is highly appreciated in situations of multiple treatment options, in situation of sparse evidence, or of uncertainty.<sup>4</sup>

Guidelines may be related to diseases or procedures. They are mainly developed for diseases with high prevalence or frequently used medical procedures, high associated costs and current variations in practice. They are of particular interest in diseases in which diagnostic or treatment decisions may have a high impact on mortality, morbidity, quality of life and care-related costs.<sup>5</sup>

The production of guidelines involves a technical and a social process: best evidence has to be sought, gathered, and then be reviewed, interpreted and « translated » into guidelines.<sup>5</sup> The CPG may vary in their accuracy and quality according to the quality and level of evidence they are based on, their methodology (form of verification, update procedures, and so on) and the composition of the expert panel which will process them. They may make evidence seem stronger when recommendations are based on low level of evidence.

According to the producing institution, guideline recommendations may be purely based on diagnostic and therapeutic efficiency, or incorporate features such as risk/benefit, cost-effectiveness or safety considerations. They may vary according to the interests of the establishing institution (eg, an insurer may have a different point of view than a patient advocacy group or a physician's association).

We have seen a massive rise in CPG in recent years, from local to international ones, which are ever more easily disseminated due to the presence and spread of electronic media. Far from all share the same level of evidence quality and reliability.

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An oncologist will therefore have to look for well-validated, trustable guidelines to work with. Fortunately, the practising oncologist can nowadays rely on several sets of « trustable » unbiased guidelines widely available (European Society for Medical Oncology (ESMO), National Comprehensive Cancer Network, and so on).

ESMO has excelled in delivering CPGs, which are established and regularly updated by well-recognised expert panels, based on highest and clearly documented levels of evidence. They are unbiased, patient-centred recommendations, independent of national or other healthcare considerations and publicly, globally available, without restrictions.

Guidelines are made « ready for use » to be easily implemented into daily practice. Due also to ESMO's reputation as a foremost medical oncology society and its worldwide broadly used portal [esmo.org](http://esmo.org), ESMO guidelines are globally well disseminated among the most recognised clinical guidelines in oncology, and have been endorsed and incorporated by many national and other local authorities and societies.

### PROBLEMS IN GUIDELINE IMPLEMENTATION

To be successful, a CPG has to be developed, disseminated to the right target audience and finally be implemented. Without being adopted in daily practice, even the guideline of highest quality is useless.

Some studies have raised substantial doubt about guideline implementation: It is estimated that 30%–40% of all medical patients may receive treatments not based on guidelines. Worse: 15%–20% may receive unnecessary or even harmful treatment.<sup>6–8</sup>

Barriers to guideline implementation have been well identified, and can be divided into:

- a. The implementing physician's personal factors (knowledge and attitude).
- b. Guideline-related factors.
- c. External factors (lack of resources, organisational constraints, heavy workload, social norms, and so on).<sup>4,9</sup>

We will not discuss external factors in this chapter, even though they have to be identified as an explanation for CPG non-implementation, and will interest one part of our knowledge and practice (K&P) questions.

Guideline-related barriers may be the easiest to resolve, but need to be identified: poor layout, too high complexity or poor access to guidelines are rather easily tackled. Guidelines have to be evidence based, plausible in their recommendation, applicable and focused on well-defined patient groups.<sup>10</sup>

Personal factors (of the applying physician) need more complex interventions. Physicians have to be motivated to use guidelines. This can be obtained providing earlier results demonstrating benefits in survival or other goals when guidelines are successfully implemented. A physician's lack of knowledge or skills should be addressed by continuous medical education (CME) efforts and audits. Some individuals may need to acquire a learning culture.

Finally, physicians may disagree with guideline contents. This may be overcome through communication, that is, with opinion leaders, in educational meetings, small group education, and even marketing outreach visits<sup>4</sup> (the latter with an obvious risk of potential bias). Pluridisciplinarity plays a major role, and tumour boards may provide an excellent forum of consensus, translating CPG into individual physicians' treatment decisions.

Validated efficient strategies to improve guideline implementation remain limited<sup>9</sup> in often heterogeneous studies and disparate settings, which do not easily allow general conclusions. A combination of multiple strategies is most certainly needed to overcome barriers.<sup>7,11</sup>

### ESMO PRACTISING ONCOLOGISTS WORKING GROUP GUIDELINE CHECKLISTS: THE WHY AND HOW

Guidelines should be as short and user friendly as possible.<sup>11–13</sup> They should be accessible at the working place and easily integrated in daily routine. Considering the complexity of diagnostic and therapeutic decisions in oncology on one side, and the necessity to remain plausible and transparent on the other, delivering a combination of both is a major challenge.

ESMO's CPGs have become an ever more precise and user-friendly tool to guide practitioners through procedures. Still, physicians may not take (or have) the time to go through the detailed texts while consulting a patient or making a decision. Algorithms are ever more complex to walk through as treatments become more and more personalised and differentiated.

Clinicians may not apply medical procedures correctly both due to a lack of knowledge of current standards or by accident. Some may be of major importance concerning later treatment outcomes – or hamper further treatment decisions.

Checklists have been identified as one tool to raise CPG adherence.<sup>4</sup> We consider that they have a didactic role in recalling standard procedures, but also fulfil a documentation role and could better structure the mandatory information needed to perform a multidisciplinary tumour board (MTB) decision, in line with international CPGs. As MTB should be a mainstay in oncologic decision-making for every patient, our checklists will also underline their necessity to come to a therapeutic decision for any individual patient.

We therefore developed a set of checklists, which are entirely derived from current ESMO guidelines.

#### Checklists: methods of development

The ESMO Practising Oncologists Working Group (POWG) has developed ESMO checklists. Ten organ-specific checklists have been developed as of January 2018 (breast, early and locally advanced non-small cell lung cancer (NSCLC), metastatic NSCLC, small cell lung cancer, oesophageal cancer, gastric cancer, localised colon cancer, metastatic colon cancer, non-metastatic rectal cancer, pancreatic cancer and prostate cancer).

The POWG also developed a general checklist to be considered in any treated oncologic patient, regardless of the organ type. We are aware that all features will not be available to every clinician, but hope that the guidelines will help encourage clinicians to improve local standards to state-of-the-art needs.

The procedure to develop ESMO guideline checklists has been validated as follows: Designated working group (WG) members identify all essential diagnostic steps to be included to reach a clear MTB decision according to the corresponding guidelines in place. Checklists are submitted to a designated WG editor for first review, and then submitted to the ESMO Guidelines Committee chair for approval

### Checklists: user guide

Checklists are printable or can be downloaded as templates. We imagined practitioners might use them while consulting their patient, or when preparing an MTB meeting (or, best, both).

When printed, users can use them to (check=ensure) make sure that all necessary items have been asked for to be able to reach a treatment decision according to ESMO guidelines. They can also serve as a document to be put in the patient file to document that all exams had been ordered according to guideline recommendations.

When used as a template, ESMO checklists also provide space to enter diagnostic exam results, thus presenting a sum-up and helping to summarise all steps up to (and including) the MTB conclusion.

### K&P QUESTIONS

CME activities have also been identified as important tools to enhance guideline implementation.<sup>4,5</sup>

The POWG therefore designed specifically ESMO guideline-related short didactic questions with 'click-on' immediate answers. K&P questions will be proposed on the [thesmo.org](http://thesmo.org) website. Users are then asked a question related to their personal practice concerning the topic.

The aim of this activity is twofold:

1. Short, playful quiz as regular, monthly CME activities, checking and enhancing knowledge of current guidelines.
2. We still have a poor understanding concerning the implementation of ESMO guidelines throughout Europe and the world. ESMO POWG will collect (anonymous) answers, which may show differences in adherence to guidelines among participating physicians. This may lead to hypothesis raising results (ie, a cluster of non-compliant answers in one region may suggest unavailability of diagnostic procedures, scattered responses may suggest lack of understanding, conflicting local guidelines, and so on) which might be worth investigating.

### K&P: methods of development

Designated POWG members produce clinical questions strictly based on ESMO guidelines content. Questions

are discussed internally among POWG members for pertinence. Once written, they are cross-checked by all members and finally by a designated editor on absolute fidelity with the corresponding guidelines.

For each question a number of five possible answers will be provided, of which only one is accurate (and to be found in the corresponding ESMO guidelines). Of all answers, one is completely wrong, while two are not adequate, and one answer could be considered as 'close'.

Questions will be graded according to the estimated level of difficulty.

A second question will only relate to the participant's routine concerning the situation dealt with in the first part (no 'right' or 'wrong' answers, no direct answer). The answers will be anonymously collected and used for compliance evaluations of ESMO guidelines.

### SUMMARY

In summary, trustworthy CPGs are paramount to practising oncologists in today's fast evolving medical landscape, for state-of-the-art management. Guidelines compliance may vary even concerning the most pertinent guidelines, and may be substantially lower than expected.

Therefore, knowledge concerning the level of guidelines adherence has to be gained. Implementation tools and strategies have to be applied on multiple levels to enhance compliance.

We provide two tools to enhance implementation of ESMO clinical guidelines, introducing ESMO guidelines checklists and K&P questions.

Future analysis of download numbers and responses should provide us knowledge whether these tools are useful to ESMO members in guideline implementation and whether current practice reflects guideline recommendations.

These tools will be available on the website [esmo.org](http://esmo.org) as of the publishing date of this article.

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