Università degli Studi di Trieste

Corso di Laurea Magistrale in
INGEGNERIA CLINICA

LINEE GUIDA IN MEDICINA

Corso di Informatica Medica

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Evidence based medicine

EVIDENCE BASED MEDICINE *INTEGRATE* INDIVIDUAL CLINICAL

EXPERTISE WITH THE BEST AVAILABLE EXTERNAL CLINICAL

EVIDENCE FROM SYSTEMATIC RESEARCH

Transfer evidence into practice – MEDICINE

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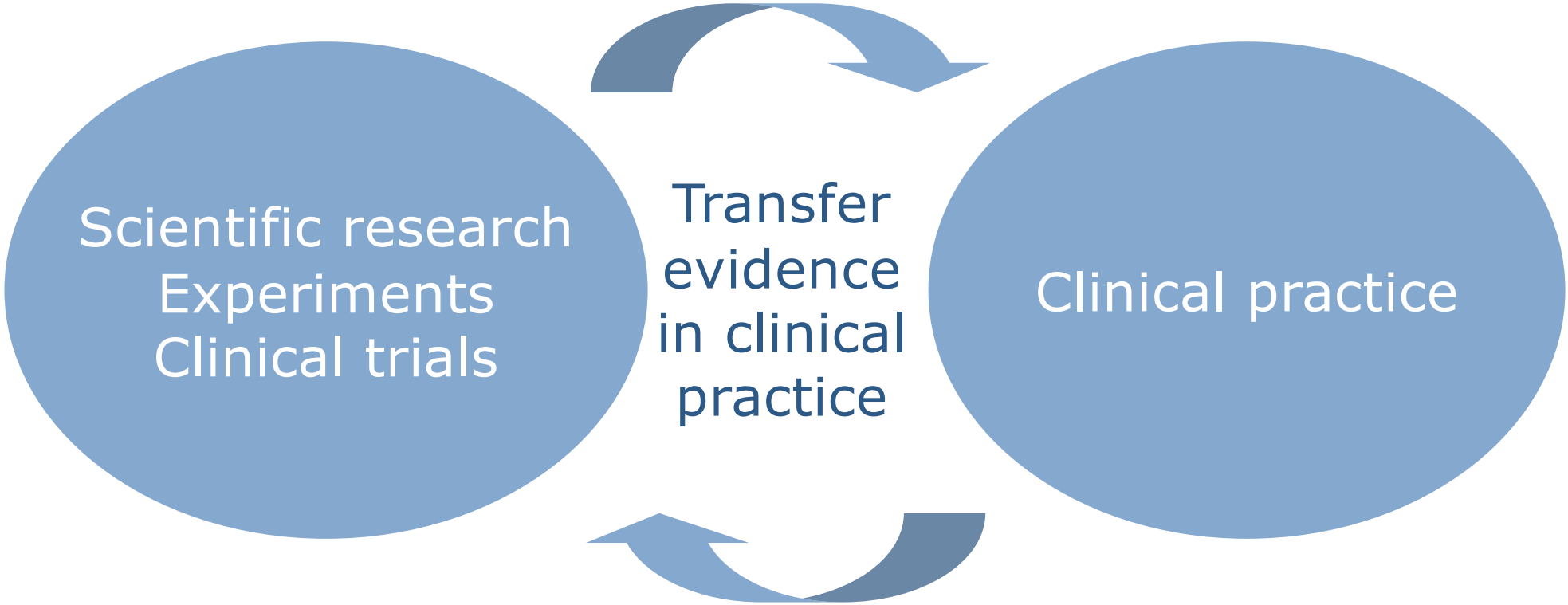
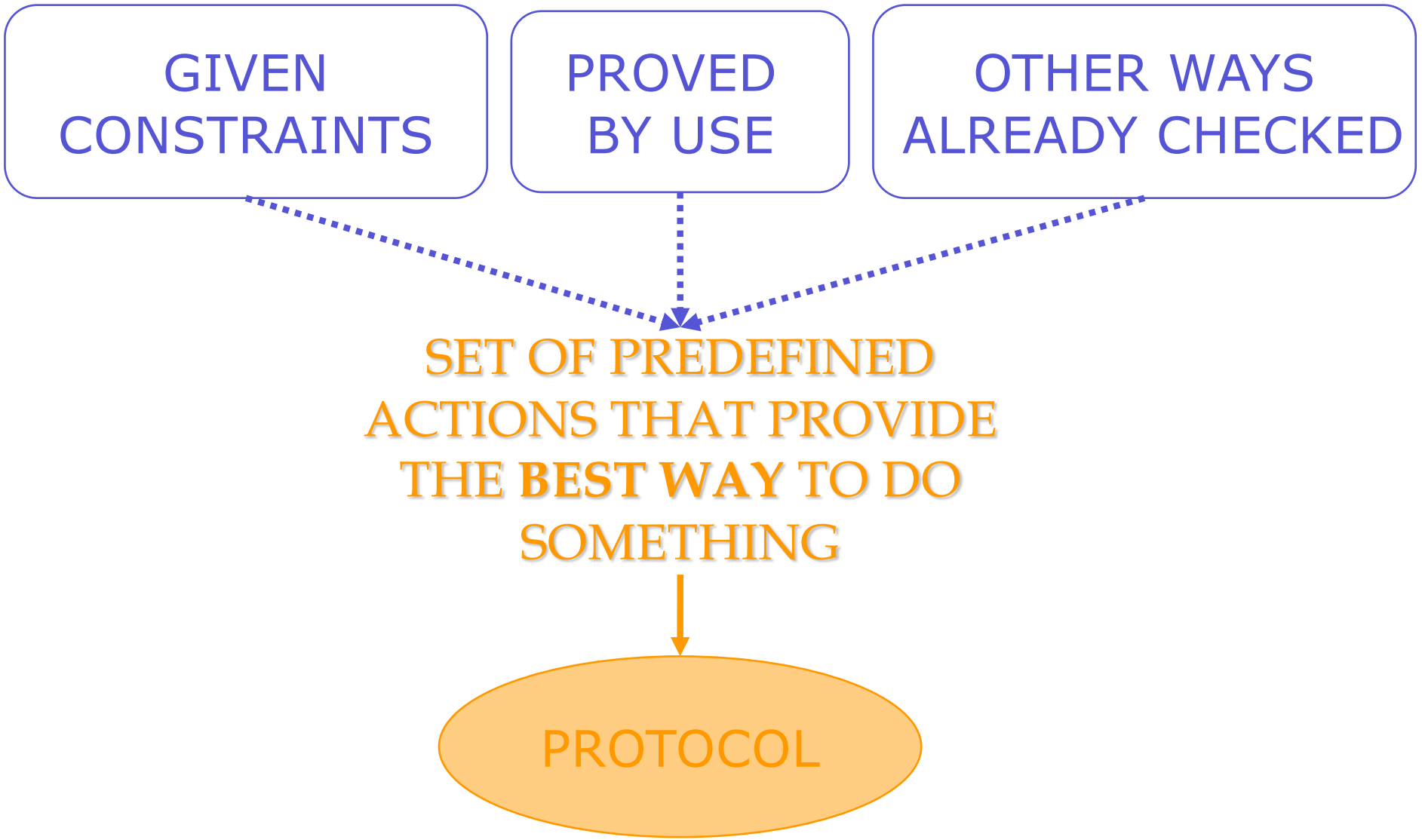


PROTOCOLS


GIVEN CONSTRAINTS
PROVED BY USE
OTHER WAYS ALREADY CHECKED
SET OF PREDEFINED ACTIONS THAT PROVIDE THE BEST WAY TO DO SOMETHING
PROTOCOL

PROTOCOLS AND EVIDENCE BASED MEDICINE

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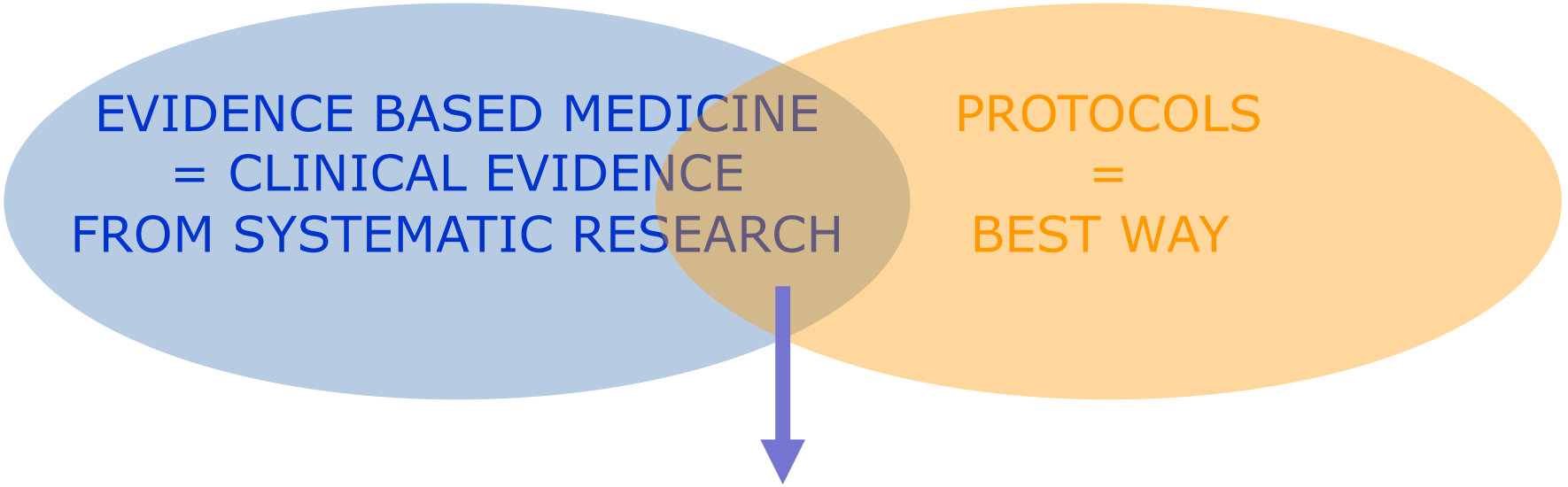
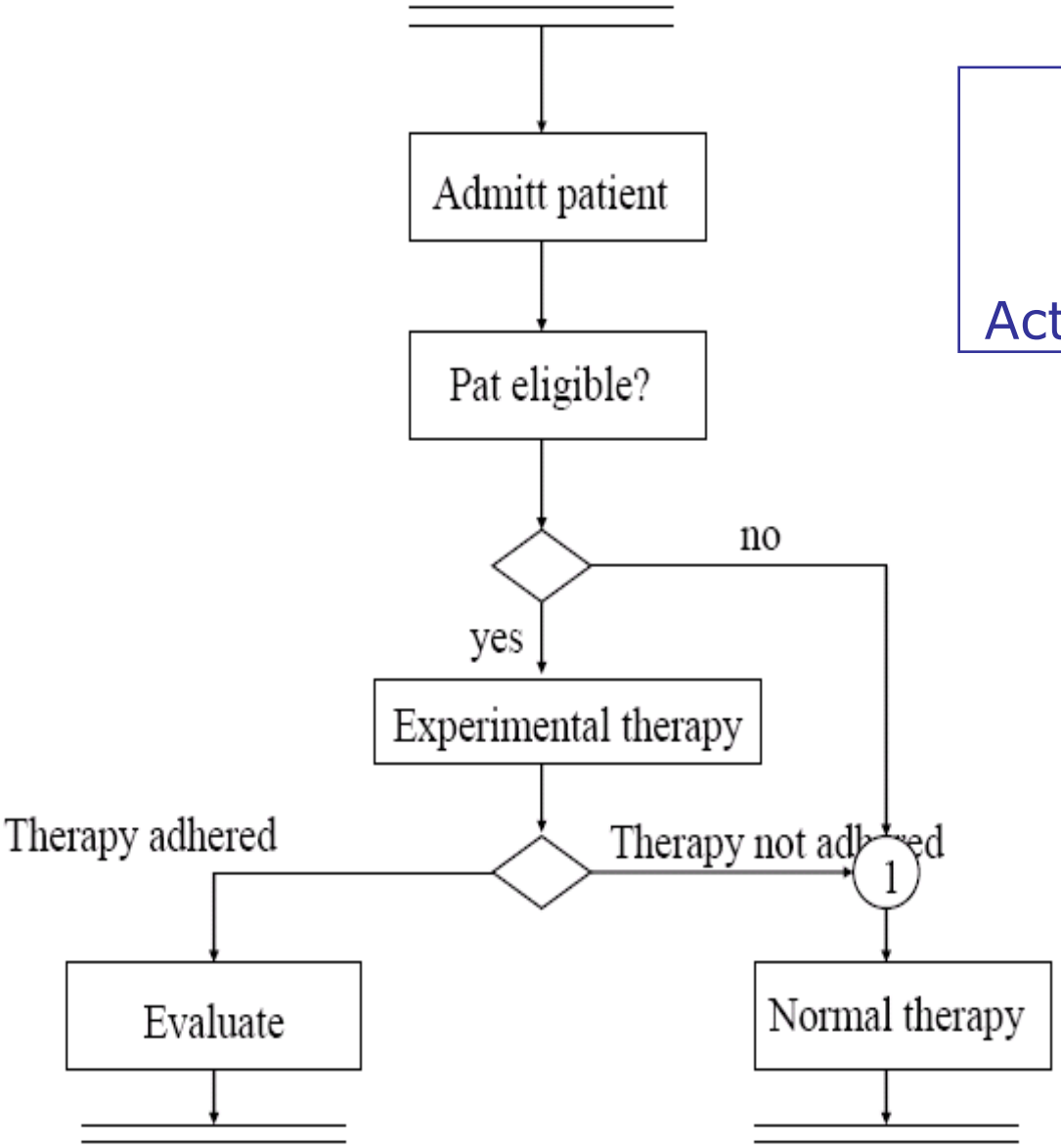


STANDARDIZED AND CONTROLLED MEDICINE TO OPTIMIZE THE TREATMENT OF THE PATIENT

EACH PATIENT IS TREATED IN THE SAME WAY GIVEN THE EVIDENCE OF HIS/HER STATE

EXAMPLE



EVIDENCE BASED MEDICINE

Action's content

PROTOCOL

Sequence of actions

+

Recommended strategy for managing health care in specific clinical circumstances

DEFINITIONS

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ALGORITHM →	•A set of instructions to carry out some task programmatically •Can involve some form of numerical calculation
PROTOCOL →	•Describes all the steps in the managment of a clinical condition (from diagnosis to treatment) •Deviations from protocol result in the exclusion of the patient
GUIDELINE →	•Synonimous of protocol (often) •Emphasizes the idea of reccomendation instead of duty
CARE PATHWAY →	•Used in nursing •Describe the steps to be followed and also the expected course of patient's state
PRACTICE PARAMETERS →	•Evidence-based clinical guidelines •They set the acceptable boundaries of safe patient care

CLINICAL GUIDELINES: applications - NCG

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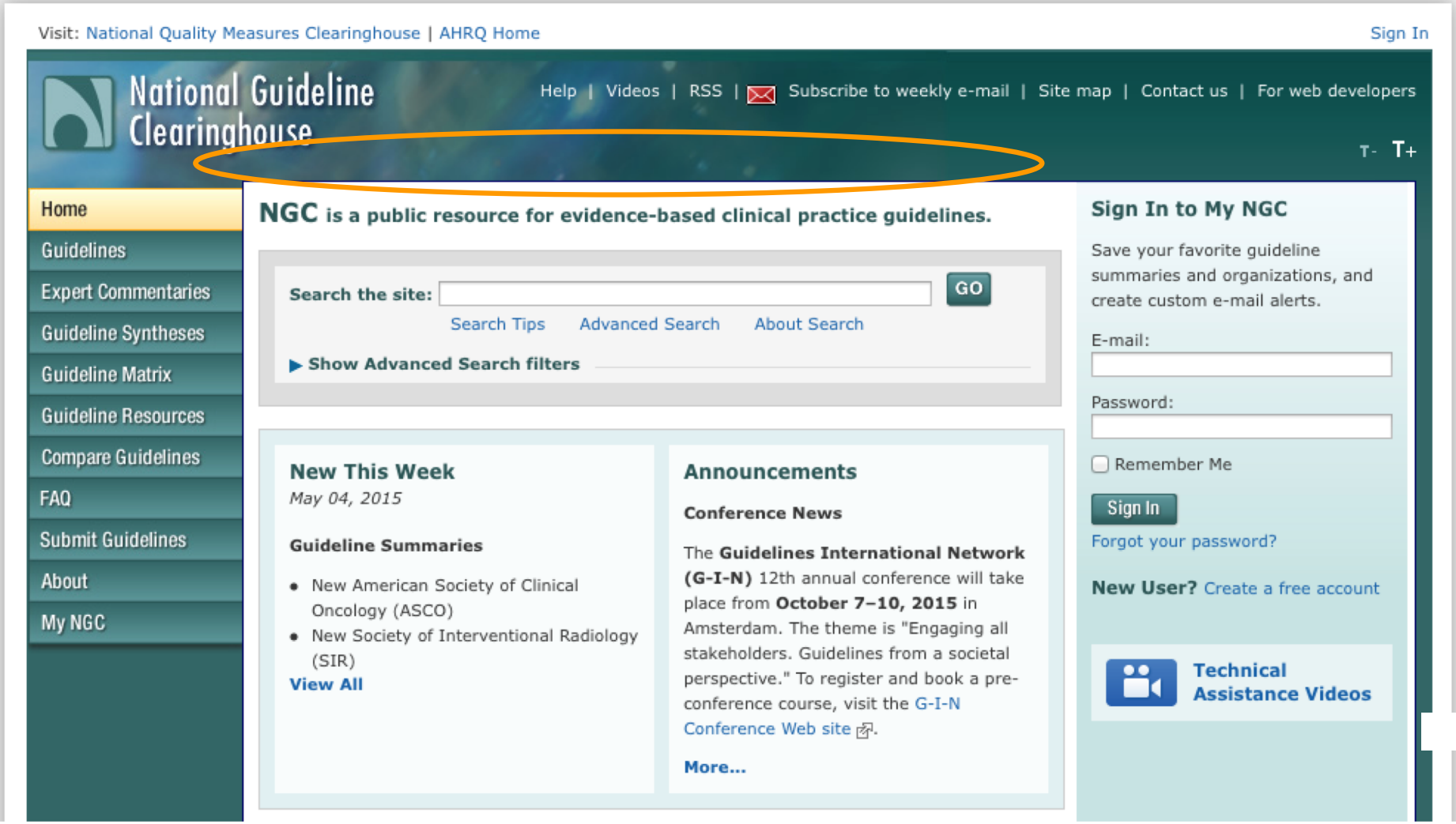
Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

Evidence-based guideline database



NATIONAL GUIDELINE CLEARINGHOUSE BROWSER

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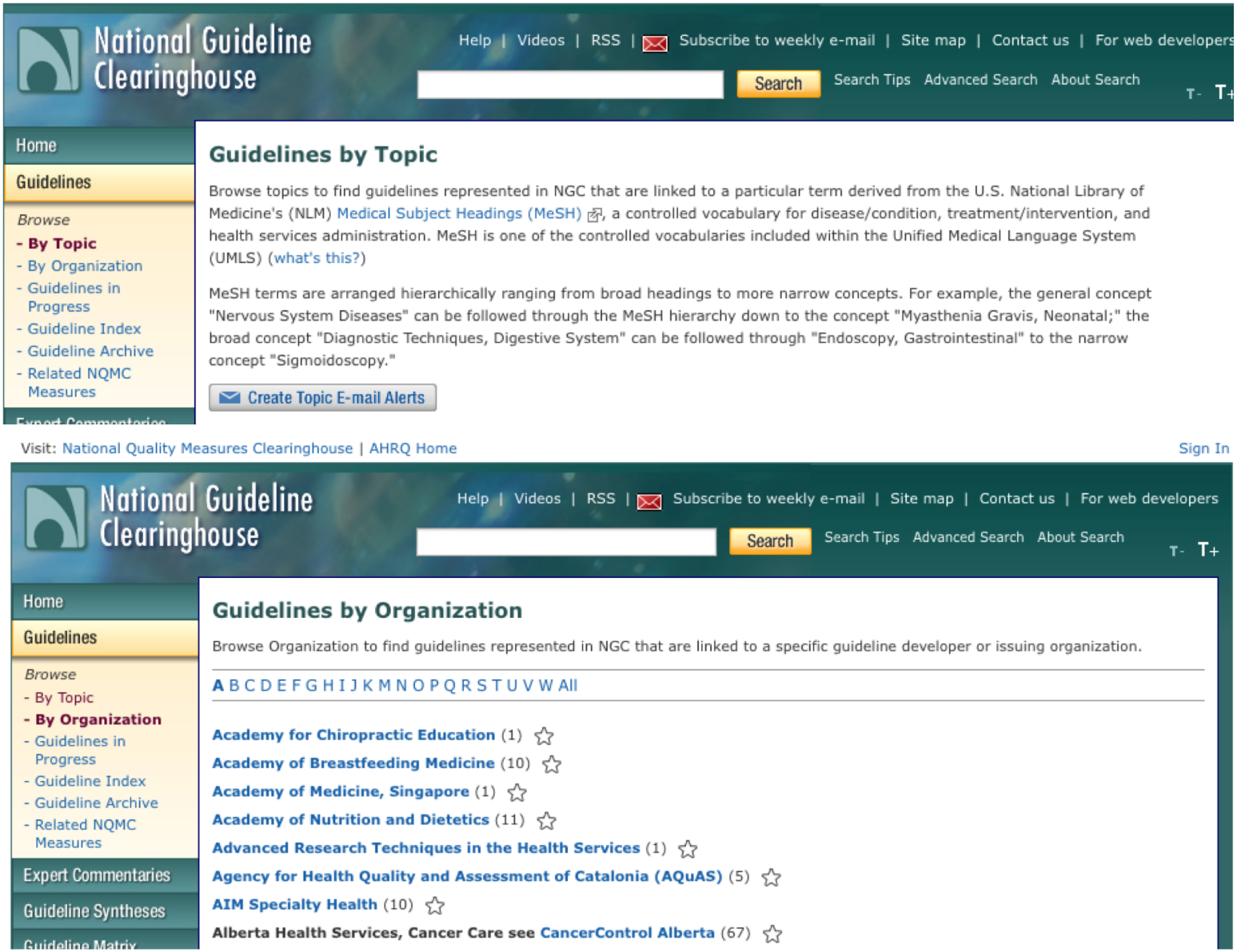

NCA: guidelines by topic

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Disease/Condition

- **Anatomy** (17)
- **Organisms** (37)
- **Diseases** (2225)
- **Chemicals and Drugs** (22)
- **Analytical, Diagnostic and Therapeutic Techniques and Equipment** (137)
- **Psychiatry and Psychology** (405)
- **Phenomena and Processes** (531)
- **Anthropology, Education, Sociology and Social Phenomena** (72)
- **Technology, Industry, Agriculture** (2)
- **Humanities** (1)
- **Information Science** (5)
- **Named Groups** (88)
- **Health Care** (198)

Treatment/Intervention

- **Anatomy** (80)
- **Organisms** (49)
- **Diseases** (150)
- **Chemicals and Drugs** (1661)
- **Analytical, Diagnostic and Therapeutic Techniques and Equipment** (2282)
- **Psychiatry and Psychology** (771)
- **Phenomena and Processes** (851)
- **Disciplines and Occupations** (358)
- **Anthropology, Education, Sociology and Social Phenomena** (733)
- **Technology, Industry, Agriculture** (264)
- **Humanities** (59)
- **Information Science** (246)
- **Named Groups** (24)
- **Health Care** (1680)
- **Publication Characteristics** (18)

Health Services Administration

- **Chemicals and Drugs** (4)
- **Analytical, Diagnostic and Therapeutic Techniques and Equipment** (131)
- **Psychiatry and Psychology** (80)
- **Phenomena and Processes** (47)
- **Disciplines and Occupations** (139)
- **Anthropology, Education, Sociology and Social Phenomena** (203)
- **Technology, Industry, Agriculture** (29)
- **Humanities** (11)
- **Information Science** (192)
- **Named Groups** (35)
- **Health Care** (418)
- **Publication Characteristics** (2)
- **Geographicals** (17)

NCA: guideline summary

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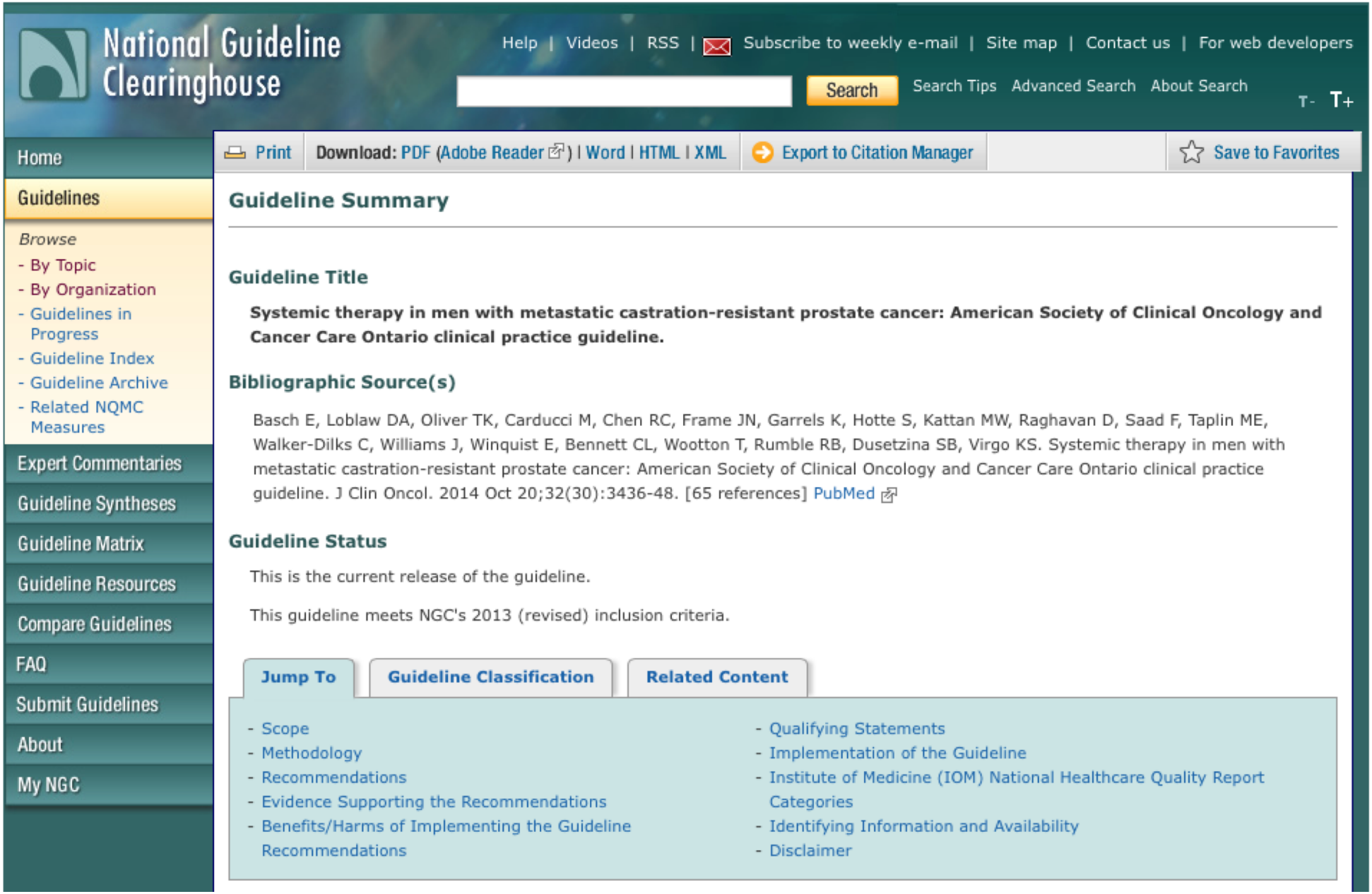

National Guideline Clearinghouse

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Guideline Summary

Guideline Title

Systemic therapy in men with metastatic castration-resistant prostate cancer: American Society of Clinical Oncology and Cancer Care Ontario clinical practice guideline.

Bibliographic Source(s)

Basch E, Loblaw DA, Oliver TK, Carducci M, Chen RC, Frame JN, Garrels K, Hotte S, Kattan MW, Raghavan D, Saad F, Taplin ME, Walker-Dilks C, Williams J, Winquist E, Bennett CL, Wootton T, Rumble RB, Dusetzina SB, Virgo KS. Systemic therapy in men with metastatic castration-resistant prostate cancer: American Society of Clinical Oncology and Cancer Care Ontario clinical practice guideline. J Clin Oncol. 2014 Oct 20;32(30):3436-48. [65 references] PubMed

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Jump To | Guideline Classification | Related Content

- Scope
- Methodology
- Recommendations
- Evidence Supporting the Recommendations
- Benefits/Harms of Implementing the Guideline Recommendations
- Qualifying Statements
- Implementation of the Guideline
- Institute of Medicine (IOM) National Healthcare Quality Report Categories
- Identifying Information and Availability
- Disclaimer

GUIDELINES DEFINITION: strength of evidence

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Guidelines are based on evidence that is collected in the literature and in randomized controlled trials (RCTs)

Rating Scheme for the Strength of the Evidence

Guide for Rating Strength of Evidence

Rating for Strength of Evidence	Definition
High	High confidence that the available evidence reflects the true magnitude and direction of the net effect (i.e., balance of benefits versus harms) and that further research is very unlikely to change either the magnitude or direction of this net effect.
Intermediate	Moderate confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research is unlikely to alter the direction of the net effect; however, it might alter the magnitude of the net effect.
Low	Low confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research may change either the magnitude and/or direction this net effect.
Insufficient	Evidence is insufficient to discern the true magnitude and direction of the net effect. Further research may better inform the topic. The use of the consensus opinion of experts is reasonable to inform outcomes related to the topic.

Methods Used to Analyze the Evidence

Meta-Analysis
Review of Published Meta-Analyses
Systematic Review with Evidence Tables

GUIDELINES DEFINITION: methods to formulate the recommendations

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Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Panel Composition

The American Society of Clinical Oncology (ASCO) Clinical Practice Guidelines Committee and Cancer Care Ontario (CCO) Program in Evidence-Based Care convened an expert panel with multidisciplinary representation in medical oncology, urologic oncology, radiation oncology, community oncology, patient advocacy, health services, implementation research, and guideline methodology. Members of the expert panel are listed in Appendix Table A1 of the original guideline document.

Guideline Development Process

The expert panel met on several occasions and corresponded frequently through e-mail; work on the guideline was completed primarily through the writing group, along with ASCO staff. The purpose of the panel meetings was for members to contribute content, provide critical review, and finalize the guideline recommendations, including an assessment of benefits and harms associated with treatments based on consideration of the evidence. All members of the expert panel participated in preparation of the draft guideline document, which was then disseminated for external review and submitted to *Journal of Clinical Oncology (JCO)* for peer review.

Development of Recommendations

The guideline recommendations were crafted, in part, using the GuideLines Into DEcision Support (GLIDES) methodology and accompanying BRIDGE-Wiz software™. This method helps guideline panels systematically develop clear, translatable, and implementable recommendations using natural language, based on the evidence and assessment of its quality to increase usability for end users. The process incorporates distilling the actions involved, identifying who will carry them out, to whom, under what circumstances, and clarifying if and how end users can carry out the actions consistently. This process helps the Panel focus the discussion, avoid using unnecessary and/or ambiguous language, and clearly state its intentions.

GUIDELINES DEFINITION: types of recommendations

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Guide for Types of Recommendations

Type of Recommendation	Definition
Evidence based	There was sufficient evidence from published studies to inform a recommendation to guide clinical practice.
Formal consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. Therefore, the Expert Panel used a formal consensus process to reach this recommendation, which is considered the best current guidance for practice. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate," or "weak"). The results of the formal consensus process are summarized in the guideline and reported in the Data Supplement (see the "Availability of Companion Documents" field).
Informal consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. The recommendation is considered the best current guidance for practice, based on informal consensus of the Expert Panel. The Panel agreed that a formal consensus process was not necessary for reasons described in the literature review and discussion. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate," or "weak").
No recommendation	There is insufficient evidence, confidence, or agreement to provide a recommendation to guide clinical practice at this time. The Panel deemed the available evidence as insufficient and concluded it was unlikely that a formal consensus process would achieve the level of agreement needed for a recommendation.

GUIDELINES DEFINITION: strength of recommendations

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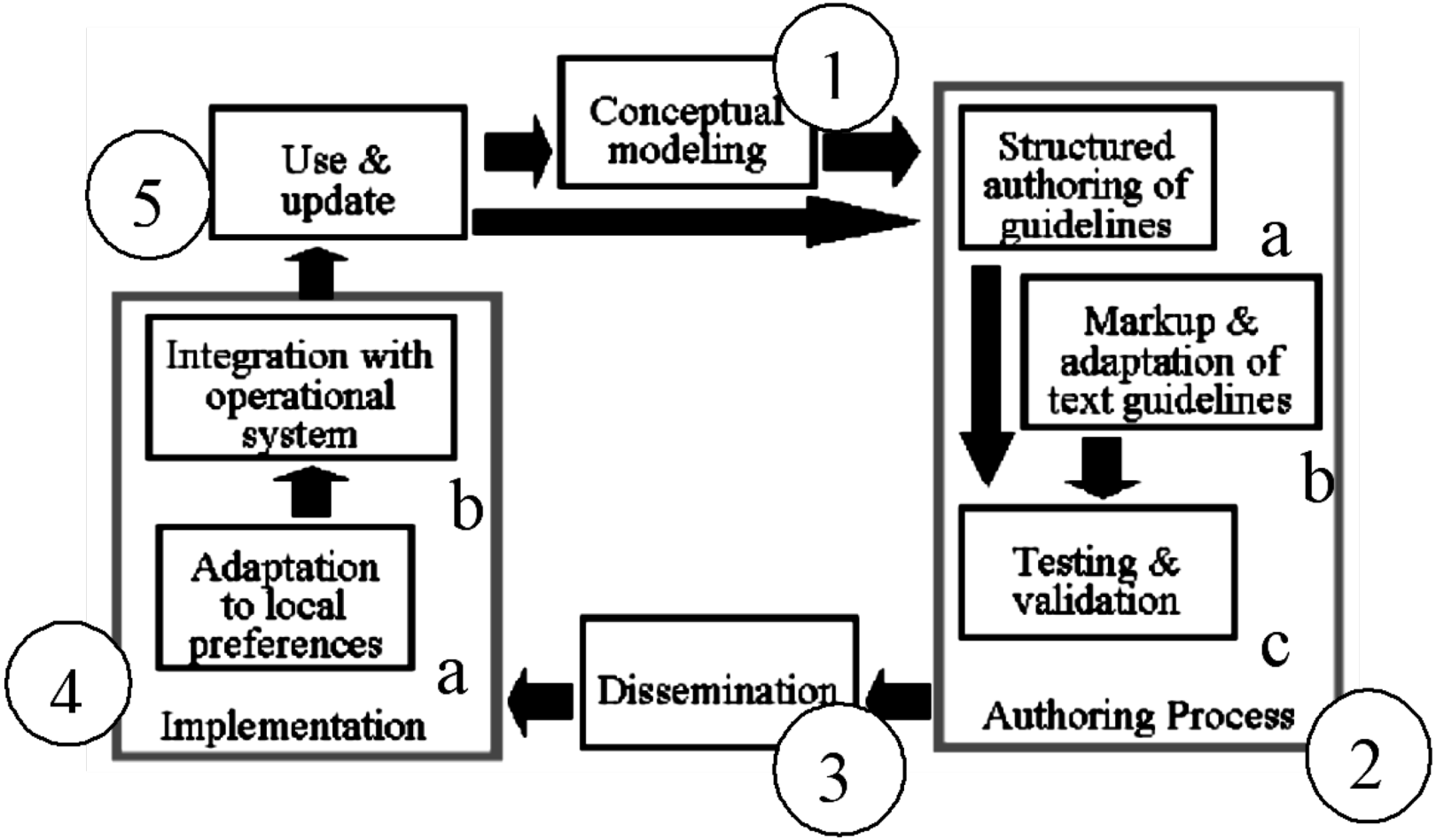
Guide for Strength of Recommendations

Rating for Strength of Recommendation	Definition
Strong	There is high confidence that the recommendation reflects best practice. This is based on (1) strong evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with no or minor exceptions; (3) minor or no concerns about study quality; and/or (4) the extent of panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a strong recommendation.
Moderate	There is moderate confidence that the recommendation reflects best practice. This is based on (1) good evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with minor and/or few exceptions; (3) minor and/or few concerns about study quality; and/or (4) the extent of panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a moderate recommendation.
Weak	There is some confidence that the recommendation offers the best current guidance for practice. This is based on (1) limited evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, but with important exceptions; (3) concerns about study quality; and/or (4) the extent of panelists' agreement. Other considerations (discussed in the guideline's literature review and analyses) may also warrant a weak recommendation.

MEDICAL GUIDELINE LIFECYCLE



Greenes RA et al., 2001

PROCESS MODELING FOR GUIDELINE CONCEPTUALIZATION

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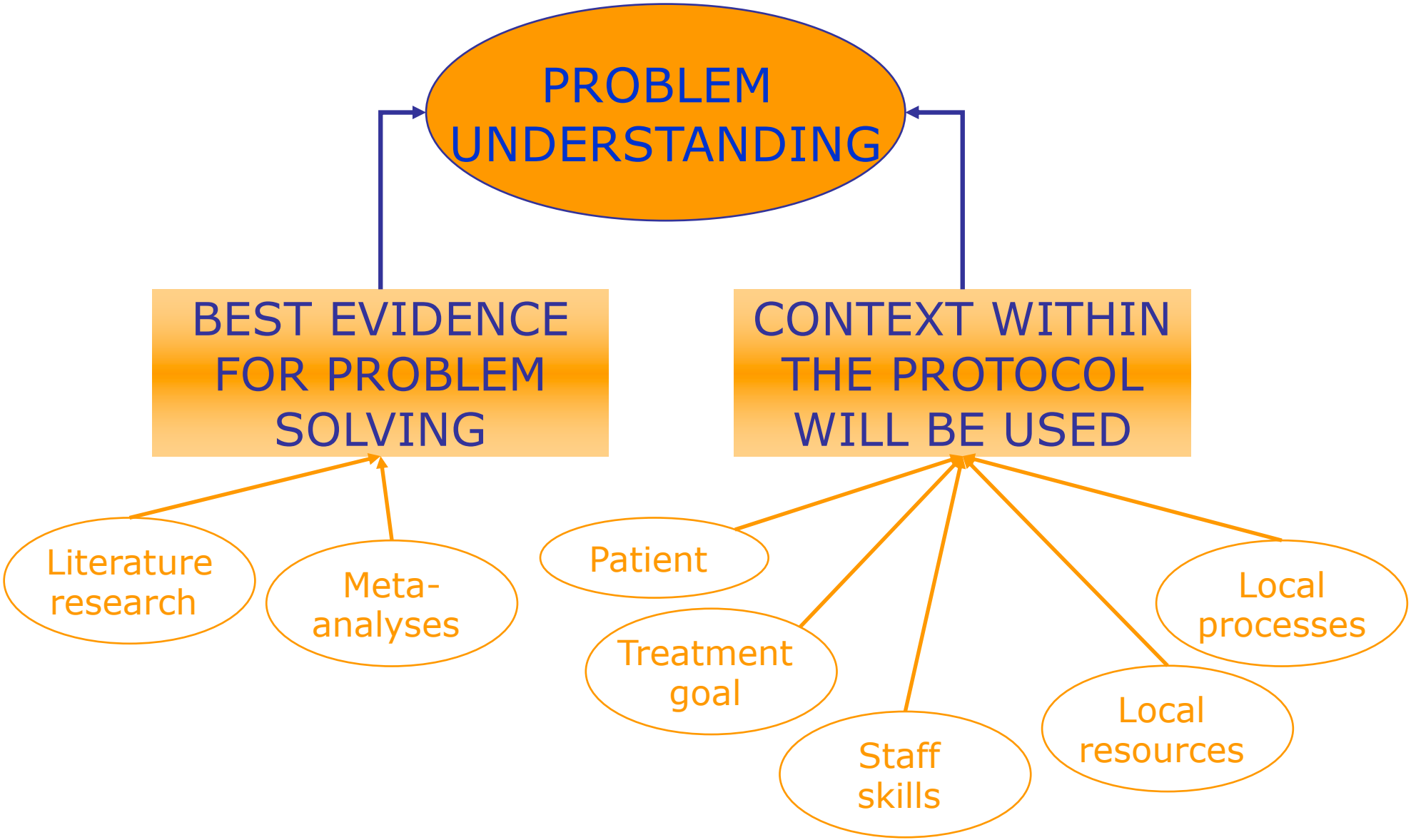

PROTOCOL/GUIDELINES DISSEMINATION

1. Easy access to evidence on best practice (and supporting evidence)
   - Cochrane collaboration
   - Internet → tool for publishing and distributing protocols
   - Provides immediate access
   - Problem of quality
2. Even if guidelines are available, they are not used
3. Evidence based practice is an information product, and clinicians are consumers
4. Level of acceptance → depends on the costs vs benefits balance (perceived by the clinician)
5. The impact factor of a guideline depends not only on its scientific value but also on the medium used for dissemination

IMPROVING GUIDELINE UPTAKE

- Increase the value for the clinician, making benefits for him more evident (time, amount of work, quality, …)
- Decrease the costs of evidence-based practice, not in financial terms but in terms of time and mental efforts
- Optimize the protocol to suit the clinical context
- Strong educational strategies
  - Overcome socio-technical barriers
  - Share the use with all the levels of the system