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Director, Cochrane Canada

\*formerly „Clinical Epidemiology and Biostatistics“

 @schunemann\_mac

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**GRADEpro: eine web-basierte Lösung für  
die Zusammenfassung, Darstellung und  
Vermittlung von Wissen für klinische  
Entscheidungen**

Department of Health Research Methods, Evidence and Impact



1967 - <http://hei.mcmaster.ca>



“Birthplace of evidence-based medicine and problem based learning”



### Department of Health Research Methods, Evidence, and Impact (HEI)

Welcome to the Department of Health Research Methods, Evidence, and Impact (HEI), formerly the Department of Clinical Epidemiology and Biostatistics (CE&B). Recognizing that the CE&B name captured only some of the depth and breadth of disciplines and expertise in the department, we formally changed its name effective January 1, 2017.

The name is outcomes focused: we produce, synthesize, package, share, and support the best available research evidence in the health and health-related fields, and we undertake a variety of initiatives designed to achieve impacts at all levels within as well as across health systems. The name effectively connects us to the department's history in evidence-based medicine and the global impact that this and other departmental initiatives have had. Moreover, the new name captures the department's strategic goal of extending its leadership in developing new health research methods, generating and synthesizing actionable research evidence, and achieving impact.

#### MORE ABOUT HEI

HEI welcomes your enquiries, requests, comments, suggestions and proposals. Please contact [chairhei@mcmaster.ca](mailto:chairhei@mcmaster.ca)



# Disclosures

 **Cochrane**  
Canada - Director

 **GRADE** working group - Co-chair



GIN Board, Member

Views expressed are my own

GRADE

HEI

# Content

GRADE in the context of guideline development

GRADEpro Guideline Development Tool

- Examples of application
  - World Health Organization Guidelines
  - European Commission Initiative on Breast Cancer and ARIA allergic rhinitis guidelines
  - American Society of Hematology
- GRADEpro Panelvoice
- GRADE-based interactive Decision Aids

GRADE

# Guideline development Process



## American Thoracic Society Documents

### **A Guide to Guidelines for Professional Societies and Other Developers of Recommendations**

Introduction to Integrating and Coordinating Efforts in COPD Guideline Development. An Official ATS/ERS Workshop Report

Holger J. Schünemann, Mark Woodhead, Antonio Anzueto, A. Sonia Buist, William MacNee, Klaus F. Rabe, and John Heffner; on behalf of the ATS/ERS Ad Hoc Committee on Integrating and Coordinating Efforts in COPD Guideline Development

*Proc Am Thorac Soc* Vol 9, Iss. 5, pp 215-218, Dec 15, 2012

## Health Research Policy and Systems



Review

**Open Access**

### **Improving the use of research evidence in guideline development: introduction**

Andrew D Oxman\*<sup>1</sup>, Atle Fretheim<sup>1</sup>, Holger J Schünemann<sup>2</sup> and SURE<sup>3</sup>

Published: 21 November 2006

Received: 07 April 2006

*Health Research Policy and Systems* 2006, 4:13 doi:10.1186/1478-4505-4-13

Accepted: 21 November 2006

This article is available from: <http://www.health-policy-systems.com/content/4/1/13>

## Guidelines 2.0: systematic development of a comprehensive checklist for a successful guideline enterprise

Holger J. Schünemann MD PhD, Wojtek Wiercioch BHSc, Itziar Etxeandia Pharm D, Maicon Falavigna MD PhD, Nancy Santesso MLIS, Reem Mustafa MD MPH, Matthew Ventresca BHSc, Romina Brignardello-Petersen DDM, Kaja-Triin Laisaar MD MPH, Sérgio Kowalski MD PhD, Tejan Baldeh, Yuan Zhang BHSc, Ulla Raid PhD, Ignacio Neumann MD, Susan L. Norris MD MPH, Judith Thornton PhD, Robin Harbour BSc, Shaun Treweek PhD, Gordon Guyatt MD MS, Pablo Alonso-Coello MD PhD, Marge Reinap MA, Jan Brožek MD, Andrew Oxman MD MS, Elie A. Akl MD PhD

### ABSTRACT

**Background:** Although several tools to evaluate the credibility of health care guidelines exist, guidance on practical steps for developing guidelines is lacking. We systematically compiled a comprehensive checklist of items linked to relevant resources and tools that guideline developers could consider, without the expectation that every guideline would address each item.

**Methods:** We searched data sources, including manuals of international guideline developers, literature on guidelines for guidelines (with a focus on methodology reports from international and national agencies, and professional societies) and recent articles providing systematic guidance. We reviewed these sources in duplicate, extracted items for the checklist using a sensitive approach and developed overarching topics relevant to guidelines. In an iterative

omissions and involved experts in guideline development for revisions and suggestions for items to be added.

**Results:** We developed a checklist with 18 topics and 146 items and a webpage to facilitate its use by guideline developers. The topics and included items cover all stages of the guideline enterprise, from the planning and formulation of guidelines, to their implementation and evaluation. The final checklist includes links to training materials as well as resources with suggested methodology for applying the items.

**Interpretation:** The checklist will serve as a resource for guideline developers. Consideration of items on the checklist will support the development, implementation and evaluation of guidelines. We will use crowdsourcing to

**Competing interests:** None declared. Authors of this manuscript have been involved in the development of various guideline manuals which are referenced in this article.

This article has been peer reviewed.

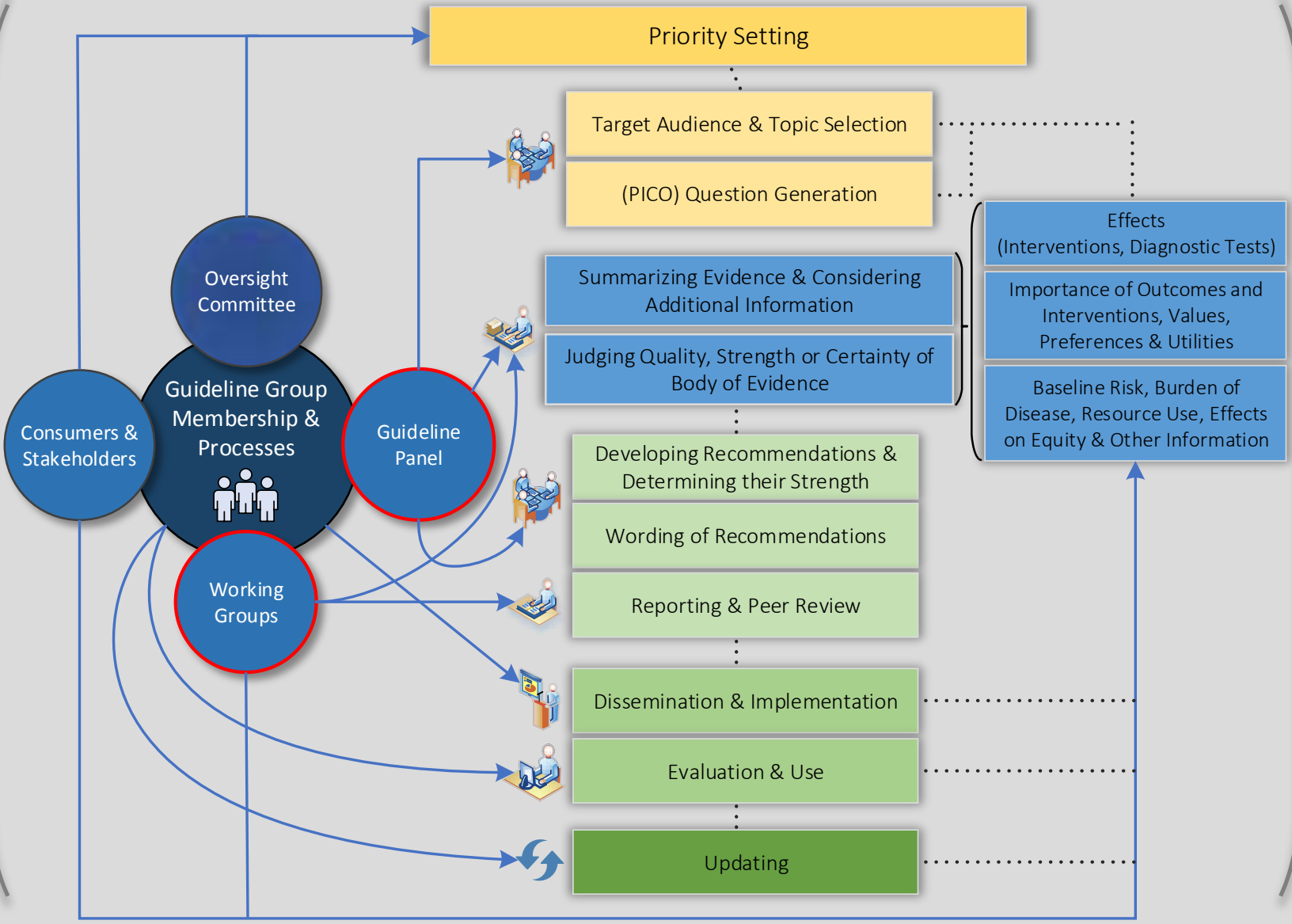
**Correspondence to:** Holger Schünemann, schuneh@mcmaster.ca

CMAJ 2014, DOI:10.1503/cmaj.131237

Organization, Budget, Planning & Training

Conflict-of-Interest Considerations

Documenting Guideline Development Process & Decisions



# Tool of 18 topics with resources

## 144 items

GRADE

### Box 2: Topics included in checklist for guideline development

Topic	Description
1. Organization, budget, planning and training	Involves laying out a general but detailed plan describing what is feasible, how it will be achieved and what resources are required to produce and use the guideline. The plan should refer to a specific period and be expressed in formal, measurable terms.
2. Priority setting	Refers to the identification, balancing and ranking of priorities by stakeholders. Priority setting ensures that resources and attention are devoted to those general areas (e.g., chronic obstructive pulmonary disease, diabetes, cardiovascular disease, cancer, prevention) where health care recommendations will provide the greatest benefit to the population, a jurisdiction or a country. A priority-setting approach needs to contribute to future plans while responding to existing, potentially difficult circumstances. <sup>100,101</sup>
3. Guideline group membership	Defines who is involved, in what capacity, and how the members are selected for the guideline development and at other steps of the guideline enterprise.
4. Establishing guideline group processes	Defines the steps to be followed, how those involved will interact and how decisions will be made.
5. Identifying target audience and topic selection	Involves describing the potential users or consumers of the guideline and defining the topics to be covered in the guideline (e.g., diagnosis of chronic obstructive pulmonary disease).
6. Consumer and stakeholder involvement	Describes how relevant people or groups who are not necessarily members of the panel but are affected by the guideline (e.g., as target audience or users) will be engaged.
7. Conflict of interest considerations	Focuses on defining and managing the potential divergence between an individual's interests and his or her professional obligations that could lead to questioning whether the actions or decisions are motivated by gain, such as financial, academic advancement, clinical revenue streams or community standing. Financial or intellectual or other relationships that may affect an individual's or organization's ability to approach a scientific question with an open mind are included.
8. Question generation	Focuses on defining key questions the recommendations should address using the PICO (patient/problem, intervention, comparison, outcome) framework, including the detailed population, intervention (including diagnostic tests and strategies) and outcomes that will be relevant for decision-making (e.g., should test A be used, or should treatments B, C, D or E be used in chronic obstructive pulmonary disease?).



9. Considering importance of outcomes and interventions, values, preferences and utilities	Includes integrating, in the process of developing the guidelines, how those affected by its recommendations assess the possible consequences. These include patient, caregiver and health care provider knowledge, attitudes, expectations, moral and ethical values, and beliefs; patient goals for life and health; prior experience with the intervention and the condition; symptom experience (e.g., breathlessness, pain, dyspnea, weight loss); preferences for and importance of desirable and undesirable outcomes; perceived impact of the condition or interventions on quality of life, well-being or satisfaction, and interactions between the work of implementing the intervention, the intervention itself, and other contexts the patient may be experiencing; preferences for alternative courses of action; and preferences relating to communication content and styles, information and involvement in decision-making and care. This can be related to what in the economic literature is considered <i>utilities</i> . An intervention itself can be considered a consequence of a recommendation (e.g., the burden of taking a medication or undergoing surgery) and a level of importance or value is associated with that.
10. Deciding what evidence to include and searching for evidence	Focuses on laying out inclusion and exclusion criteria based on types of evidence (e.g., rigorous research, informally collected), study designs, characteristics of the population, interventions and comparators, and deciding how the evidence will be identified and obtained. It also includes but is not limited to evidence about values and preferences, local data and resources.
11. Summarizing evidence and considering additional information	Focuses on presenting evidence in a synthetic format (e.g., tables or brief narratives) to facilitate the development and understanding of recommendations. It also involves identifying and considering additional information relevant to the question under consideration.
12. Judging quality, strength or certainty of a body of evidence	Includes assessing the confidence one can place in the obtained evidence by transparently evaluating the obtained research (individual studies and across studies) and other evidence applying structured approaches. This may include, but is not limited to, evidence about baseline risk or burden of disease, importance of outcomes and interventions, values, preferences and utilities, resource use (cost), estimates of effects and accuracy of diagnostic tests.
13. Developing recommendations and determining their strength	Developing recommendations involves use of a structured analytic framework and a transparent and systematic process to integrate the factors that influence a recommendation. Determining the strength of the recommendations refers to judgments about how confident a guideline panel is that the implementation of a recommendation exerts more desirable than undesirable consequences.
14. Wording of recommendations and of considerations about implementation, feasibility and equity	Refers to choosing syntax and formulations that facilitate understanding and implementation of the recommendations. Such wording is connected to considerations about implementation, feasibility and equity, which refer to the guideline panel's considerations about how the recommendation will be used and what impact it may have on the factors described.
15. Reporting and peer review	Reporting refers to how a guideline will be made public (e.g., print, online). Peer review refers to how the guideline document will be reviewed before its publication and how it can be assessed (e.g., for errors), both internally and externally, by stakeholders who were not members of the guideline development group.
16. Dissemination and implementation	Focuses on strategies to make relevant groups aware of the guidelines and to enhance their uptake (e.g., publications and tools such as mobile applications).
17. Evaluation and use	Refers to formal and informal strategies that allow judgments about: evaluation of the guidelines as a process and product; evaluation of the use or uptake, or both; and evaluation of impact and whether or not the guideline leads to improvement in patient or population health or other consequences.
18. Updating	Refers to how and when a guideline requires revision because of changes in the evidence or other factors that influence the recommendations.

# Interactive website

[cebgrade.mcmaster.ca/guidecheck.html](http://cebgrade.mcmaster.ca/guidecheck.html)

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## GRADE

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About GRADE

GRADE Learning  
Modules

GIN-McMaster Guideline  
Development Checklist

GRADEpro GDT

CE&B

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## GIN-McMaster Guideline Development Checklist

### About the Checklist

This is a webpage for the **GIN-McMaster Guideline Development Checklist**, which contains a comprehensive list of topics and items outlining the practical steps to consider for developing guidelines. The Guideline Development Checklist project is a partnership between the Guidelines International Network (GIN) and McMaster University. The checklist is intended for use by guideline developers to plan and track the process of guideline development and to help ensure that no key steps are missed. Users of the checklist should become familiar with the topics and the items before applying them.

*What the Checklist is and what it isn't:*

The checklist is designed to serve as a publicly available and interactive resource, with links to learning tools and training materials, for those interested in beginning, enhancing or evaluating their guideline development process. Considering items on this checklist is intended to support the development and implementation of trustworthy guidelines.

The purpose of the checklist is not to replace guideline credibility assessment tools like AGREE and other tools that may be a result of standards put forth by the Guidelines International Network or Institute of Medicine (IOM). Following steps outlined in the checklist will, however, ensure that key items are covered and increase the likelihood of the guideline achieving higher scores when evaluated with credibility assessment tools.

See our publication in the [Canadian Medical Association Journal](#) for a detailed explanation of the guideline checklist and its development.



Inspiring Innovation and Discovery



Please also view the two **videos** below to learn about the features of each version of the checklist.

[Go to Online Checklist](#)

[Download Checklist PDF](#)

[Download Glossary PDF](#)



The Guideline Development Checklist is officially endorsed by:



Developed in collaboration with:

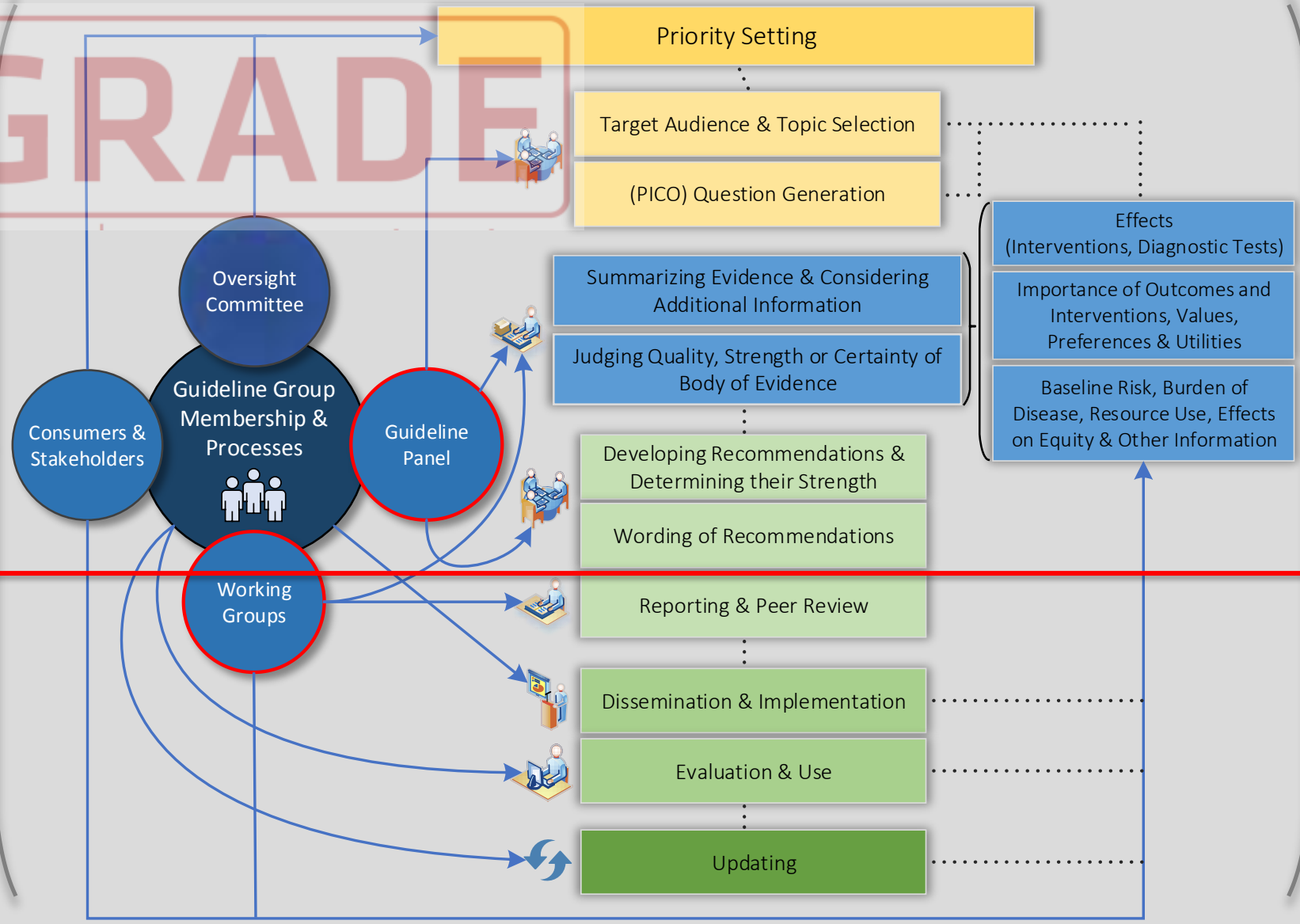


# Organization, Budget, Planning & Training

# GRADE

Conflict-of-Interest Considerations

Documenting Guideline Development Process & Decisions

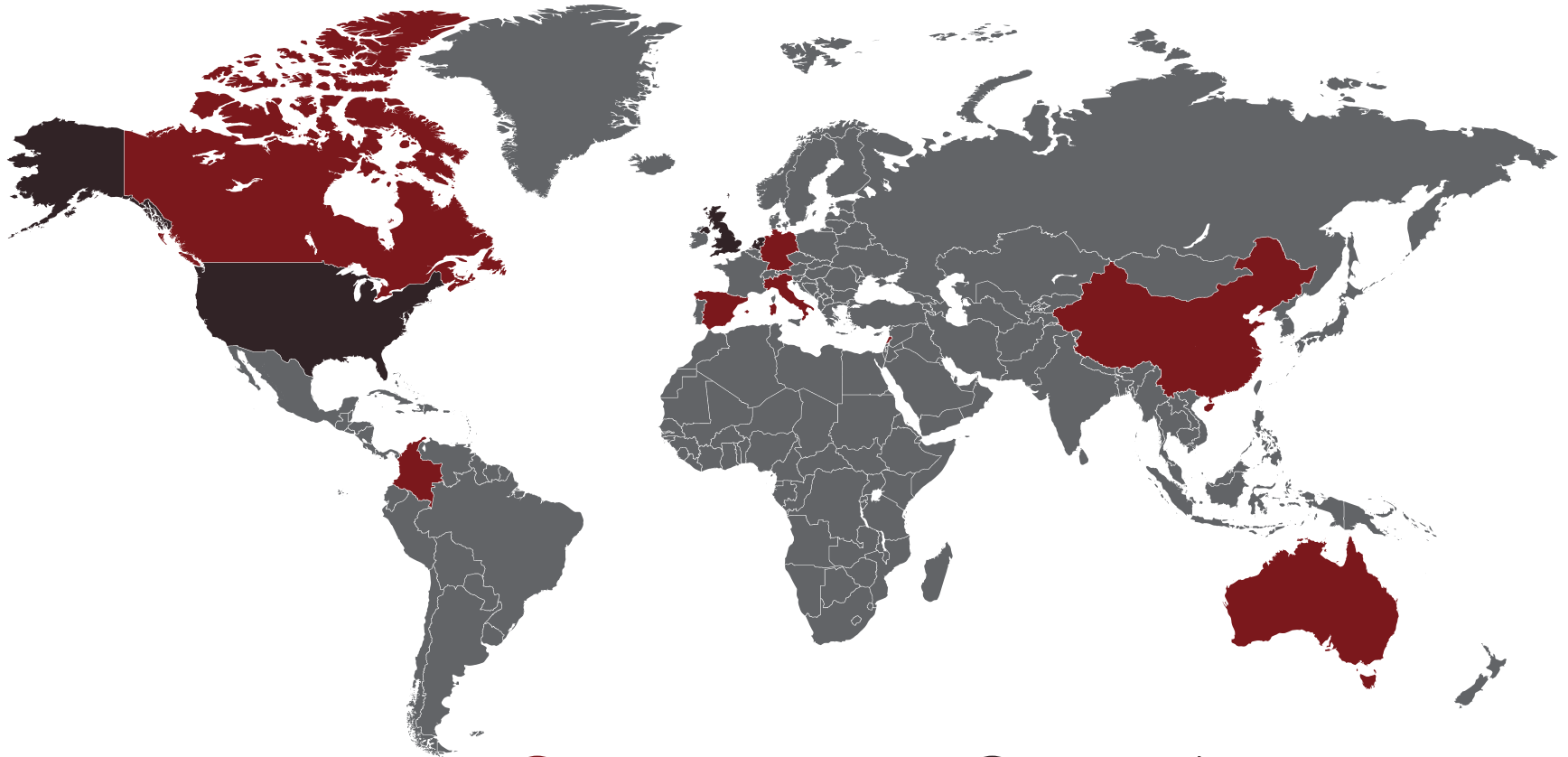


# **GRADE** working group

After 30 years of increasing confusion, GRADE developed a unifying, transparent and sensible system for grading the certainty of evidence and making decisions

- Over 100 organizations: WHO, European Commission, NICE, CADTH, CDC, professional societies, academics
- For systematic reviews, HTA and guidelines
- International & diverse contributors (>600)
- 2008 BMJ series; 2011 JCE series – over 30,000 cites
- Various other publications (incl. GRADE Handbook)
- Official IT applications **GRADEpro** **GDT**

# GRADE



## GRADE Centers

McMaster University GRADE Center, **Canada**  
Lanzhou University GRADE Center, **China**  
Barcelona GRADE Center, **Spain**  
Freiburg University GRADE Center, **Germany**  
American University of Beirut GRADE Center, **Lebanon**  
Lazio Region-ASL Rome GRADE Center, **Italy**  
Javeriana Bogota GRADE Center, **Colombia**  
JBI Adelaide GRADE Center, **Australia**

## GRADE Networks

U.S. GRADE Network, **United States**  
Dutch GRADE Network, **Netherlands**  
UK GRADE Network, **United Kingdom**

Formulate question

P	Outcome	Critical
I/E	Outcome	Critical
C	Outcome	Important
O	Outcome	Not important



Create evidence profile or Summary of Findings Table with GRADEpro

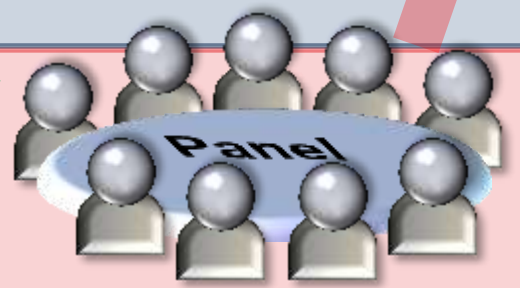
Certainty of evidence for each outcome  
Randomization raises initial quality

High  
Moderate  
Low  
Very low

- |            |                                |
|------------|--------------------------------|
| Grade down | 1. Risk of bias                |
|            | 2. Inconsistency               |
|            | 3. Indirectness                |
|            | 4. Imprecision                 |
|            | 5. Publication bias            |
| Grade up   | 1. Large effect                |
|            | 2. Dose response               |
|            | 3. Opposing bias & Confounders |

Evidence synthesis (systematic review/HTA)

Recommendation/Decision



Grade recommendations (Evidence to Recommendation)  
• For or against (direction) ↓↑  
• Strong or conditional/weak (strength)

Grade overall  
Certainty of evidence across outcomes

Recommendation /Decision

By balancing consequences (evidence to recommendations):

- ❑ Certainty of evidence
- ❑ Values and preferences (utilities)
- ❑ Balance benefits/harms
- ❑ Resource use (cost)
- ❑ Equity, Feasibility, Acceptability

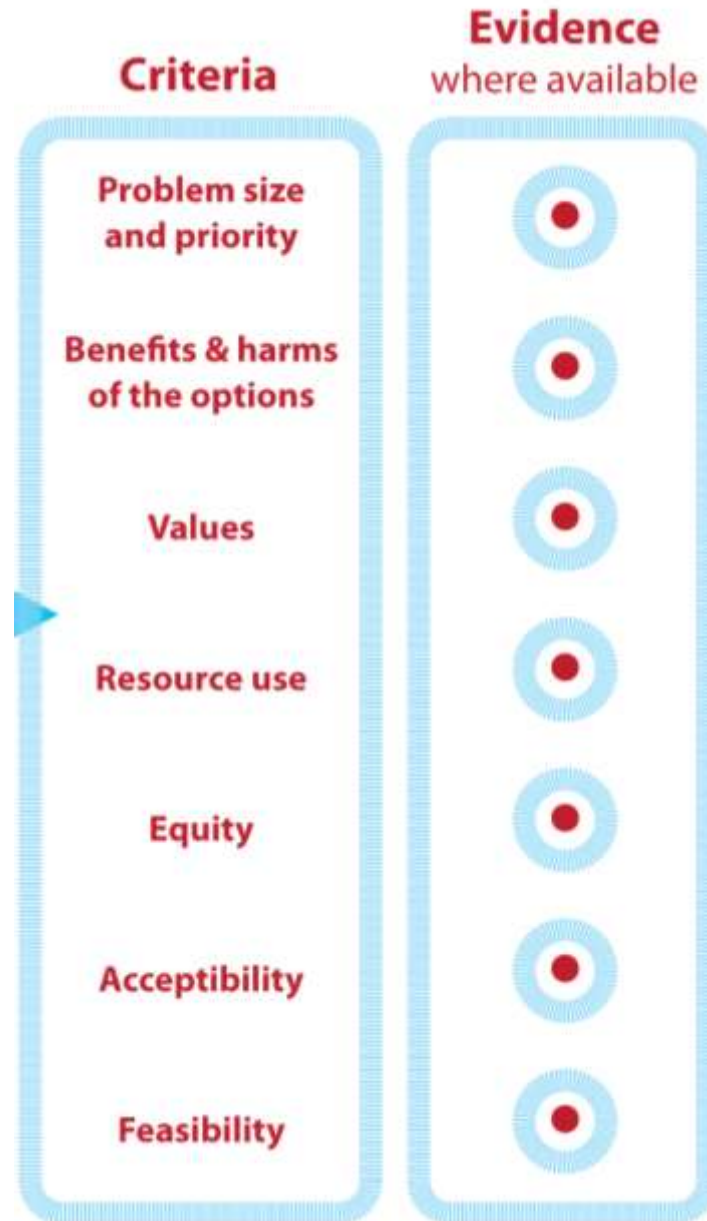
EtD framework



Formulate Recommendations (↓↑ | ⊕...)  
 “The panel recommends that ....should...”  
 “The panel suggests that ....should...”  
 “The panel suggests to not ...”  
 “The panel recommends to not...”

# GRADE decision criteria

Systematic reviews or HTA



Recommendation





## GRADE Evidence to Decision (EtD) frameworks: a systematic and transparent approach to making well informed healthcare choices. 1: Introduction

Pablo Alonso-Coello,<sup>1,2</sup> Holger J Schünemann,<sup>2,3</sup> Jenny Moberg,<sup>4</sup> Romina Brignardello-Petersen,<sup>2,5</sup> Elie A Akl,<sup>2,6</sup> Marina Davoli,<sup>7</sup> Shaun Treweek,<sup>8</sup> Reem A Mustafa,<sup>2,9</sup> Gabriel Rada,<sup>10,11,12</sup> Sarah Rosenbaum,<sup>4</sup> Angela Morelli,<sup>4</sup> Gordon H Guyatt,<sup>2,3</sup> Andrew D Oxman<sup>4</sup> the GRADE Working Group



## GRADE Evidence to Decision (EtD) frameworks: a systematic and transparent approach to making well informed healthcare choices. 2: Clinical practice guidelines

Pablo Alonso-Coello,<sup>1,2</sup> Andrew D Oxman,<sup>3</sup> Jenny Moberg,<sup>3</sup> Romina Brignardello-Petersen,<sup>2,4</sup> Elie A Akl,<sup>2,5</sup> Marina Davoli,<sup>6</sup> Shaun Treweek,<sup>7</sup> Reem A Mustafa,<sup>2,8</sup> Per O Vandvik,<sup>3</sup> Joerg Meerpohl,<sup>9</sup> Gordon H Guyatt,<sup>2,10</sup> Holger J Schünemann,<sup>2,10</sup> the GRADE Working Group

ELSEVIER

Journal of Clinical Epidemiology ■ (2016) ■

## ORIGINAL ARTICLE

# GRADE Guidelines: 16. GRADE evidence to decision frameworks for tests in clinical practice and public health

Holger J. Schünemann<sup>a,b,c,\*</sup>, Reem Mustafa<sup>a,c,d</sup>, Jan Brozek<sup>a,b,c</sup>, Nancy Santesso<sup>a,c</sup>, Pablo Alonso-Coello<sup>a,c,e</sup>, Gordon Guyatt<sup>a,b,c</sup>, Rob Scholten<sup>f</sup>, Miranda Langendam<sup>c,g</sup>, Mariska M. Leeftang<sup>g</sup>, Elie A. Akl<sup>a,c,h</sup>, Jasvinder A. Singh<sup>c,i</sup>, Joerg Meerpohl<sup>c,j</sup>, Maria Hakker<sup>k</sup>, David Brindley<sup>g</sup>, Andrew D. Oxman<sup>l</sup> GRADE Working Group

RESEARCH

Open Access



# The GRADE evidence-to-decision framework: a report of its testing and application in 15 international guideline panels

Ignacio Neumann<sup>1,2</sup>, Romina Brignardello-Petersen<sup>1,3</sup>, Wojtek Wiercioch<sup>1</sup>, Alonso Carrasco-Labra<sup>1,3</sup>, Carlos Cuello<sup>1</sup>, Elie Akl<sup>4</sup>, Reem A. Mustafa<sup>1,5</sup>, Waleed Al-Hazzani<sup>1</sup>, Itziar Etxeandia-Ikobaltzeta<sup>1,7</sup>, Maria Ximena Rojas<sup>8</sup>, Maicon Falavigna<sup>9</sup>, Nancy Santesso<sup>1</sup>, Jan Brozek<sup>1,6</sup>, Alfonso Iorio<sup>1</sup>, Pablo Alonso-Coello<sup>1,10</sup> and Holger J. Schünemann<sup>1,6\*</sup>

OPEN ACCESS Freely available online

PLOS MEDICINE

Health in Action

## Transparent Development of the WHO Rapid Advice Guidelines

Holger J. Schünemann<sup>\*</sup>, Suzanne R. Hill, Meetal Kakad, Gunn E. Vist, Richard Bellamy, Lauren Stockman, Torbjørn Fosen Wisløff, Chris Del Mar, Frederick Hayden, Timothy M. Uyeki, Jeremy Farrar, Yazdan Yazdanpanah, Howard Zucker, John Beigel, Tawee Chotpitayasunondh, Tran Tinh Hien, Bülent Özbay, Norio Sugaya, Andrew D. Oxman

# Key Problems

1. Time is short
2. Money is tight
3. Guidelines are complicated (and shouldn't be simplistic)

GRADE



# GRADE's software for Summary of Findings tables, Health Technology Assessment and Guidelines

LOG IN / SIGN UP



# WHO Guideline on the use of Bedaquiline for Drug Resistant Tuberculosis

GRADE

GRADEpro Evidence to Decision Frameworks piloting  
Grading of evidence  
Updating of guidelines



# The use of bedaquiline in the treatment of multidrug-resistant tuberculosis

Interim policy guidance



## Report of the Guideline Development Group Meeting on the use of bedaquiline in the treatment of multidrug-resistant tuberculosis

A review of available evidence (2016)

28 - 29 June 2016  
Geneva, Switzerland



THE  
**END TB**  
STRATEGY

All Search

Sort by: Name (A-Z) Change view:

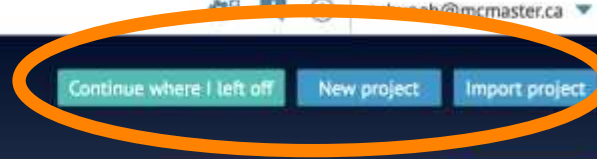
Force explanations  
Always display question group drop a...  
Language  
New project Import project

Language dropdown menu:

- English
- 中国 (Chinese)
- Deutsch
- Español
- Italiano
- 日本語 (japanese)
- Nederlands
- Português
- Eesti

Project Name	Code	Last Updated	Actions
[ATS] IPF: Management (21 questions)	ATS		
[CPG] GLAD-P (PRE and PRObiotics)	--		
[CPG] GLAD-P (PRE and PRObiotics) Holger working copy	--		
[CPG] GLAD-P Vitamin D	--		
[WAO] GLAD-P: PRE and PRObiotics	WAO		
2016 Update of WHO Interim guidelines on the use of Delamanid in MDR TB	--	Nov 17, 2017 by me	
2016 Update of WHO Interim guidelines on the use of Delamanid in MDR TB working copy for WHO report	--	May 16, 2017	
2nd Example heparin for patients with cancer who have no other indication for heparin	--	Nov 24, 2017 by me	
Adaptation of Rheumatoid Arthritis Guidelines for the Eastern Mediterranean Region	--	Nov 18, 2017	
ARIA 2015 [original]	ARIA	Jul 31, 2017	
ASH Guideline on Diagnosis of VTE	ASH	Nov 17, 2017	
ASH Guideline on Diagnosis of VTE	--	Nov 6, 2017	
ASH Guideline on Heparin-Induced Thrombocytopenia (HIT)	--	Aug 23, 2017	
ASH Guideline on Optimal Management of Anticoagulation Therapy	--	Nov 16, 2017	
ASH Guideline on Pediatric VTE (Working Copy)	--	Jul 28, 2017	
ASH Guideline on Prevention and Treatment of VTE in Patients with Cancer	--	Nov 17, 2017	

GRADE



All Search

Sort by: Name (A-Z) Change view:

Active (120) Archived (1) Invitations (3)

Project Name	Organization	Last Updated	Dropdown
[ATS] IPF: Management (21 questions)	ATS	Aug 2, 2017	▼
[CPG] GLAD-P (PRE and PRObiotics)	--	Nov 14, 2016 by me	▼
[CPG] GLAD-P (PRE and PRObiotics) Holger working copy	--	Jun 26, 2016 by me	▼
[CPG] GLAD-P Vitamin D	--	Nov 22, 2017	▼
[WAO] GLAD-P: PRE and PRObiotics	WAO	Jun 12, 2017	▼
2016 Update of WHO Interim guidelines on the use of Delamanid in MDR TB	--	Nov 17, 2017 by me	▼
2016 Update of WHO Interim guidelines on the use of Delamanid in MDR TB working copy for WHO report	--	May 16, 2017	▼
2nd Example heparin for patients with cancer who have no other indication for heparin	--	Nov 24, 2017 by me	▼
Adaptation of Rheumatoid Arthritis Guidelines for the Eastern Mediterranean Region	--	Nov 18, 2017	▼
ARIA 2015 [original]	ARIA	Jul 31, 2017	▼
ASH Guideline on Diagnosis of VTE	ASH	Nov 17, 2017	▼
ASH Guideline on Diagnosis of VTE	--	Nov 6, 2017	▼
ASH Guideline on Heparin-Induced Thrombocytopenia (HIT)	--	Aug 23, 2017	▼
ASH Guideline on Optimal Management of Anticoagulation Therapy	--	Nov 16, 2017	▼
ASH Guideline on Pediatric VTE (Working Copy)	--	Jul 28, 2017	▼
ASH Guideline on Prevention and Treatment of VTE in Patients with Cancer	--	Nov 17, 2017	▼



Project Name	Project ID	Last Updated	Actions
[ATS] (PF) Management (21 questions)	ATS	Aug 2, 2017	▼
[CPC] GLAD-P (PRE and PRObiotics)	-	Nov 14, 2016 by me	▼
[CPC] GLAD-P (PRE and PRObiotics) Holger working copy	-	Jun 26, 2018 by me	▼
[CPC] GLAD-P Vitamin D	-	Nov 22, 2017	▼
[WAO] GLAD-P, PRE and PRObiotics	WAO	Jan 12, 2017	▼
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ASH Guideline on Optimal Management of Anticoagulation Therapy	-	Nov 18, 2017	▼
ASH Guideline on Pediatric VTE (Working Copy)	-	Jul 28, 2017	▼
ASH Guideline on Prevention and Treatment of VTE in Patients with Cancer	-	Nov 17, 2017	▼

Import project from RevMan5 or GRADEpro

Choose file

include references from outcomes studies

Cancel Import

## 6. WHO Interim policy recommendations

In view of the aforementioned evidence assessment and advice provided by the EG, WHO recommends that *bedaquiline may be added to a WHO-recommended regimen in adult patients with pulmonary MDR-TB (conditional recommendation, very low confidence in estimates of effects).*

Given the limited data available on bedaquiline and its use under the various situations that may be encountered in different clinical settings, adequate provisions for safe and effective use of the drug must be in place. Consequently, countries are advised to follow

### **5. Pharmacovigilance and proper management of adverse drug reactions and prevention of drug–drug interactions.**

- a. Special measures need to be put in place to ensure the early detection and timely reporting of adverse events using active pharmacovigilance methods, such as ‘cohort event monitoring’. Any adverse drug reaction attributed to bedaquiline should also be reported to the national pharmacovigilance centre as part of the spontaneous reporting mechanism in the country. As for any other drug in the MDR-TB regimen the patient should be encouraged to report to the attending health worker any adverse event that occurs during the time the drug is being

GRADE standard EtD templates were developed to facilitate the process of making healthcare decisions by guideline panels. Different EtD templates include various criteria (e.g., equity) depending on type of recommendations/decisions and chosen perspective (e.g., individual, population). [Learn about EtD templates](#)

Template for management questions

Select base template for management questions

- Clinical recommendation - Individual perspective
- Clinical recommendation - Population perspective**
- Coverage Decision
- Health system and public health recommendation
- Health system and public health decision

English

Template name

Clinical recommendation - Population perspective

> Question

> Assessment

> Conclusions

> Presentations

- SETTINGS
- ETD TEMPLATES
- TASKS
- TEAM
- SCOPE
- PROGNOSIS
- COMPARISONS
- PANEL VOICE
- DOCUMENT SECTIONS
- DISSEMINATION

- Assessment
  - Problem  
Is the problem a priority?
  - Desirable Effects  
How substantial are the desirable anticipated effects?
  - Undesirable Effects  
How substantial are the undesirable anticipated effects?
  - Certainty of evidence  
What is the overall certainty of the evidence of effects?
  - Values  
Is there important uncertainty about or variability in how much people value the main outcomes?
  - Balance of effects  
Does the balance between desirable and undesirable effects favor the intervention or the comparison?
  - Resources required  
How large are the resource requirements (costs)?
  - Certainty of evidence of required resources  
What is the certainty of the evidence of resource requirements (costs)?
  - Cost effectiveness  
Does the cost-effectiveness of the intervention favor the intervention or the comparison?
  - Equity  
What would be the impact on health equity?
  - Acceptability  
Is the intervention acceptable to key stakeholders?
  - Feasibility  
Is the intervention feasible to implement?

# Interactive Evidence to Decision

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Guideline Development Tool

Not Secure | gdt.guidelinedevelopment.org/app/#projects/p\_hojes\_459c7e59-696c-4a54-a926-128b7bc21f60/evidence-syntheses/619760D2-07D7-832E-9E86-98F...

Apps | CYCLING IN PROVE... | draw.io | Tngs | IBM | EST | Soc | ASH | CE&B | Bank | Airlines | GRADE | Chrome | Bike | Other Bookmarks

GRADEpro | GDT | Copy of Bedaquiline for Tuberculosis - use for BMJ EtD paper | schuneh@mcmaster.ca

Should Bedaquiline + background MDR-TB treatment vs. Background MDR-TB treatment alone (regimen of drugs recommended by WHO) be used in Multidrug-resistant tuberculosis (MDR-TB) ?

Bottom panel | Explanations | Help

### Question

Should Bedaquiline + background MDR-TB treatment vs. Background MDR-TB treatment alone (regimen of drugs recommended by WHO) be used in Multidrug-resistant tuberculosis (MDR-TB) ?

Recommendations preview

### Assessment

CRITERIA	JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS										
<b>Is the problem a priority?</b>	<input type="radio"/> No <input type="radio"/> Probably no <input type="radio"/> Probably yes <input checked="" type="radio"/> Yes <input type="radio"/> Varies <input type="radio"/> Don't know <a href="#">Detailed judgements</a>	<p>Among MDR-TB patients started on treatment globally in 2009, only 48% were treated successfully, as a result of high frequency of death (15%) and loss to follow-up (28%), commonly associated with adverse drug reactions, among other factors [2].</p>											
<b>How substantial are the desirable anticipated effects?</b>	<input type="radio"/> Trivial <input type="radio"/> Small <input type="radio"/> Moderate <input checked="" type="radio"/> Large <input type="radio"/> Varies	<p>Summary of findings: Bedaquiline for multidrug-resistant tuberculosis</p> <p><b>Bedaquiline + background MDR-TB treatment compared to Background MDR-TB treatment alone (regimen of drugs recommended by WHO) in MDR-TB patients</b></p> <table border="1"> <thead> <tr> <th>Outcomes</th> <th>Anticipated absolute effects* (95% CI)</th> <th>Relative effect (95% CI)</th> <th>N<sub>o</sub> of participants (studies)</th> <th>Quality of the evidence (GRADE)</th> </tr> </thead> <tbody> <tr> <td>Risk with</td> <td>Risk with</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Outcomes	Anticipated absolute effects* (95% CI)	Relative effect (95% CI)	N <sub>o</sub> of participants (studies)	Quality of the evidence (GRADE)	Risk with	Risk with				
Outcomes	Anticipated absolute effects* (95% CI)	Relative effect (95% CI)	N <sub>o</sub> of participants (studies)	Quality of the evidence (GRADE)									
Risk with	Risk with												

# Presentation and use of criteria can be tailored

Interactive EtDs (iEtD)

Lets us choose the criteria

If obvious or not considered omit

GRADE



# EtD frameworks

GRADE

The screenshot shows the GRADEpro GDT software interface. At the top, the title bar reads "GRADEpro GDT" and "Estonian workshop December 2015 Bedaquiline for Tuberculosis". The main question is "Should bedaquiline plus BR vs. BR be used in MDR-TB patients?". Below the question is a table with four columns: CRITERIA, JUDGEMENT, RESEARCH EVIDENCE, and ADDITIONAL CONSIDERATIONS. The "CRITERIA" column contains the question "Is the problem a priority?". The "JUDGEMENT" column has radio buttons for "No", "Probably no", "Probably yes", "Yes" (selected), "Varies", and "Don't know". The "RESEARCH EVIDENCE" column contains text about MDR-TB treatment success rates. The "ADDITIONAL CONSIDERATIONS" column contains text about children with MDR.

CRITERIA	JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
Is the problem a priority?	<input type="radio"/> No <input type="radio"/> Probably no <input type="radio"/> Probably yes <input checked="" type="radio"/> Yes <input type="radio"/> Varies <input type="radio"/> Don't know	Among MDR-TB patients started on treatment globally in 2009, 48% were treated successfully, as a result of high frequency of death (15%) and loss to follow-up (28%), commonly associated with adverse drug reactions, among other factors [2].	Children have less MDR but we do not have data.

**Criteria** on which a recommendation is based

**Judgements** that must be made in relation to each criterion

**Research evidence** to inform each judgement

**Additional considerations** that inform or explain each judgement

**What are guideline panel members doing?**



# Discuss evidence

e

Should Bedaquiline + background MDR-TB treatment vs. Background MDR-TB treatment alone (regimen of drugs recommended by WHO) be used in Multidrug-resistant tuberculosis (MDR-TB) ?

Bottom panel Explanations Help

## Question

Should Bedaquiline + background MDR-TB treatment vs. Background MDR-TB treatment alone (regimen of drugs recommended by WHO) be used in Multidrug-resistant tuberculosis (MDR-TB) ?

Recommendations preview

## Assessment

	CRITERIA	JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS									
PROBLEM	Is the problem a priority?	<input type="radio"/> No <input type="radio"/> Probably no <input type="radio"/> Probably yes <input checked="" type="radio"/> Yes  <input type="radio"/> Varies <input type="radio"/> Don't know  <a href="#">Detailed judgements</a>	Among MDR-TB patients started on treatment globally in 2009, only 48% were treated successfully, as a result of high frequency of death (15%) and loss to follow-up (28%), commonly associated with adverse drug reactions, among other factors [2].										
	How substantial are the desirable anticipated effects?	<input type="radio"/> Trivial <input type="radio"/> Small <input type="radio"/> Moderate <input checked="" type="radio"/> Large  <input type="radio"/> Varies	Summary of findings: Bedaquiline for multidrug-resistant tuberculosis  <b>Bedaquiline + background MDR-TB treatment compared to Background MDR-TB treatment alone (regimen of drugs recommended by WHO) in MDR-TB patients</b> <table border="1"><thead><tr><th>Outcomes</th><th>Anticipated absolute effects* (95% CI)</th><th>Relative effect (95% CI)</th><th>N<sup>o</sup> of participants (studies)</th><th>Quality of the evidence (GRADE)</th></tr></thead><tbody><tr><td></td><td>Risk with</td><td>Risk with</td><td></td><td></td></tr></tbody></table>	Outcomes	Anticipated absolute effects* (95% CI)	Relative effect (95% CI)	N <sup>o</sup> of participants (studies)	Quality of the evidence (GRADE)		Risk with	Risk with		
Outcomes	Anticipated absolute effects* (95% CI)	Relative effect (95% CI)	N <sup>o</sup> of participants (studies)	Quality of the evidence (GRADE)									
	Risk with	Risk with											

# Add relevant consideration



GRADEpro GDT Copy of Bedaquiline for Tuberculosis - use for BMJ EtD paper schuneh@mcmaster.ca

Should Bedaquiline + background MDR-TB treatment vs. Background MDR-TB treatment alone (regimen ... Explanations Help

What is the overall certainty of the evidence of effects?

- Very low
- Low
- Moderate
- High
- No included studies

Detailed judgements

**The relative importance or values of the main outcomes of interest:**

Outcome	Relative importance	Certainty of the evidence (GRADE)
Subjects cured by end of study: 120 weeks (C208 Stage 2: mITT)	CRITICAL	⊕⊕○○ LOW
Serious Adverse Events during investigational 24 week treatment phase (C208 Stages 1 and 2: ITT) 7 (assessed through clinical and laboratory results)	CRITICAL	⊕○○○ VERY LOW
Mortality up to end of study at 120 weeks (C208 Stage 2: ITT) (deaths reported)	CRITICAL	⊕○○○ VERY LOW
Time to conversion over 24 weeks (C208 Stage 2: mITT1) (measured with microbiological endpoints - MGIT960)	CRITICAL	⊕⊕○○ LOW
Culture conversion at 24 weeks (C208 Stage 2: mITT1) (assessed with	CRITICAL	⊕⊕○○

All critical outcomes measured There were concerns about imprecision (due to small sample size and few events), and indirectness (due to (1) background MDR-TB treatment not being consistent with currently recommended regimens and (2) to the use of a surrogate outcome, i.e. culture conversion). There were also concerns on the risk of bias (due to the inappropriate exclusion of 19 randomized patients with unconfirmed MDR-TB from mITT analysis).

# Make judgments (when research evidence complete) – w/o COI

GRADEpro GDT

Copy of Bedaquiline for Tuberculosis - use for BMJ EtD paper

Schuneh@mcmaster.ca

Should Bedaquiline + background MDR-TB treatment vs. Background MDR-TB treatment alone (regimen of drugs recommended by WHO) in MDR-TB patients

How substantial are the desirable anticipated effects?

- Trivial
- Small
- Moderate
- Large
- Varies
- Don't know

Detailed judgements

Summary of findings: Bedaquiline for multidrug-resistant tuberculosis

Bedaquiline + background MDR-TB treatment compared to Background MDR-TB treatment alone (regimen of drugs recommended by WHO) in MDR-TB patients

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	No of participants (studies)	Quality of the evidence (GRADE)
	Risk with Background MDR-TB treatment alone (regimen of drugs recommended by WHO)	Risk with Bedaquiline + background MDR-TB treatment			
Subjects cured by end of study: 120 weeks (C208 Stage 2; mITT) <sup>1,2</sup>	Study population		RR 1.81 (1.26 to 2.31) <sup>3,6</sup>	132 (1 RCT) <sup>3,5</sup>	⊕⊕○○ LOW <sup>4,5</sup>
	32 per 100 <sup>1</sup>	58 per 100 (40 to 74) <sup>1</sup>			
Serious Adverse Events during Investigational 24 week treatment phase (C208 Stages 1 and	Study population		RR 3.60 (0.77 to 14.00)	207 (2 RCTs) <sup>7,9</sup>	⊕○○○ VERY LOW <sup>6,8</sup>
	2 per 100	7 per 100 (1 to 27) <sup>3</sup>			

# Interactive Summary of Findings

Participants: MDR TB patients  
 Intervention: Bedaquiline + background MDR TB treatment  
 Comparison: background MDR TB treatment alone

► About this summary

Add or remove columns:

Visual overview

Outcome	Plain language summary	Absolute Effect		Relative effect (95% CI) N° of participants & studies	Certainty of the evidence (GRADE)
		Without bedaquiline	With bedaquiline		
<b>Cured by end of study</b> <sup>(1)</sup> Follow-up: 120 weeks	<i>Bedaquiline may increase the number of patients cured.</i>	32 <sup>(1)</sup> per 100	58 <sup>(1)</sup> per 100	RR 1.81 (1.26 to 2.31)  Based on data from 132 patients in 1 study	++○○ Low <sup>(1)</sup>
		Difference 26 more per 100 patients (95% CI: 8 to 42 more per 100 patients)			
<b>Serious adverse events</b> <sup>(1)</sup> Follow-up: 24 week treatment phase	<i>It is uncertain whether bedaquiline increases the number of patients who have adverse effects.</i>	2 per 100	7 <sup>(1)</sup> per 100	RR 3.6 (0.77 to 14.00)  Based on data from 207 patients in 2 studies	+○○○ Very low <sup>(1)</sup>
		Difference 5 more per 100 patients (95% CI: 0 to 25 more per 100 patients)			
<b>Mortality</b> <sup>(1)</sup> Follow-up: 120 weeks	<i>It is uncertain whether bedaquiline increases the number of patients who die.</i>	3 per 100	13 <sup>(1)</sup> per 100	RR 9.23 (1.20 to 72.95)  Based on data from 160 patients in 1 study	+○○○ Very low <sup>(1)</sup>
		Difference 10 more per 100 patients (95% CI: 0 to 53 more per 100 patients)			

## Detailed judgements

DESIRABLE EFFECTS: **How substantial are the desirable anticipated effects?**

Panel discussion

### Detailed questions

How substantial is the anticipated effect (difference) for each main outcome for which there is a desirable effect?

Main outcomes	Judgements					
Subjects cured by end of study; 120 weeks (C208 Stage 2: mITT)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Trivial	Small	Moderate	Large	Varies	Don't know
Serious Adverse Events during investigational 24 week treatment phase (C208 Stages 1 and 2: ITT) 7 (assessed through clinical and laboratory results)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Trivial	Small	Moderate	Large	Varies	Don't know
Mortality up to end of study at 120 weeks (C208 Stage 2: ITT) (deaths reported)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Trivial	Small	Moderate	Large	Varies	Don't know
Time to conversion over 24 weeks (C208 Stage 2: mITT1) (measured with microbiological endpoints - MGIT960)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Trivial	Small	Moderate	Large	Varies	Don't know
Culture conversion at 24 weeks (C208 Stage 2: mITT1) (assessed with microbiological endpoint - MGIT960)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Trivial	Small	Moderate	Large	Varies	Don't know

**Outcome: Subjects cured by end of study: 120 weeks (C208 Stage 2: mITT)**

Domain (original question asked)	Description	Judgment - Is the evidence sufficiently direct?
Population:		<input type="radio"/> Yes <input type="radio"/> Probably yes <input type="radio"/> Probably no <input type="radio"/> No
Intervention: Bedaquiline + background MDR-TB treatment		<input type="radio"/> Yes <input type="radio"/> Probably yes <input type="radio"/> Probably no <input type="radio"/> No
Comparator: Background MDR-TB treatment alone (regimen of drugs recommended by WHO)		<input type="radio"/> Yes <input type="radio"/> Probably yes <input type="radio"/> Probably no <input type="radio"/> No
Direct comparison		<input type="radio"/> Yes <input type="radio"/> Probably yes <input type="radio"/> Probably no <input type="radio"/> No
Outcome: Subjects cured by end of study: 120 weeks (C208 Stage 2: mITT)		<input type="radio"/> Yes <input type="radio"/> Probably yes <input type="radio"/> Probably no <input type="radio"/> No
Final judgment about indirectness across domains:	<input type="radio"/> No indirectness <input checked="" type="radio"/> Serious indirectness <input type="radio"/> Very serious indirectness	

Cancel

Apply

Importance

CRITICAL

CRITICAL

CRITICAL

▼ Should Bedaquiline + background MDR-TB treatment vs. Background MDR-TB treatment alone (regimen i

Bottom panel

★ Explanations

● Help



RESOURCES REQUIRED	<p>How large are the resource requirements (costs)?</p> <p><input type="radio"/> Large costs</p> <p><input type="radio"/> Moderate costs</p> <p><input type="radio"/> Negligible costs and savings</p> <p><input type="radio"/> Moderate savings</p> <p><input type="radio"/> Large savings</p> <p><input checked="" type="radio"/> Varies</p> <p><input type="radio"/> Don't know</p> <p>Detailed judgements</p>	<p>Detailed judgements</p> <p>Cost data for the base case in each country were sourced from published studies [1], with additional supplementary data provided by study authors. For the primary estimates for the unit cost per patient treatment with Bedaquiline, a regimen cost of US \$900 (for Global Fund Eligible countries) and US \$3000 (for all other countries) was used for a full course of bedaquiline based on estimates from Janssen. In addition the costs of four electro-cardiograms were added. To estimate the possible cost savings from a shortened course with bedaquiline, the costs of an intensive phase of six months were estimated. Eight month intensive phase drug costs were adjusted to take into account reductions in hospitalization and required length of second-line parenteral agents (injectable anti-tuberculosis drugs). Where hospitalization was not used extensively in the intensive phase of treatment (Peru and Nepal), a reduction was made in the cost of clinic visits. All other costs (programme management, testing costs etc.) were conservatively assumed to remain the same as the non-shortened bedaquiline regimen.</p>	
	<p>What is the certainty of the evidence of resource requirements (costs)?</p> <p><input checked="" type="radio"/> Very low</p> <p><input type="radio"/> Low</p> <p><input type="radio"/> Moderate</p> <p><input type="radio"/> High</p> <p><input type="radio"/> No included studies</p> <p>Detailed judgements</p>	<p>Detailed judgements</p> <p>Results were ambiguous in low-income settings, and highly dependent on the assumptions made about the generalizability of trial results to routine settings. The expert group noted that further analysis would be needed to test the robustness of the assumptions in various settings and to separately assess affordability [1].</p>	

Should bedaquiline plus BR vs. BR be used in MDR-TB patients?

Explanations Help

- PROJECT ADMINISTRATION
- TASKS
- TEAM
- SCOPE
- DOCUMENT SECTIONS
- PROGNOSIS
- COMPARISONS
- EVIDENCE TABLE
- RECOMMENDATIONS
- PRESENTATIONS OF ...
- DISSEMINATION

Summary of judgements

CRITERIA	SUMMARY OF JUDGEMENTS						FAVORS background...	FAVORS bedaquilin...	IMPORTANCE FOR DECISION
	No	Probably no	Probably yes	Yes	Varies	Don't know			
PROBLEM	No	Probably no	Probably yes	Yes	Varies	Don't know	↔↔↔↔↔↔↔↔		
DESIRABLE EFFECTS	Trivial	Small	Moderate	Large	Varies	Don't know	↔↔↔↔↔↔↔↔		
UNDESIRABLE EFFECTS	Large	Moderate	Small	Trivial	Varies	Don't know	↔↔↔↔↔↔↔↔		
CERTAINTY OF EVIDENCE	Very low	Low	Moderate	High	No included studies		↔↔↔↔↔↔↔↔		
VALUES	Important uncertainty or...	Possibly important...	Probably no important...	No important uncertainty...	No known undesirable...		↔↔↔↔↔↔↔↔		
BALANCE OF EFFECTS	Favors the comparison	Probably favors the...	Does not favor either the...	Probably favors the...	Favors the intervention	Varies	Don't know	↔↔↔↔↔↔↔↔	
RESOURCES REQUIRED	Large costs	Moderate costs	Negligible costs and...	Moderate savings	Large savings	Varies	Don't know	↔↔↔↔↔↔↔↔	
CERTAINTY OF EVIDENCE OF REQUIRED RESOURCES	Very low	Low	Moderate	High	No included studies		↔↔↔↔↔↔↔↔		
COST EFFECTIVENESS	Favors the comparison	Probably favors the...	Does not favor either the...	Probably favors the...	Favors the intervention	Varies	No	↔↔↔↔↔↔↔↔	
EQUITY	Reduced	Probably reduced	Probably no impact	Probably increased	Increased	Varies	Don't know	↔↔↔↔↔↔↔↔	
ACCEPTABILITY	No	Probably no	Probably yes	Yes	Varies	Don't know	↔↔↔↔↔↔↔↔		
FEASIBILITY	No	Probably no	Probably yes	Yes	Varies	Don't know	↔↔↔↔↔↔↔↔		



Should Bedaquiline + background MDR-TB treatment vs. Background MDR-TB treatment alone (regimen of drugs recommended by WHO) be used in MDR-TB

Summary of judgements

**Conclusions**  
 Should Bedaquiline + background MDR-TB treatment vs. Background MDR-TB treatment alone (regimen of drugs recommended by WHO) be used in MDR-TB patients?

Type of recommendation	Strong recommendation against the intervention	Conditional recommendation against the intervention	Conditional recommendation for either the intervention or the comparison	Conditional recommendation for the intervention	Strong recommendation for the intervention
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

**Recommendation**

The panel suggests adding bedaquiline to a WHO recommended regimen in MDR-TB adult patients under the following conditions (conditional recommendation, very low certainty of the evidence).

In addition:

- A duly informed decision making-process by patients should be followed. Patient should know the risk.
- What dose? Lower dose to lower the risk of bedaquiline
- If patient is already on QT prolongating drugs then possible avoid use. E.g. PLHIV. Need to monitor ECG in these patients.
- Do not apply to children - risk are too high.

**Justification**

**Overall justification**

**Detailed justification**

*Desirable Effects*  
 2.5 x higher probability of being cured than dying with the intervention (for different reasons).

*Undesirable Effects*

Should Bedaquiline + background MDR-TB treatment vs. Background MDR-TB treatment alone (regimen of drugs recommended by WHO) be used in MDR-T

- ADMINISTRATION
- TASKS
- TEAM
- SCOPE
- DOCUMENT SECTIONS
- PROGNOSIS
- COMPARISONS
- EVIDENCE TABLE
- RECOMMENDATIONS
- PRESENTATIONS
- DISSEMINATION

	<p>with a potential increase in mortality, serious adverse effects, and very low certainty of the evidence. For patients with extensively drug-resistant (XDR) tuberculosis and limited, if any other options, the desirable effects probably outweigh the undesirable effects.</p>
<b>Subgroup considerations</b>	<p>Bedaquiline is only suggested for patients with extensively drug-resistant MDR TB under the specified conditions.</p>
<b>Implementation considerations</b>	<ul style="list-style-type: none"> <li>A process to ensure informed decision-making by patients should be established.</li> <li>Equipment for baseline testing and monitoring for QT prolongation and development of arrhythmia should be available.</li> <li>Monitoring of cardiac and liver disease should be available.</li> </ul>
<b>Monitoring and evaluation</b>	<ul style="list-style-type: none"> <li>Spontaneous reporting of adverse drug reactions should be reinforced at country level and active pharmacovigilance should be established among patient groups treated with the drug.</li> <li>Resistance to bedaquiline should be monitored.</li> <li>Resistance to other anti-TB drugs should be monitored following WHO recommendations.</li> </ul>
<b>Research priorities</b>	<ul style="list-style-type: none"> <li>Phase 3 clinical trial(s) of safety and efficacy of bedaquiline, with particular attention to mortality (including causes of death), in the treatment of MDRTB should be accelerated</li> <li>Pharmacokinetics, safety and efficacy studies in specific populations (paediatrics, HIV patients, alcohol and drug users, elderly, pregnant women, extrapulmonary TB, persons with diabetes)</li> <li>Safety studies, including type, frequency and severity of adverse events (short term and long term)</li> <li>Drug-drug interactions, including with other existing and newly developed TB drugs and ARVs</li> <li>Impact on mortality (including cause of death)</li> <li>Acquisition of resistance to bedaquiline and to other TB drugs</li> <li>Duration and dosing of treatment</li> <li>Patients' values</li> <li>Further research on the validity of culture conversion as a surrogate marker of treatment outcome</li> </ul>

# Live use of iEtDs

EtDs are shared with panel members before the meeting and online:

Clarify the process

During the preparation for input on the evidence (all members including conflicted members could be involved)

For initial agreement on the included evidence and additional considerations

If possible, feasible and appropriate for agreement on judgments for specific decision criteria (but may all happen at an in-person meeting)

Final draft EtDs before a final meeting

GRADE

# Review of previous judgments and update through online tool

## Report of the Guideline Development Group Meeting on the use of bedaquiline in the treatment of multidrug-resistant tuberculosis

A review of available evidence (2016)

28 - 29 June 2016

Geneva, Switzerland



World Health Organization

THE  
**END TB**  
STRATEGY

▼ Should Bedaquiline + background MDR-TB treatment vs. Background MDR-TB treatment alone (regimen i

Bottom panel

★ Explanations

● Help

RESOURCES REQUIRED	<p>How large are the resource requirements (costs)?</p> <p>ⓘ</p> <ul style="list-style-type: none"> <li><input type="radio"/> Large costs</li> <li><input type="radio"/> Moderate costs</li> <li><input type="radio"/> Negligible costs and savings</li> <li><input type="radio"/> Moderate savings</li> <li><input type="radio"/> Large savings</li> <li><input checked="" type="radio"/> Varies</li> <li><input type="radio"/> Don't know</li> </ul> <p>Detailed judgements</p>	<p>Cost data for the base case in each country were sourced from published studies [1], with additional supplementary data provided by study authors. For the primary estimates for the unit cost per patient treatment with Bedaquiline, a regimen cost of US \$900 (for Global Fund Eligible countries) and US \$3000 (for all other countries) was used for a full course of bedaquiline based on estimates from Janssen. In addition the costs of four electro-cardiograms were added. To estimate the possible cost savings from a shortened course with bedaquiline, the costs of an intensive phase of six months were estimated. Eight month intensive phase drug costs were adjusted to take into account reductions in hospitalization and required length of second-line parenteral agents (injectable anti-tuberculosis drugs). Where hospitalization was not used extensively in the intensive phase of treatment (Peru and Nepal), a reduction was made in the cost of clinic visits. All other costs (programme management, testing costs etc.) were conservatively assumed to remain the same as the non-shortened bedaquiline regimen.</p>	
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# European Commission Initiative on Breast Cancer and ARIA (allergy)

GRADE

Live decision-making for guidelines

Presentation formats of  
recommendations



GRADE



# EUROPEAN COMMISSION INITIATIVE ON BREAST CANCER

European Commission > EU Science Hub > ECIBC > Home

- Home
- Who we are
- Quality Assurance
- European Guidelines
- News & Events
- Publications
- Contribute!
- ECIBC for You



## EC Initiative on Breast Cancer (ECIBC)

### Guidelines and Quality Assurance scheme for Breast Cancer

The European Commission, in response to the Council of the European Union's conclusions on reducing the burden of cancer, initiated a ground-breaking



### Report of a European Survey on the Implementation of Breast Units

Breast units implementation? À la carte, survey says. Breast units patchy panorama confirms ECIBC evidence-based approach is needed.



### European Breast Guidelines

ECIBC recommendations for breast cancer screening and diagnosis.



# ***Breast Cancer screening recommendations for different age groups by the European Commission***

GRADE

For asymptomatic women aged **40 to 44** with an average risk of breast cancer, the ECIBC's Guideline Development Group (GDG) **suggests not implementing mammography screening** (conditional recommendation, moderate certainty in the evidence).

For asymptomatic women aged **45 to 49** with an average risk of breast cancer, the ECIBC's Guideline Development Group (GDG) **suggests mammography screening** over no mammography screening, in the context of an organised screening programme (conditional recommendation, moderate certainty in the evidence).

For asymptomatic women aged **50 to 69** with an average risk of breast cancer, the ECIBC's Guideline Development Group (GDG) **recommends mammography screening** over no mammography screening, in the context of an organised screening programme (strong recommendation, moderate certainty in the evidence).

For asymptomatic women aged **70 to 74** with an average risk of breast cancer, the ECIBC's Guideline Development Group (GDG) **suggests mammography screening** over no mammography screening, in the context of an organised screening programme (conditional recommendation, moderate certainty in the evidence).



Should organised mammography screening vs. no mammography screening be used for early detection of breast cancer in women : Explanations Help

- SETTINGS
- TASKS
- TEAM
- SCOPE
- PROGNOSIS
- COMPARISONS
- EVIDENCE TABLE
- RECOMMENDATIONS
- PRESENTATIONS
- PANEL VOICE
- DOCUMENT SECTIONS
- DISSEMINATION

**Question**

Should organised mammography screening vs. no mammography screening be used for early detection of breast cancer in women aged of 50 to 69?

**Population:** Women aged of 50 to 69

**Intervention:** organised mammography screening

**Comparison:** no mammography screening

**Main outcomes:** Breast cancer mortality (short case accrual); Breast cancer mortality (longest case accrual available); All-cause mortality; Other cause mortality; Stage IIA breast cancer or higher; Stage III+ breast cancer or tumour size ≥40 mm; Rate of mastectomies; Provision of chemotherapy; Overdiagnosis (long case accrual); Quality of life (inferred from psychological effects); False-positive related adverse effects (psychological distress); and False-positive related adverse effects (biopsies and surgeries)

**Setting:** European Union

**Perspective:** Population (National Health System)

**Background:** Although mammography screening has both potential benefits and harms many countries have organised programmes for women aged 50 or older. A reassessment of the evidence on screening women aged 50 to 69 is appropriate considering advances in diagnosis and treatment of breast cancer.

**Management of Conflicts of Interests (Col):** CoIs of all Guideline Development Group (GDG) members were assessed and managed by the Joint Research Centre (JRC) following an established procedure in line with European Commission rules. GDG member participation in the development of the recommendations was restricted, according to Col disclosure. Consequently, for this particular question, the following GDG members were recused from voting: Mireille Broeders, Roberto d'Amico, Jan Danes, Patricia Fitzpatrick, Axel Gräwingholt, Elsa Pérez Gómez, Ruben van Engen, Cary van Landsveld-Verhoeven, and Kenneth Young. For more information please visit: <http://ecibc.jrc.ec.europa.eu/gdg-documents>

**Assessment**

CRITERIA	JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
<p>Is the problem a priority?</p>	<p><input type="radio"/> No</p> <p><input type="radio"/> Probably no</p> <p><input type="radio"/> Probably yes</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> Varies</p> <p><input type="radio"/> Don't know</p>	<p>Breast cancer is the second most common cancer in the world and, by far, the most frequent cancer among women with an estimated 1.67 million new cancer cases diagnosed in 2012—accounting for 25% of all cancers (GLOBOCAN 2012). Breast cancer ranks as the fifth leading cause of cancer death worldwide and the second leading cause of cancer-related death in developed regions (citation). In the European Union, 367 090 women were diagnosed with breast cancer and 92 000 women died from the disease in 2012 (Ferlay 2013). Breast cancer ranks fourth among the top five cancers with the highest disease burden (Tsilidis 2016).</p>	

# Online interaction of panel

**GRADEpro** **GDT**    Project name 1    Alison Beck (alison.beck@gmail.com) ▾

Phase 1 **unsent (6)**    Phase 1 ongoing (1)    Phase 2 unsent (0)    Phase 2 ongoing (0)    Finished (0)

ADMINISTRATION

EtD TEMPLATES

VOTING

TASKS

TEAM

SCOPE

DOCUMENT SECTIONS

PROGNOSIS

COMPARISONS

DISSEMINATION

Send EtD frameworks for individual voting to panel members. Voting can be run in one or two phases. Voting consists of one phase if you decide to send all parts of EtD framework (Assessment, Type of recommendation, Conclusions) at once. Voting consists of two phases if you decide to send parts of EtD framework separately.

Please decide what should be sent in **phase 1**:

1. Do you want to send proposed judgments for voting in **Assessment part** of EtD framework? (See examples of [panel members' voting form - judgments](#))

**All judgments proposed** (panel members vote agree/disagree)  
 **None judgments proposed** (panel members vote on full scale)  
 **Some judgments proposed** (panel member vote agree/disagree or on full scale)

2. Which **parts of EtD** (Assessment, Type of recommendation, Conclusions) do you want to send in phase 1? (See examples of [panel members' voting form - parts of EtD](#))

Only **Assessment**  
 **Assessment** and **Type of recommendation** (empty)  
 **Assessment** (proposed) and **Type of recommendation** (proposed) and **Conclusions** (proposed)

3. Which questions do you want to send?  
Please note that in order to send an EtD framework, all of the required data should be filled in.

Select all

Should altered fractionation vs. conventional radiotherapy be used for asthma prevention?

Should SOTI vs. elimination diet be used for asthma prevention?

Should ICS vs. ICS+LABA be used for asthma prevention?

**Compared to placebo**

Should SOTI vs. placebo be used for asthma prevention?

Compose message and send selected questions

# Online agreement

Copy of Bedaquiline for Tuberculosis

Phase 1 consent (4) Phase 2 consent (1)

Some judgments proposed (part 1)

2. Which parts of EtD table (Assessment and Type of Recommendation) should be included in the assessment table (proposed) and Type of Recommendation table (proposed)?

only Assessment

Assessment and Type of Recommendation

3. Which questions do you want to include in the assessment table (proposed) and Type of Recommendation table (proposed)?

Please note that in order to send a judgment, you must have filled in a judgment for every criterion.

Select all

For BMI paper final copy

Should Bedaquiline + background information + research evidence be included in the assessment table? (Yes/No) [ ]

Do not alter: for BMI EtD paper

Should Bedaquiline + background information + research evidence be included in the assessment table? (Yes/No) [ ]

Do not alter: for original from BMI paper

Should Bedaquiline plus BMI version be included in the assessment table? (Yes/No) [ ]

Holger Estonia

Should Bedaquiline + background information + research evidence be included in the assessment table? (Yes/No) [ ]

### Panel members' voting form - parts of EtD in phase 1

**Only Assessment**

CRITERION	PROPOSED JUDGMENT	RESEARCH EVIDENCE
PROBLEM: Is the problem a priority?		
CRITERION {...}		RESEARCH EVIDENCE
<b>JUDGMENT ON ALL CRITERIA IS REQUIRED BEFORE SUBMITTING</b>		
Submit my judgments		

**Assessment and Type of Recommendation**

CRITERION	PROPOSED JUDGMENT	RESEARCH EVIDENCE
PROBLEM: Is the problem a priority?		
CRITERION {...}		RESEARCH EVIDENCE
<b>TYPE OF RECOMMENDATION. EMPTY JUDGMENTS</b>		
TYPE OF RECOMMENDATION		

Are you for or against intervention?

Compose message and send straight to recipient

# Online agreement

DEpro | G01

Copy of Bedaquiline for Tuberculosis - use for BMI EID

Phase 1 assessment (4) Phase 1 ongoing (3) Phase 2 assessment (0)

ADMINISTRATION

TEMPLATES

1. Do you want to send proposed judgments for voting?

2. Which parts of EID table (Assessment, Type of Recommendation, Conclusions) do you want to send?

3. Which questions do you want to send?

For BMI paper final copy

Should Bedaquiline + background HQR-TB treatment vs. ...

Do not alter: for BMI EID paper

Should Bedaquiline + background HQR-TB treatment vs. ...

Do not alter: for original from WHO guideline

Should bedaquiline plus (R) vs. (R) be used in HQR-TB as ...

Huiga Eozina

Should Bedaquiline + background HQR-TB treatment vs. ...

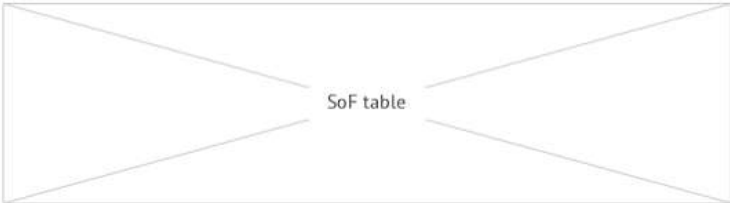
CRITERION	PROPOSED JUDGMENT	RESEARCH EVIDENCE
PROBLEM: Is the problem a priority?	No Probably no Probably yes <input checked="" type="checkbox"/> Yes Varies Don't know	
<b>LIST OF ALL CRITERIA THAT ARE PRESENT IN THE "ASSESSMENT" PART OF YOUR EID TABLE. PROPOSED JUDGMENTS</b>		
	<input type="radio"/> Agree <input type="radio"/> Disagree	Comment

CRITERION	PROPOSED JUDGMENT	RESEARCH EVIDENCE
[...]		
<b>TYPE OF RECOMMENDATION. PROPOSED JUDGMENTS</b>		
<b>TYPE OF RECOMMENDATION</b>		
Strong recommendation against intervention	<input checked="" type="checkbox"/> Conditional recommendation against intervention	Conditional recommendation for either intervention or comparison
		Conditional recommendation for intervention
		Strong recommendation for intervention
<b>PANEL MEMBERS VOTE AGREE/DISAGREE</b>		
	<input type="radio"/> Agree <input type="radio"/> Disagree	Comment
<b>PANEL MEMBERS PROVIDE COMMENT (REQUIRED IN CASE OF DISAGREEING)</b>		
<b>CONCLUSIONS. PROPOSED CONTENT</b>		
<b>CONCLUSIONS</b>		
Text of recommendation	We recommend...	
<b>PANEL MEMBERS VOTE AGREE/DISAGREE</b>		
	<input type="radio"/> Agree <input type="radio"/> Disagree	Comment
<b>PANEL MEMBERS PROVIDE COMMENT (REQUIRED IN CASE OF DISAGREEING)</b>		
Justification	The reason for that is ...	
	<input type="radio"/> Agree <input type="radio"/> Disagree	Comment
[...]		
<b>JUDGMENT ON ALL CRITERIA, TYPE OF RECOMMENDATION AND CONCLUSIONS IS REQUIRED BEFORE SUBMITTING</b>		
<input type="button" value="Submit my judgments"/>		

cases are SAR, 40% of cases are perennial rhinitis, and 40% of cases are mixed (Skoner 2001).

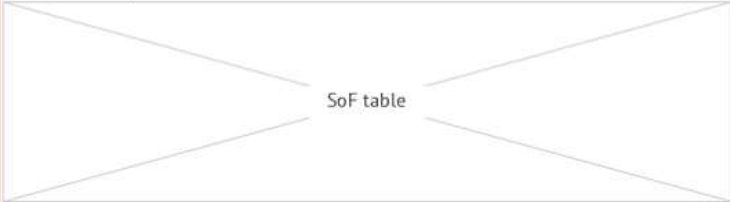
Comment

Provide a reason for your decision or other comments

CRITERION	YOUR JUDGMENT	RESEARCH EVIDENCE
<b>DESIRABLE EFFECTS: How substantial are the desirable anticipated effects?</b>	<input type="radio"/> Trivial <input type="radio"/> Small <input type="radio"/> Moderate <input type="radio"/> Large ----- <input type="radio"/> Varies <input type="radio"/> Don't know	<b>The relative importance or values of the main outcomes of interest:</b>  <p>The diagram shows a central box labeled "SoF table" with four lines extending outwards to the corners of a larger rectangle, forming a diamond shape.</p>

Comment

Provide a reason for your decision or other comments

CRITERION	YOUR JUDGMENT	RESEARCH EVIDENCE
<b>UNDESIRABLE EFFECTS: How substantial are the undesirable anticipated effects?</b>	<input type="radio"/> Trivial <input type="radio"/> Small <input type="radio"/> Moderate <input type="radio"/> Large ----- <input type="radio"/> Varies <input type="radio"/> Don't know	<b>The relative importance or values of the main outcomes of interest:</b>  <p>The diagram shows a central box labeled "SoF table" with four lines extending outwards to the corners of a larger rectangle, forming a diamond shape.</p>

Judgment is required.

Comment

Provide a reason for your decision or other comments

Save

Save and submit

Voting on "Assessment" part when judgments are empty.

List of questions > ICS compared to ICS+LABA for asthma prevention

**Question: Should ICS vs. ICS+LABA be used for asthma prevention?**

**Population:** Adults with asthma

**Intervention:** ICS

**Comparison:** ICS+LABA

**Main outcomes:** Any AE (95% CI); Any AE (99% CI); Any AE (90% CI);

**Setting:** Global

**Perspective:** Patient

**Evidence to Decision framework**

[Instructions](#)

CRITERION	PROPOSED JUDGMENT	RESEARCH EVIDENCE
PROBLEM: <b>Is the problem a priority?</b>	<input type="radio"/> No <input type="radio"/> Probably no <input type="radio"/> Probably yes <input checked="" type="radio"/> <b>Yes</b> <hr/> <input type="radio"/> Varies <input type="radio"/> Don't know	AR is a worldwide common disease in children and adolescents. Although the great majority of the cases begin during childhood, its prevalence changes throughout the life. The overall prevalence of AR is 14.6% (range 1.0 to 45%) in 13-14 years old children, and for the 6 to 7 years old children is 8.5% (range 4.2-12.7%) (Ait-Khaled 2009). Some studies have shown that the overall prevalence in adult patients with AR clinically confirmed is between 17% to 30%, with an overall value of 23% in Europe (Bauchau 2004, Cingi 2010), a range between 8 to 21% in China (Zhang 2009), and approximately 7% in Latin America (Izquierdo 2013). The distribution of SAR vs Perennial is more difficult to estimate because it varies among studies and among countries, being similar in some countries, while in others they are not. In the United States it has been estimated that 20% of cases are SAR, 40% of cases are perennial rhinitis, and 40% of cases are mixed (Skoner 2001).

Agree  Disagree

Comment\*

Provide a reason for your decision or other comments

Comment is required. Please give the reason for disagreeing.

CRITERION	PROPOSED JUDGMENT	RESEARCH EVIDENCE
DESIRABLE EFFECTS: <b>How substantial are the desirable anticipated effects?</b>	<input type="radio"/> Trivial <input type="radio"/> Small <input checked="" type="radio"/> <b>Moderate</b> <hr/> <input type="radio"/> Large <input type="radio"/> Varies <input type="radio"/> Don't know	<p><b>The relative importance or values of the main outcomes of interest:</b></p>

Agree  Disagree

Comment

Provide a reason for your decision or other comments

# Recommendations on Breast Cancer

Read me



General Information

I'm a patient/individual



I'm a policy maker



If you are aged 40 to 44, should you attend an organised mammography screening programme?

Recommendation

Justification

Considerations

Assessment

Bibliography

## Recommendation

The ECIBC guidelines suggests not providing mammography screening to women between 40 and 44 years old who are at average risk of breast cancer and do not have symptoms.

## Recommendation strength

Conditional recommendation against the intervention\*





## Recommendations on Breast Cancer Screening

Read me



I'm a patient/individual



I'm a professional



I'm a policy maker



### Should organised mammography screening vs. no mammography screening be used for early detection of breast cancer in women aged 40 to 44?

Recommendation

Justification

Considerations

Assessment

Bibliography

### Recommendation

For asymptomatic women aged 40 to 44 with an average risk of breast cancer, the ECIBC's Guidelines Development Group (GDG) suggests **not implementing** mammography screening **conditional recommendation, moderate certainty in the evidence.**

### Recommendation strength

● Conditional recommendation against the intervention\*



Should organised mammography screening vs. no mammography screening be used for early detection of breast cancer in women : Explanations ? Help

Question

Should organised mammography screening vs. no mammography screening be used for early detection of breast cancer in women aged of 50 to 69?

Assessment

	CRITERIA	JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
PROBLEM	Is the problem a priority?	<input type="radio"/> No <input type="radio"/> Probably no <input type="radio"/> Probably yes <input checked="" type="radio"/> Yes <input type="radio"/> Varies <input type="radio"/> Don't know Detailed judgements	Breast cancer is the second most common cancer in the world and, by far, the most frequent cancer among women with an estimated 1.67 million new cancer cases diagnosed in 2012 – accounting for 25% of all cancers (GLOBOCAN 2012). Breast cancer ranks as the fifth leading cause of cancer death worldwide and the second leading cause of cancer-related death in developed regions (citation). In the European Union, 367 090 women were diagnosed with breast cancer and 92 000 women died from the disease in 2012 (Ferlay 2013). Breast cancer ranks fourth among the top five cancers with the highest disease burden (Tsilidis 2016).  Annual incidence of breast cancer in the EU among women aged 50 to 69 is 2.7 per 1 000 and mortality is 0.5 per 1 000 (GLOBOCAN 2012)	
	How substantial are the desirable anticipated effects?	<input type="radio"/> Trivial <input type="radio"/> Small <input type="radio"/> Moderate <input checked="" type="radio"/> Large <input type="radio"/> Varies <input type="radio"/> Don't know Detailed judgements	<b>Desirable effects</b>  Six trials of invitation to mammography screening provided breast cancer mortality data from 249 160 women aged 50 to 69 (short case accrual). Mammography (using short case accrual), compared to no screening, reduced the risk of breast cancer mortality (Relative Risk (RR)=0.76, 95% CI 0.64-0.90; Inconsistency (I <sup>2</sup> )=52%, p=0.06) (high quality evidence). This translates into an absolute effect of 144 fewer breast cancer deaths per 100 000 women invited to screening over 18 years (range: 60 to 216 fewer deaths).  Mammography screening also reduced breast cancer mortality using 'longest case accrual available' (RR=0.78, 95% CI 0.67-0.90; I <sup>2</sup> =54%, p=0.05; resulting in 167 fewer breast cancer deaths per 100 000 women over 17.3 years, from 76 to 251 fewer) (high quality evidence) and stage III+ breast cancer or tumour size ≥ 40 mm	These studies used an 'intention-to-treat' analysis thus, a per protocol approach would lead to even larger absolute effects.  Estimates from observational studies were similar to those described here (see evidence profile).  As there was disagreement among GDG members regarding whether the effects were large or moderate, voting took place among the 18 GDG members: 15 GDG members voted that the effects were large. Two GDG members voted that the effects were moderate. One

Should organised mammography screening vs. no mammography screening be used for early detection of breast

Explanations Help

- SETTINGS
- TASKS
- TEAM
- SCOPE
- PROGNOSIS
- COMPARISONS
- EVIDENCE TABLE
- RECOMMENDATIONS
- PRESENTATIONS
- PANEL VOICE
- DOCUMENT SECTIONS
- DISSEMINATION

UNDESIRABLE EFFECTS	<p><b>How substantial are the undesirable anticipated effects?</b></p> <p><input type="radio"/> Large</p> <p><input checked="" type="radio"/> Moderate</p> <p><input type="radio"/> Small</p> <p><input type="radio"/> Trivial</p> <hr/> <p><input type="radio"/> Varies</p> <p><input type="radio"/> Don't know</p> <p>Detailed judgements</p>	<p>overdiagnosis from two randomised clinical trials (RCTs) were 10.1% (95% CI 8.6%-11.6%; I<sup>2</sup>=0%, p=0.61) (moderate quality evidence) from a population perspective (long case accrual). From the perspective of women invited to screening, the proportion of overdiagnosed women was 17.3% (95% CI 14.7-20.0; I<sup>2</sup>=10%, p=0.29) (moderate quality evidence).</p> <p>Mammography screening compared with no screening did not increase the number of women aged 43 to 74 treated with chemotherapy (RR=0.86, 95% CI 0.52-1.41; I<sup>2</sup>=71%, p=0.06) (very low quality evidence). A systematic review of observational studies (Brett 2005) reported that women who had further testing following their routine mammogram experienced significant short term anxiety.</p> <p>A systematic review by Hofvind (2012), reported estimated cumulative risk of a false-positive screening result in women aged 50 to 69 undergoing 10 biennial screening tests was 19.7%. In addition, the EUNICE Project showed that 2.2% of women had a needle biopsy after an initial screening mammogram. False-positive mammograms are also associated with greater anxiety and distress about breast cancer (Salz 2010). Furthermore, the negative psychological consequences may last up to three years (Bond 2013) (low quality evidence).</p>	
TY OF EVIDENCE	<p><b>What is the overall certainty of the evidence of effects?</b></p> <p><input type="radio"/> Very low</p> <p><input type="radio"/> Low</p> <p><input checked="" type="radio"/> Moderate</p> <p><input type="radio"/> High</p>	<p>The overall certainty (i.e. quality) of the evidence was moderate, as this was the lowest quality (corresponding to the quality of the evidence for overdiagnosis) of the two critical outcomes—namely, breast cancer mortality and overdiagnosis.</p>	<p>Effects of chemotherapy and mastectomy were not considered to change the recommendation, and thus did not critically influence the overall certainty in the evidence.</p>

GRADEpro GDT | JRC European Breast Guidelines | schuneh@mcmaster.ca

Should organised mammography screening vs. no mammography screening be used for early detection of breast

SETTINGS | TASKS | TEAM | SCOPE | PROGNOSIS | COMPARISONS | EVIDENCE TABLE | RECOMMENDATIONS | PRESENTATIONS | PANEL VOICE | DOCUMENT SECTIONS | DISSEMINATION

**VALUES**

**Is there important uncertainty about or variability in how much people value the main outcomes?**

- Important uncertainty or variability
- Possibly important uncertainty or variability
- Probably no important uncertainty or variability
- No important uncertainty or variability

Detailed judgements

A systematic review (JRC Technical Report PICO 10-11, contract FWC443094012015; available upon request) shows that women placed little value on the psychosocial and physical effects of false-positive results and overdiagnosis. However, women generally consider these undesirable effects acceptable (low confidence in evidence). These findings are of limited value mainly given the significant concerns regarding the adequacy of the information provided to the participants, in order to make an informed decision. Another finding is that breast cancer screening represents a significant burden for some women due to associated psychological distress and inconvenience (moderate confidence in evidence).

Also, acceptability of false-positive results is based on studies of patients who have already received a false-positive result and, whose preferences may differ from the general population.

Regarding breast cancer diagnosis, very limited data is available addressing patients' views. One of the main themes identified in the literature is that patients have a high disregard for anxiety caused by delays in receiving diagnostic results from or by a lack of understanding of the tests due to suboptimal communication with physicians (moderate confidence in evidence). Also, women have a higher overall preference towards more comfortable, brief diagnostic procedures (moderate confidence in evidence).

GRADE



Is there important uncertainty about or variability in how much people value the main outcomes?

- Important uncertainty or variability
- Possibly important uncertainty or variability
- Probably no important uncertainty or variability
- No important uncertainty or variability

Detailed judgements

The relative importance of the outcomes is as follows:

**Pulmonary embolism: 0.63-0.93**

**Deep vein thrombosis: 0.64-0.99**

**Deep vein thrombosis patients' own current health: 0.95 (Time trade off)**

Patients highly value the benefits of VTE risk reduction of VTE prophylaxis; patients would like to avoid adverse events but most of them are "not afraid of" the adverse events.

For patients using mechanical methods to prevent VTE, in general patients would like to continue with the same methods. However, discomfort with the mechanical methods is a major complaint with this intervention. Most patients prefer knee-length stockings rather than thigh-length stockings.

The tolerability of the stockings was described as very good with no complaints of side effects. None of the other trials reported adverse effects of wearing the stockings (Clarke et al., 2016). For patients using any mechanical methods to prevent VTE, in general, they would like to continue with the same methods. Most patients prefer knee-length stockings rather than thigh-length stockings.






# The panel evaluated the effects of screening

GRADE

GRADEpro GDT | JRC Breast Cancer Guideline | schuneh@mcmaster.ca

Should organised mammography screening vs. no mammography screening be used for early detection of breast cancer in women : Explanations ? Help

Plain language statements  Absolute effect  Relative effect  Visual overview

Outcomes	Plain language statements	Absolute Effect		Differences in outcomes	Certainty of the evidence
		Without organised mammography screening	With organised mammography screening	Favours organised mammography screening	GRADE
<b>Breast cancer mortality (short case accrual)</b> Follow-up: 18 years <input checked="" type="radio"/> Low <input type="radio"/> Moderate <input type="radio"/> High	Organise mammography screening reduces breast cancer mortality	600 per 100000	456 per 100000  	144 fewer per 100000 patients 	++++ High
▶ <b>Breast cancer mortality (longest case accrual)</b> Follow-up: 17.3 years					
▶ <b>Breast cancer stage IIA or higher</b> Follow-up: 0					
▶ <b>Breast cancer stage III+ or tumour size ≥40 mm</b> Follow-up: 0					
▶ <b>All-cause mortality</b> Follow-up: 9.6 years					
▶ <b>Other cause mortality</b> Follow-up: 9.6 years					



In asymptomatic women with average breast cancer risk between the ages of 40 to 44, the EC/BC's Guideline Development Group suggests not implementing mammography screening (conditional recommendation, moderate certainty in the evidence).

Background

Subgroup considerations

Justification

Detailed justification

Summary of findings

Plain language statements  ON

Absolute effect  ON

Relative effect  OFF

Visual overview  ON

Outcomes

Plain language statements

**Absolute Effect**

Without organised mammography screening	With organised mammography screening
---	--

**Differences in outcomes**

Favours organised mammography screening	← →	Doesn't favour organised mammography screening
--	-----	---

**Certainty of the evidence**  
GRADE

56 fewer breast cancer deaths per 100,000 women  
but  
12,400 false positives per 100,000 women with related  
consequences

NOT have breast cancer  
(over-diagnosis  
population perspective)

have it (from 9 900 to 14 900).

GRADE

GRADEproGOT | JRC European Breast Guidelines | Should organised mammography screening vs. no mammography screening be used for early detection of breast cancer in women aged of 50 to 69?

CRITERIA	SUMMARY OF JUDGEMENTS						FAVORS no mamm...	FAVORS org...	IMPORTANCE FOR DECISION
	No	Probably no	Probably yes	Yes	Varies	Don't know			
PROBLEM	No	Probably no	Probably yes	Yes	Varies	Don't know			
DESIRABLE EFFECTS	Trivial	Small	Moderate	Large	Varies	Don't know			
UNDESIRABLE EFFECTS	Large	Moderate	Small	Trivial	Varies	Don't know			
CERTAINTY OF EVIDENCE	Very low	Low	Moderate	High	No included studies				
VALUES	Important uncertainty at...	Possibly important...	Probably no important...	No important uncertainty...					
BALANCE OF EFFECTS	Favors the comparison	Probably favors the...	Does not favor either...	Probably favors the...	Favors the intervention	Varies	Don't know		
RESOURCES REQUIRED	Large costs	Moderate costs	Negligible costs and...	Moderate savings	Large savings	Varies	Don't know		
CERTAINTY OF EVIDENCE OF REQUIRED RESOURCES	Very low	Low	Moderate	High	No included studies				
COST EFFECTIVENESS	Favors the comparison	Probably favors the...	Does not favor either...	Probably favors the...	Favors the intervention	Varies	No...		
EQUITY	Reduced	Probably reduced	Probably no effect	Probably increased	Increased	Varies	Don't know		
ACCEPTABILITY	No	Probably no	Probably yes	Yes	Varies	Don't know			
FEASIBILITY	No	Probably no	Probably yes	Yes	Varies	Don't know			

**Conclusions**

Should organised mammography screening vs. no mammography screening be used for early detection of breast cancer in women aged of 50 to 69?

Type of recommendation	Strong recommendation against the intervention	Conditional recommendation against the intervention	Conditional recommendation for either the intervention or the comparison	Conditional recommendation for the intervention	Strong recommendation for the intervention
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

**Recommendation**

For asymptomatic women aged 50 to 69 with an average risk of breast cancer, the ECIBC's Guideline Development Group (GDG) recommends mammography screening over no mammography screening, in the context of an organized screening programme (strong recommendation, moderate certainty in the evidence).

# What about younger women

GRADE

For asymptomatic women aged **40 to 44** with an average risk of breast cancer, the ECIBC's Guideline Development Group (GDG) **suggests not implementing mammography screening** (conditional recommendation, moderate certainty in the evidence).

For asymptomatic women aged **45 to 49** with an average risk of breast cancer, the ECIBC's Guideline Development Group (GDG) **suggests mammography screening** over no mammography screening, in the context of an organised screening programme (conditional recommendation, moderate certainty in the evidence).

For asymptomatic women aged **50 to 69** with an average risk of breast cancer, the ECIBC's Guideline Development Group (GDG) **recommends mammography screening** over no mammography screening, in the context of an organised screening programme (strong recommendation, moderate certainty in the evidence).

For asymptomatic women aged **70 to 74** with an average risk of breast cancer, the ECIBC's Guideline Development Group (GDG) **suggests mammography screening** over no mammography screening, in the context of an organised screening programme (conditional recommendation, moderate certainty in the evidence).



GRADE

GRADEpro GDT | JRC European Breast Guidelines | Should organised mammography screening vs. no mammography screening be used for early detection of breast cancer in women aged 40 to 44?

Summary of judgements

CRITERIA	SUMMARY OF JUDGEMENTS						FAVORS mammogr...	FAVOR organised...	IMPORTANCE FOR DECISION
	No	Probably no	Probably yes	Yes	Varies	Don't know			
PROBLEM	No	Probably no	Probably yes	Yes	Varies	Don't know			
DESIRABLE EFFECTS	Small	Small	Moderate	Large	Varies	Don't know			
UNDESIRABLE EFFECTS	Large	Moderate	Small	Small	Varies	Don't know			
CERTAINTY OF EVIDENCE	Very low	Low	Moderate	High	No included studies				
VALUES	Important uncertainty	Possibly important...	Probably no important...	No important uncertainty...					
BALANCE OF EFFECTS	Favors the comparison	Probably favors the...	Does not favor either the...	Probably favors the...	Favors the intervention	Varies	Don't know		
RESOURCES REQUIRED	Large costs	Moderate costs	Negligible cost/benefit...	Moderate savings	Large savings	Varies	Don't know		
CERTAINTY OF EVIDENCE OF REQUIRED RESOURCES	Very low	Low	Moderate	High	No included studies				
COST EFFECTIVENESS	Favors the comparison	Probably favors the...	Does not favor either the...	Probably favors the...	Favors the intervention	Varies	No...		
EQUITY	Reduced	Probably reduced	Probably no impact	Probably increased	Increased	Varies	Don't know		
ACCEPTABILITY	No	Probably no	Probably yes	Yes	Varies	Don't know			
FEASIBILITY	No	Probably no	Probably yes	Yes	Varies	Don't know			

Conclusions

Should organised mammography screening vs. no mammography screening be used for early detection of breast cancer in women aged 40 to 44?

Type of recommendation	Strong recommendation against the intervention	Conditional recommendation against the intervention	Conditional recommendation for either the intervention or the comparison	Conditional recommendation for the intervention	Strong recommendation for the intervention
	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Recommendation

For asymptomatic women aged 40 to 44 with an average risk of breast cancer, the ECBC's Guidelines Development Group (GDG) suggests not implementing mammography screening (conditional recommendation, moderate certainty in the evidence).

# American Society of Hematology

## Panelvoice

- Online interaction, voting, consensus, public comment

## Health Marker States

Semi-automated development of  
interactive decision aids

GRADE



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## The American Society of Hematology and McMaster University Announce Partnership to Develop Clinical Practice Guidelines on Venous Thromboembolism

### *Guidelines on the Treatment and Diagnosis of VTE Anticipated in 2017*

(WASHINGTON, November 30, 2015) – The American Society of Hematology, the world's largest association of clinicians and scientists dedicated to conquering blood diseases, is collaborating with McMaster University, a world leader in guideline development and an international authority on thrombosis, to develop clinical practice guidelines on the diagnosis and treatment of venous thromboembolism (VTE).

VTE is a blood clotting disorder that includes both deep-vein thrombosis (DVT) and pulmonary embolism (PE). DVT is a blood clot



### Protect Medical Research

Urge your members of Congress to support continued medical research funding.

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10 topics | >200 recommendations | 150 panelists



GRADE

In-person and teleconference meetings

Learning how to make recommendations: in-person meeting

Follow-up work: online interaction and teleconferences

# Helps with deciding about degree of discussion needed

GRADEpro GDT

ASH Guideline on Prevention of VTE in Medical Hospitalized Patients (Working Copy)

schuneh@mcmaster.ca

Should thromboprophylaxis vs. no thromboprophylaxis be used in chronically ill medical inpatients (incl. Bottom panel Explanations Help)

### Assessment

Draft judgement Voting results Consensus

CRITERIA	JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
Is the problem a priority?	<p><input type="radio"/> No</p> <p><input type="radio"/> Probably no</p> <p><input type="radio"/> Probably yes</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> Varies</p> <p><input type="radio"/> Don't know</p> <p>Detailed judgements</p>	<p>In the nursing home setting, 3 studies evaluated the incidence of VTE diagnosed during facility residence. Liebson et al found a crude incidence rate of 1.2 (95% CI 0.9-1.5) to 1.5 (95% CI: 1.1-1.9) cases per 100 PY. Gomes et al, compiling Minimum Data Set (MDS) and Medicare records for residents in Kansas for the period 1997 to 1998, found a crude VTE incidence rate of 1.30 events per 100 PY (95% CI: 1.10-1.51) when excluding warfarin users. Gatt et al evaluated VTE incidence for residents with a length of stay (LOS) of 3 months or longer in a nursing home in Jerusalem, Israel, during the period 1991 to 2001. The crude incidence rate of VTE was similar in both chronically immobilized and mobile cohorts: 1.39 and 1.58 per 100 PY, respectively.</p>	<p>Voted: 7 (of 14)</p> <p>Agree 100%</p> <p>Disagree 0%</p>
VOTING RESULTS			
Draft judgement: Yes		Team members' votes and comments	
Voted: 7 (of 14)		AGREE	
Agree 100%		Frederick Spencer, Jill Lansing, Suely Rezende, Neil Zakai, Susan Kahn, Mary Cushman, Allison Burnett	
Disagree 0%		Summary	
		All agreed.	

PROBLEM

# Helps with deciding about degree of discussion needed

GRADEpro GDT ASH Guideline on Prevention of VTE in Medical Hospitalized Patients (Working Copy) schuneh@mcmaster.ca

Should thromboprophylaxis vs. no thromboprophylaxis be used in chronically ill medical inpatients (incl Bottom panel Explanations Help)

important harm or benefit is still likely or cannot be excluded

- c. Serious imprecision without events in both arms
- d. Reardon 2013 reported an incidence of 3.7% per 100 person years of any VTE (n=2144) in nursing home residents population
- e. We applied the assumption that approximately 10% of symptomatic VTE are symptomatic PE and 100% of each is of moderate severity
- f. Serious indirectness. One study reported the effect of the intervention as a composite outcome: any DVT
- g. Very serious imprecision. Wide confidence interval with only 2 events in total
- h. We applied the assumption that approximately 20% of symptomatic DVTs are proximal, 80% are distal and 100% of each is of moderate severity.
- i. Very serious imprecision. Wide confidence interval with only 10 events in total and important harm or benefit is still likely or cannot be excluded.
- j. Serious indirectness. Hemorrhagic complications were reported as mild bleeding or hematoma.

VOTING RESULTS

Voted: 7 (of 14)

Trivial	29%
Small	29%
Moderate	29%
Large	0%
Varies	0%
Don't know	14%

Team members' votes and comments  
*All hidden*

Summary

Trivial 29% Small 29% Moderate 29% Large 0% Don't know 14%

Comments;  
Moderate based on relative effect and absolute risk difference primarily driven by mortality outcome, (but hesitant re low quality of evidence and imprecision) This study is not robust enough to address the issue.  
Comment from moderator: we are not addressing certainty in the evidence here. This will come under that criterion and when balancing benefits and harms.  
**Would suggest: small effect as mean effect.**

DESIRABLE EFFECTS

## Comments

DESIRABLE EFFECTS: **How substantial are the desirable anticipated effects?**

DRAFT JUDGEMENT: **Small**

Team members' votes and comments

### TRIVIAL

Frederick **Spencer**, Suely **Rezende**

Show

### SMALL

Mary **Cushman**, Allison **Burnett**

Show

### MODERATE

Susan **Kahn**

Moderate based on relative effect and absolute risk difference primarily driven by mortality outcome, (but hesitant re low quality of evidence and imprecision)

Show

Jill **Lansing**

Show

### DON'T KNOW

Neil **Zakai**

This study is not robust enough to address the issue.

Show

### Summary

Trivial 29% Small 29% Moderate 29% Large 0% Don't know 14%

Comments;

Moderate based on relative effect and absolute risk difference primarily driven by mortality outcome, (but hesitant re low quality of evidence and imprecision) This study is not robust enough to address the issue.

Comment from moderator: we are not addressing certainty in the evidence here. This will come under that criterion and when balancing benefits and harms.

What is the small effect size?

schuneh@mcmaster.ca

11:50

but hesitant re low quality of  
that criterion and when

# Most recommendations

Will be conditional

Require support with implementation





# **GRADE Conditional/weak recommendations**

**Patients/people:** The majority of people in this situation would want the recommended course of action, but many would not

**Clinicians:** Be more prepared to help patients to make a decision that is consistent with their own values/**decision aids and shared decision making are useful**

**Policy makers/QA:** There is a need for substantial debate and involvement of stakeholders. Performance measures **should assess if decision-making appropriate**

**COMMENTARY**

**Clinical practice guidelines and patient decision aids.  
An inevitable relationship**

Trudy van der Weijden<sup>a,b,\*</sup>, Antoine Boivin<sup>b,c</sup>, Jako Burgers<sup>b</sup>,  
Holger J. Schünemann<sup>d,e</sup>, Glyn Elwyn<sup>b,f</sup>

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<sup>b</sup>*Department IQ Healthcare, Scientific Institute for Quality of Healthcare, Radboud University Nijmegen Medical Centre, Nijmegen, The Netherlands*

<sup>c</sup>*Agence de la santé et des services sociaux de l'Abitibi-Témiscamingue, Rouyn-Noranda, Quebec, Canada*

<sup>d</sup>*Department of Clinical Epidemiology and Biostatistics, McMaster University, Hamilton, Ontario, Canada*

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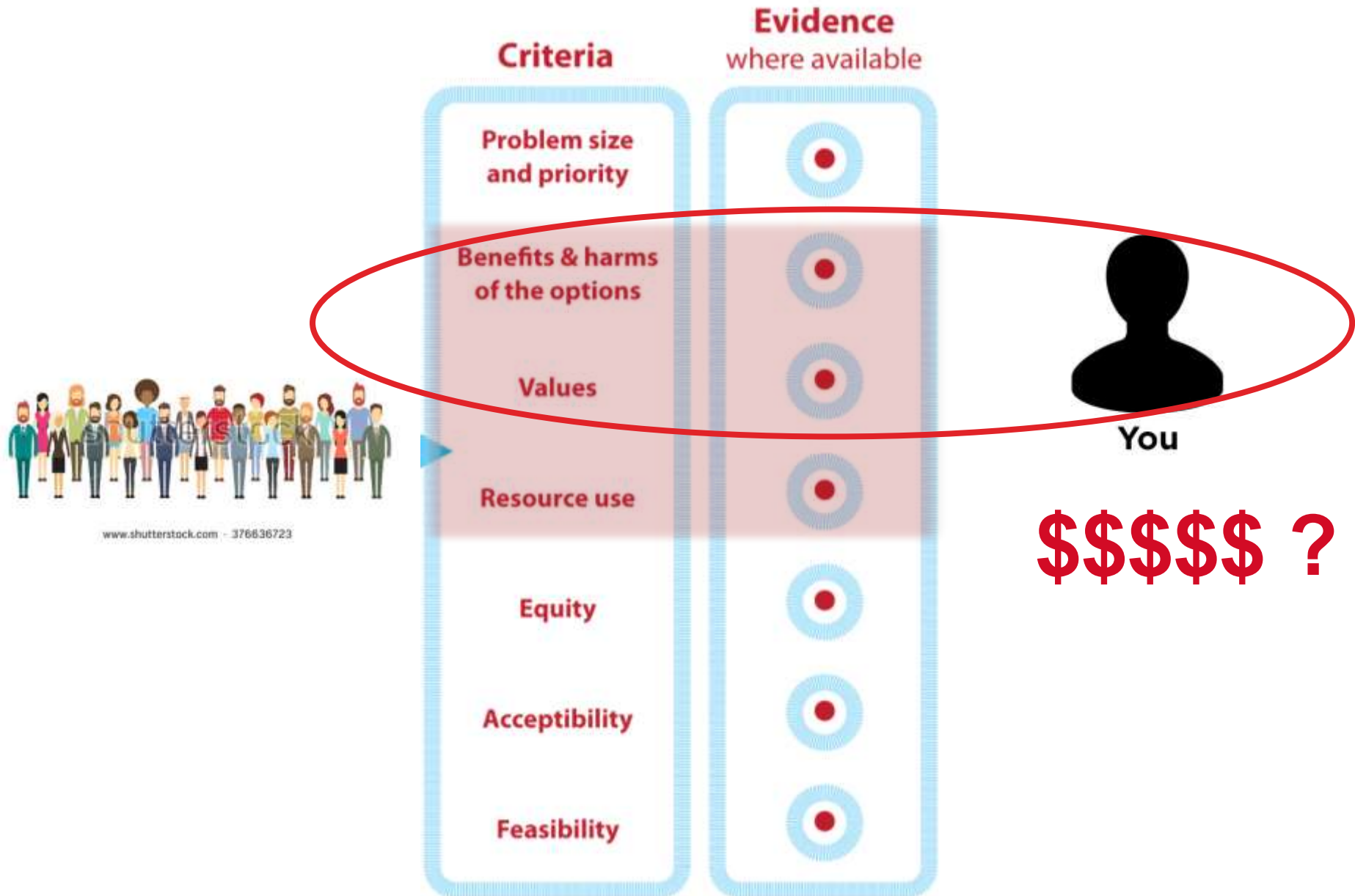
<sup>f</sup>*Clinical Epidemiology Interdisciplinary Research Group, Department of Primary Care and Public Health, School of Medicine, Cardiff University, Heath Park, Cardiff, UK*

Accepted 2 October 2011; Published online 31 January 2012

# Should patients with unprovoked (no reason found) deep venous thrombosis receive up to 12 months or lifelong anticoagulation?

The ASH guideline panel suggests using indefinite duration of antithrombotic therapy over defined duration antithrombotic therapy (12 months or less) in patients with unprovoked DVT/PE (conditional recommendation based on moderate certainty in the evidence about effects).

# GRADE decision criteria



# Values

Treatment

5% fewer  
**death** from PE

1% fewer  
**death** from PE

Comparison

5% more  
**small**  
**bleeds**

99% more  
**small**  
**bleeds**

GRADE

# Clinical Practice Guideline

Decision points:



**Low uncertainty /  
Strong recommendation**  
(e.g. aspirin use in myocardial infarction)

**High uncertainty /  
Conditional recommendation**  
(e.g. lumpectomy Vs mastectomy in breast ca)

Supporting optimal behaviors

Supporting deliberation

## INFORMATION COMPONENTS

Define clear recommendation  
Communicate benefits and risks to explain the rationale

## INFORMATION COMPONENTS

Make options explicit  
Communicate benefits and risks of options to explain the dilemma

## BEHAVIOR CHANGE COMPONENTS

Implementation strategies  
Performance measures based on professional/patient behavior  
(prescribing aspirins/ taking aspirins)

## DECISION MAKING COMPONENTS

Deliberation methods  
Preference constructing methods  
Performance measures based on quality of decision process (e.g. use of breast cancer decision aid)

Population level



Individual level

# supporting patients' decisions

1. Inform and let patient walk off makes decision by themselves
2. Inform patient but asks for decision to be made by others
3. Inform and share decision

GRADE

# GRADE-based interactive Decision Aids

GRADE





# University at Buffalo, State University of New York SCHOOL OF MEDICINE AND BIOMEDICAL SCIENCES

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Patients](#)[Your  
Values](#)[Your  
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- | [How this Decision Aid can help you](#)
- | [Your Participation](#)
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## INTRODUCTION

Inhaled steroids present a treatment option for Chronic Obstructive Pulmonary Disease (COPD). Inhaled steroids have some of benefits, but they come with certain downsides. That's why deciding whether to use inhaled steroids or not will depend on each individual's values.

If a clinician has told you that inhaled steroids are a possible treatment option for you this Decision Aid can help you decide whether to use inhaled steroids or not.

We believe that your participation in making this treatment decision about your health is very important. However, the degree to which you



Should Indefinite duration of Antithrombotic Therapy vs. defined duration(12months or less) Antithrombotic Therapy be used in patients with unprovoked DVT/PE?



## What you should remember?



### Problem

Deep Venous Thrombosis (DVT) and Pulmonary Embolism (PE) are major contributors to global disease burden. Their estimate incidence range from 0.7 to 2.7 per 1000 patients-year in Western Europe, 1.1 to 2.4 per 1000 patients-year in

### Myths and Facts

Deep Vein Thrombosis (DVT) is a blood clot that forms in a major vein of the leg or, less commonly, in the arms,

Key facts

Comparison

Your values

Summary

### Should Indefinite duration of Antithrombotic Therapy vs. defined duration(12months or less) Antithrombotic Therapy be used in patients with unprovoked DVT/PE?



#### COMPARISON

Outcomes	Events per 1000 people		Quality of Evidence
	Defined duration (12months or less) Antithrombotic Therapy	vs. Indefinite duration of Antithrombotic Therapy	
<b>Mortality</b> follow up: mean 36 months	18	<b>4 fewer</b> (8 fewer to 2 more)	⊕⊕⊕⊖ MODERATE
<b>Moderate PE</b> follow up: mean 24 months	28	<b>20 fewer</b> (24 fewer to 14 fewer)	⊕⊕⊕⊕ HIGH
<b>All DVT</b> follow up: mean 24 months	58	<b>46 fewer</b> (51 fewer to 39 fewer)	⊕⊕⊕⊕ HIGH
<b>Major bleeding</b> follow up: mean 36 months	7	<b>9 more</b> (3 more to 16 more)	⊕⊕⊕⊕ HIGH



#### EXPERTS RECOMENDATION

Summary of findings table

DEFINED DURATION (12MONTHS OR LESS) ANTITHROMBOTIC THERAPY vs. INDEFINITE DURATION OF ANTITHROMBOTIC THERAPY

**WEAK RECOMENDATION**

The ASH guideline panel suggests using indefinite duration of antithrombotic therapy over defined duration antithrombotic therapy (12months or less) in patients patients with unprovoked DVT/PE (conditional recommendation based on moderate certainty in the evidence about effects).

#### Remarks:

The majority of the panel felt that most patients with an unprovoked VTE would benefit from indefinite anticoagulant therapy. However, this needs to include a careful assessment of risks and benefits for the individula patient and the patient's preferences, as well as a regular re-evaluation of these parameters.

Guideline Development Tool Holger

gdt.guidelinedevelopment.org/app/projects/p\_tjcranford\_ccc0003a-5e05-4a6f-891e-c1c3bb0bbaed/evidence-syntheses/B4FEBCC9-DEB2-C7FE-9420-79D262F2AB... schuneh@mcmaster.ca

GRADEpro GDT ASH Guideline on Treatment of VTE Bottom panel Explanations Help

Should an indefinite duration of antithrombotic therapy vs. a defined duration (12 months or less) be used in patients with unprovoked DVT/PE? Bottom panel Explanations Help

An indefinite duration of antithrombotic therapy compared to a defined duration (12 months or less) in patients with unprovoked DVT/PE

Certainty assessment							Summary of findings					
No. of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	No. of patients		Effect		Certainty	Importance
							An indefinite duration of antithrombotic therapy	A defined duration (12 months or less)	Relative (95% CI)	Absolute (95% CI)		
<b>Mortality (follow up: mean 28 months) <sup>a</sup></b>												
50 1,2,3,4,5,6,7,8,9,10	randomised trials	not serious	not serious	not serious	serious <sup>b</sup>	none	44/5877 (1.1%)	1.8%	RR 0.75 (0.49 to 1.15)	5 fewer per 1,000 (from 2 more to 9 fewer)	⊕⊕⊕ MODERATE	
<b>Moderate PE (follow up: mean 24 months) <sup>c</sup></b>												
9 1,2,3,4,5,6,7,8,9	randomised trials	not serious	not serious	not serious	not serious	none	33/4138 (0.8%)	97/5302 (2.9%) 3.3% <sup>d</sup>	RR 0.29 (0.15 to 0.56)	21 fewer per 1,000 (from 13 fewer to 25 fewer) 24 fewer per 1,000 (from 15 fewer to 28 fewer)	⊕⊕⊕ HIGH	
<b>All DVT (follow up: mean 24 months) <sup>e</sup></b>												
10 1,3,4,5,6,7,9,10,11,14	randomised trials	not serious	not serious	not serious	not serious <sup>b</sup>	none	50/4165 (1.2%)	210/5527 (6.3%) 4.1% <sup>d</sup>	RR 0.20 (0.12 to 0.34)	50 fewer per 1,000 (from 42 fewer to 56 fewer) 55 fewer per 1,000 (from 27 fewer to 36 fewer)	⊕⊕⊕ HIGH	
<b>All DVT - DOAC (follow up: mean 24 months)</b>												
4 1,3,10,14	randomised trials	not serious	not serious	not serious	not serious	none	31/3548 (0.9%)	154/2696 (5.7%) 4.1% <sup>d</sup>	RR 0.15 (0.10 to 0.23)	49 fewer per 1,000 (from 44 fewer to 51 fewer) 35 fewer per 1,000 (from 31 fewer to 37 fewer)	⊕⊕⊕ HIGH	
<b>All DVT - VKA/LMWH (follow up: mean 24 months)</b>												
3 1,4,5,6,13	randomised trials	not serious	not serious	not serious	not serious	none	3/412 (0.7%)	28/454 (6.5%) 4.1% <sup>d</sup>	RR 0.17 (0.05 to 0.53)	54 fewer per 1,000 (from 30 fewer to 61 fewer) 34 fewer per 1,000 (from 19 fewer to 39 fewer)	⊕⊕⊕ HIGH	
<b>All DVT - Aspirin (follow up: mean 24 months)</b>												
1 7	randomised trials	not serious	not serious	not serious	serious <sup>f</sup>	none	16/205 (7.8%)	28/197 (14.2%)	RR 0.55 (0.31 to 0.98)	64 fewer per 1,000 (from 3 fewer to 98)	⊕⊕⊕ MODERATE	

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Should an indefinite duration of antithrombotic therapy vs. a defined duration (12 months or less) be used in patients with unprovoked DVT/PE? Bottom panel Explanations Help

Plain language statements Absolute effect **Absolute effect** Relative effect Visual overview

Outcomes	Absolute Effect		Certainty of the evidence
	Without an indefinite duration of antithrombotic therapy	With an indefinite duration of antithrombotic therapy	GRADE
<b>Mortality</b> Follow-up: 28 months	18 per 1000	14 per 1000	⊕⊕⊕⊕ Moderate
	Difference: 4 fewer per 1000 patients <small>(95% CI: 9 fewer to 2 more per 1000 patients)            Based on data from 6951 patients in 10 studies</small>		
<b>Moderate PE</b> Follow-up: 24 months <input checked="" type="checkbox"/> Study population <input type="checkbox"/> Unprovoked Event - 1 year	29 per 1000	8 per 1000	⊕⊕⊕⊕ High
	Difference: 21 fewer per 1000 patients <small>(95% CI: 13 to 29 fewer per 1000 patients)            Based on data from 7460 patients in 9 studies</small>		
<b>All DVT</b> Follow-up: 24 months			
<b>All DVT - DOAC</b> Follow-up: 24 months			
<b>All DVT - VKA/LMWH</b> Follow-up: 24 months			
<b>All DVT - Aspirin</b> Follow-up: 24 months			
<b>Major bleeding</b> Follow-up: 28 months			

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Should an indefinite duration of antithrombotic therapy vs. a defined duration (12 months or less) be used in patients with unprovoked DVT/PE? Bottom panel Explanations Help

Plain language statements Absolute effect Relative effect Visual overview

Outcomes	Absolute Effect	Differences in outcomes	Certainty of the evidence GRADE
<b>Mortality</b> Follow-up: 28 months	<b>Absolute Effect</b> Without an indefinite duration of antithrombotic therapy: 18 per 1000 With an indefinite duration of antithrombotic therapy: 14 per 1000 Difference: 4 fewer per 1000 patients <small>(95% CI: 9 fewer to 2 more per 1000 patients)            Based on data from 6933 patients in 10 studies</small>	Favours an indefinite duration of antithrombotic therapy Doesn't favour an indefinite duration of antithrombotic therapy 4 fewer per 1000 patients	Moderate
<b>Moderate PE</b> Follow-up: 24 months <input checked="" type="checkbox"/> Study population <input type="checkbox"/> Unprovoked Event - 1 year	<b>Absolute Effect</b> Without an indefinite duration of antithrombotic therapy: 29 per 1000 With an indefinite duration of antithrombotic therapy: 8 per 1000 Difference: 21 fewer per 1000 patients <small>(95% CI: 13 to 29 fewer per 1000 patients)            Based on data from 7460 patients in 9 studies</small>	Favours an indefinite duration of antithrombotic therapy Doesn't favour an indefinite duration of antithrombotic therapy 21 fewer per 1000 patients	High
<b>All DVT</b> Follow-up: 24 months			
<b>All DVT - DOAC</b> Follow-up: 24 months			
<b>All DVT - VKA/LMWH</b> Follow-up: 24 months			
<b>All DVT - Aspirin</b> Follow-up: 24 months			
<b>Major bleeding</b> Follow-up: 28 months			

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gdt.guidelinedevelopment.org/app/#projects/p\_tjcranford\_ccc0003a-5e05-4a6f-891e-c1c3bb0bbaed/evidence-syntheses/B4FEBCC9-DEB2-C7FE-9420-79D262F2AB...

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Should an indefinite duration of antithrombotic therapy vs. a defined duration (12 months or less) be used in patients with unprovoked DVT/PE? Bottom panel Explanations Help

Plain language statements Absolute effect Relative effect Visual overview

Outcomes	Absolute Effect	Differences in outcomes	Relative effect	Certainty of the evidence
	Without an indefinite duration of antithrombotic therapy   With an indefinite duration of antithrombotic therapy	Favours an indefinite duration of antithrombotic therapy   Doesn't favour an indefinite duration of antithrombotic therapy	(95% CI) N° of participants & studies	GRADE
<b>Mortality</b> Follow-up: 28 months	18 per 1000 14 per 1000 Difference: 4 fewer per 1000 patients <small>(95% CI: 9 fewer to 2 more per 1000 patients) Based on data from 8953 patients in 12 studies</small>	4 fewer per 1000 patients	<b>RR 0.75</b> <small>(0.49 to 1.15)</small>	⊕⊕⊕⊕ Moderate
<b>Moderate PE</b> Follow-up: 24 months <input checked="" type="radio"/> Study population <input type="radio"/> Unprovoked Event - 1 year	29 per 1000 8 per 1000 Difference: 21 fewer per 1000 patients <small>(95% CI: 13 to 25 fewer per 1000 patients) Based on data from 7440 patients in 9 studies</small>	21 fewer per 1000 patients	<b>RR 0.29</b> <small>(0.13 to 0.56)</small>	⊕⊕⊕⊕ High
<input checked="" type="checkbox"/> All DVT Follow-up: 24 months <input checked="" type="checkbox"/> All DVT - DOAC Follow-up: 24 months <input checked="" type="checkbox"/> All DVT - VKA/LMWH Follow-up: 24 months <input checked="" type="checkbox"/> All DVT - Aspirin Follow-up: 24 months				
<b>Major bleeding</b> Follow-up: 28 months <input checked="" type="radio"/> Study population <input type="radio"/> Low <input type="radio"/> High	5 per 1000 11 per 1000 Difference: 6 more per 1000 patients <small>(95% CI: 4 to 17 more per 1000 patients) Based on data from 1692 patients in 12 studies</small>	6 more per 1000 patients	<b>RR 2.24</b> <small>(1.49 to 3.33)</small>	⊕⊕⊕⊕ High



COMPARISON



EXPERTS RECOMENDATION

Summary of findings table

DEFINED DURATION  
(12 MONTHS OR LESS)  
ANTITHROMBOTIC THERAPY

INDEFINITE DURATION  
OF ANTITHROMBOTIC  
THERAPY

WEAK RECOMMENDATION

The ASH guideline panel suggests using indefinite duration of antithrombotic therapy over defined duration antithrombotic therapy (12 months or less) in patients with unprovoked DVT/PE (conditional recommendation based on moderate certainty in the evidence about effects).

**Remarks:**  
 The majority of the panel felt that most patients with an unprovoked VTE would benefit from indefinite anticoagulant therapy. However, this needs to include a careful assessment of risks and benefits for the individual patient and the patient's preferences, as well as a regular re-evaluation of these parameters.



**How important are the  
outcomes?**



## Your Values

Indicate the importance of each benefit and downside on a scale from 0 to 100, where 0 indicates the worst imaginable health state (we define it as "dead") and 100 indicates the best imaginable health state.

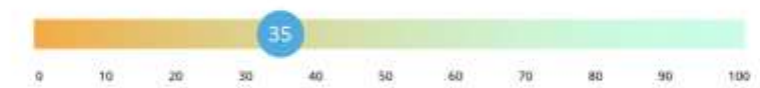
For me **Mortality** is equivalent to:



For me having a **Moderate PE** is equivalent to:



For me having a **All DVT** is equivalent to:



For me having a **Major bleeding** is equivalent to:





## Your Values

Indicate the importance of each benefit and downside on a scale from 0 to 100, where 0 indicates the worst imaginable health state (we define it as "dead") and 100 indicates the best imaginable health state.

For me **Mortality** is equivalent to:



For me having a **Moderate PE** is equivalent to:

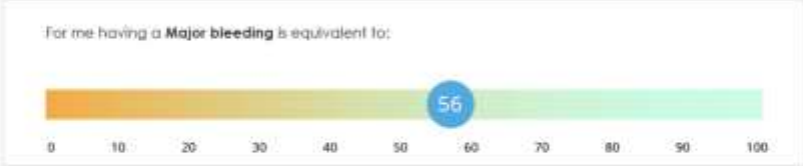
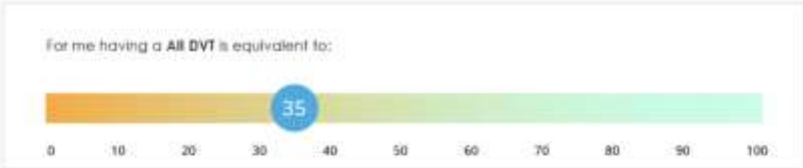
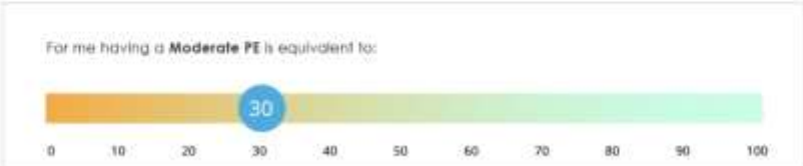
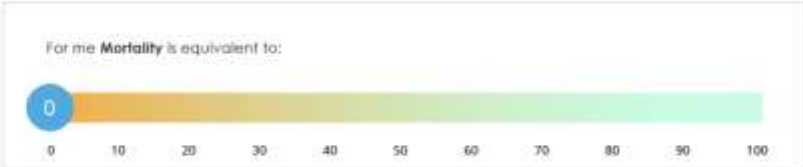


For me having a **All DVT** is equivalent to:



For me having a **Major bleeding** is equivalent to:





Calculate your individual risk Start

GRADE

**What is your baseline risk?**



Back

Exit fullscreen

## My Risk

Men Women

Age  $\geq$  65

No  Yes

Hyperpigmentation

No  Yes

Edema

No  Yes

Redness

No  Yes

D-dimer  $\geq$ 250  $\mu$ g/L during AC

No  Yes

Obesity (BMI  $\geq$ 30 kg/m<sup>2</sup>)

No  Yes

Calculate

Back

## My Risk

Men

Women

Age  $\geq 65$

No  Yes

Hyperpigmentation

No  Yes

Edema

No  Yes

Redness

No  Yes

D-dimer  $\geq 250$   $\mu\text{g/L}$  during AC

No  Yes

Obesity (BMI  $\geq 30$   $\text{kg/m}^2$ )

No  Yes

1

Calculate

Back

## My Risk

Men

Women

Age  $\geq$  65

No  Yes

1

Hyperpigmentation

No  Yes

Edema

No  Yes

Redness

No  Yes

D-dimer  $\geq$ 250  $\mu$ g/L during AC

No  Yes

1

Obesity (BMI  $\geq$ 30 kg/m<sup>2</sup>)

No  Yes

1

Calculate



## My Risk

Men Women

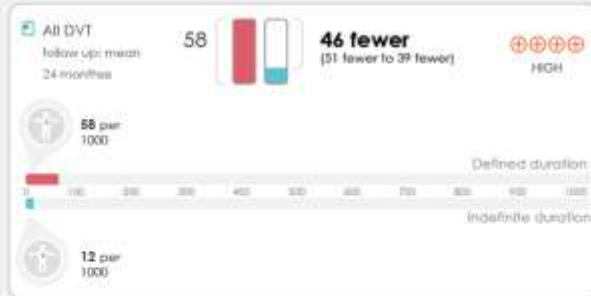
Age > 65

No Yes

Your general DVT risk is **14.2%**

It means that with **indefinite duration of Antithrombotic Therapy 114 fewer (per 1000)** patients like you experience DVT

### General population results



### Your individual risk



Calculate

Key facts

Comparison

Your values

Summary

Should Indefinite duration of Antithrombotic Therapy vs. defined duration (12 months or less) Antithrombotic Therapy be used in patients with unprovoked DVT/PE?

My reasons to have Defined duration (12 months or less) Antithrombotic Therapy

Outcomes	Importance rating
My risk of having <b>Major bleeding</b> reduced by 20 per 1000 cases	54

My reasons to have Indefinite duration of Antithrombotic Therapy

Outcomes	Importance rating
My risk of <b>death</b> will be reduced by 4 in 1000 cases	0
My risk of having <b>PE</b> is reduced by 20 per 1000 cases	30
My risk of having <b>DVT</b> reduced by 114 per 1000 cases	35

Less important outcomes

Have the Decision Aid balance the benefits and downsides for you and get

# Link to outcomes for panel and patients

The screenshot shows a web browser displaying a clinical decision support tool. The URL is <https://preview.uxpin.com/5bbe92a12e2ca776f0b3f33f42820b1c08a1b147#/pages/72115748/simulate/no-panels>. The tool displays a comparison of outcomes for Major Bleeding, with a modal window providing detailed information.

**Major Bleeding**  
(Bleeding with Substantial Blood Loss)

**Importance** | **Utility**

**Symptoms**  
You lose a lot of blood (e.g. vomit blood, blood with your stools, blood from a wound) or you have an internal bleeding.

**Time Horizon**  
Bleeding does not stop and you have to receive specific urgent care.

**Testing and Treatment**  
You may require a CT scan, a flexible tube via your mouth or anus to investigate your bowel, and blood work, and you may be admitted to hospital to receive blood transfusion or surgery.

**Consequences**  
You may recover completely, but you may instead have permanent neurological damage if your brain does not receive blood for an extended period of time (e.g. be unable to speak or understand, or wheel-chair bound), or even die.

The background interface shows a comparison of outcomes for Major Bleeding, with a table of outcomes and a bar chart showing the difference between two groups. The table includes outcomes such as Mortality, Moderate PE, Major bleeding, and Major bleeding, with values and differences between groups.

Outcome	Value	Difference
Mortality	28	24 fewer (28 fewer to 14 fewer)
Moderate PE	58	46 fewer (51 fewer to 29 fewer)
Major bleeding	7	9 more (3 more to 16 more)

Should Indefinite duration of Antithrombotic Therapy vs. defined duration(12months or less) Antithrombotic Therapy be used in patients with unprovoked DVT/PE?

My reasons to have Defined duration (12months or less) Antithrombotic Therapy	My reasons to have Indefinite duration of Antithrombotic Therapy												
<table border="1"><thead><tr><th>Outcomes</th><th>Importance rating</th></tr></thead><tbody><tr><td>My risk of having <b>Major bleeding</b> reduced by 20 per 1000 cases</td><td>54</td></tr></tbody></table>	Outcomes	Importance rating	My risk of having <b>Major bleeding</b> reduced by 20 per 1000 cases	54	<table border="1"><thead><tr><th>Outcomes</th><th>Importance rating</th></tr></thead><tbody><tr><td>My risk of <b>death</b> will be reduced by 4 in 1000 cases</td><td>0</td></tr><tr><td>My risk of having <b>PE</b> is reduced by 20 per 1000 cases</td><td>30</td></tr><tr><td>My risk of having <b>DVT</b> reduced by 114 per 1000 cases</td><td>35</td></tr></tbody></table>	Outcomes	Importance rating	My risk of <b>death</b> will be reduced by 4 in 1000 cases	0	My risk of having <b>PE</b> is reduced by 20 per 1000 cases	30	My risk of having <b>DVT</b> reduced by 114 per 1000 cases	35
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<p>Less important outcomes</p>													
<p>Have the Decision Aid balance the benefits and downsides for you and get a recommendation. You can use this recommendation to make a decision.</p>													
<p><a href="#">See recommendation</a></p>													

# Summary

**GRADEpro** | **GDT**

1. GRADEpro – official tool of GRADE working group – linkage to GIN-Guideline checklist
2. Grading evidence and recommendations
3. Remote, web/browser-based interaction
4. Panel input, voting and consensus
5. Highly flexible and not prescriptive
6. Interactive Summary of Findings Tables (iSoF)
7. Interactive Decision Aids (iDA)
8. Adaptation, etc.

