



TARTU ÜLIKOOL

Sissejuhatus GRADE metoodikasse



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Eriline tänu: Holger Schünemann ja GRADE working group

www.gradeworkinggroup.org

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Erinevad tõendusmaterjali hindamise süsteemid

hindama – ingl *grade*

			
I RCTs	I RCTs, well designed, n↑ for suff. stat. power	I Syst. review of RCTs	A. Prospect. controlled trials
II-1 Controlled trials (no randomization)	II 1 large well-designed clinical trial (+/- rand.), cohort or case-control studies or well designed meta-analysis	II 1+ properly desig. RCT, n↑, clinical setting	B. Observational studies
II-2 Cohort or case-control analytical studies		III Publ., well-desig. trials, pre-post, cohort, time series, case-control studies	
II-3 Multiple time series, dramatic uncontr. experiments	III Clinical experience, descr. studies, expert comm.	IV Non-exp. studies >1 center/group, opinion respected authorities, clinical evidence, descr. studies, expert consensus comm.	C. Expert opinion
III Opinion of respected authorities, descrip. epidemiology	IV Not rated		

Erinevad tõendusmaterjali hindamise süsteemid

- tõenduse kvaliteet *versus* kliinilise soovitusel tugevus?
- kindel raamistik?
- (hindamis)kriteeriumid selged ja läbipaistvad?

			
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GRADE metoodika

1. (ravi)juhendi koostamise protsess on põhjalik ja intensiivne
2. paigas on kindel kontseptuaalne* raamistik
3. (hindamis)kriteeriumid on põhjalikud** ja läbipaistvad
4. tõendust hinnatakse iga kliinilise küsimuse iga olulise tulemi kohta ning kokkuvõtvalt
5. kasutajaskond (organisatsioonid, asutused) järjest laieneb

* mõisteline, ingl *conceptual*

** kõikehõlmavad, ingl *comprehensive*

GRADE: tulemite valimine

Patsiendi seisukohast olulised tulemid!

Ühe kliinilise küsimuse kohta max 7 tulemit

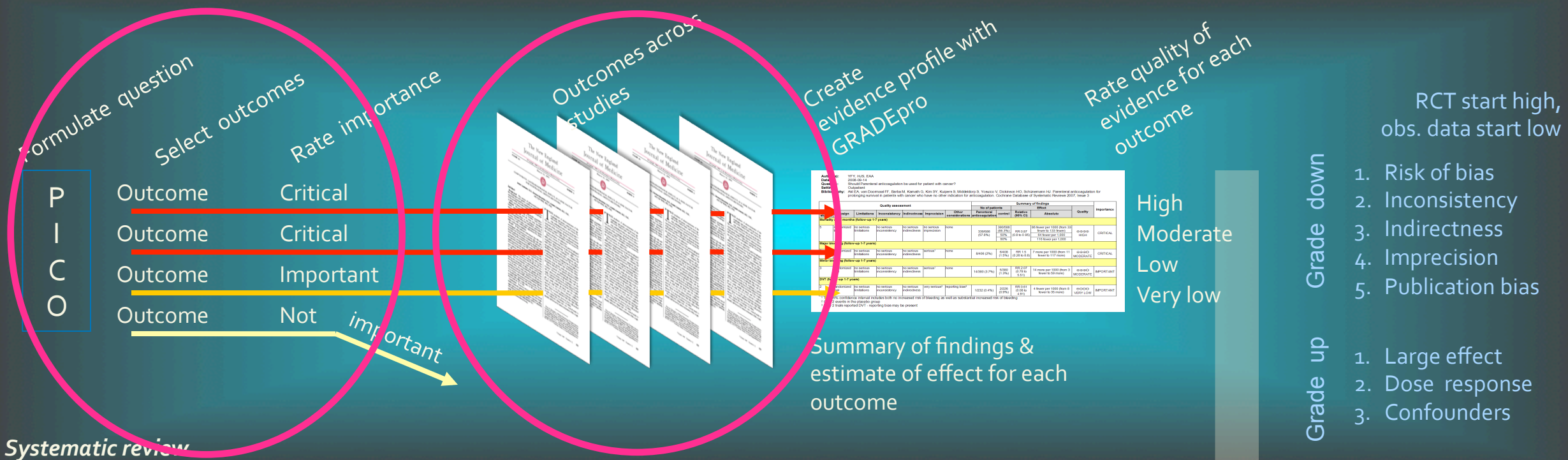
Iga tulemusi suhteline olulisus (kliinilise otsuse langetamisel) 9-pallisel skaalal:

1–3 ebaoluline

4–6 oluline

7–9 kriitilise tähtsusega / väga oluline

Tulemid, mille alusel saab vastata kliinilisele küsimusele



RCT start high, obs. data start 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. Confounders

Systematic review

Guideline development

Formulate recommendations:

- For or against (direction)
- Strong or weak (strength)

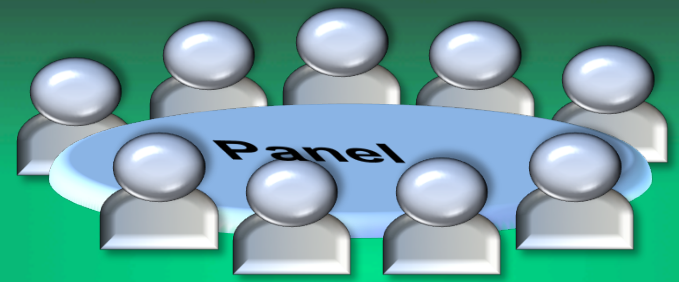
By considering:

- Quality of evidence
- Balance benefits/harms
- Values and preferences



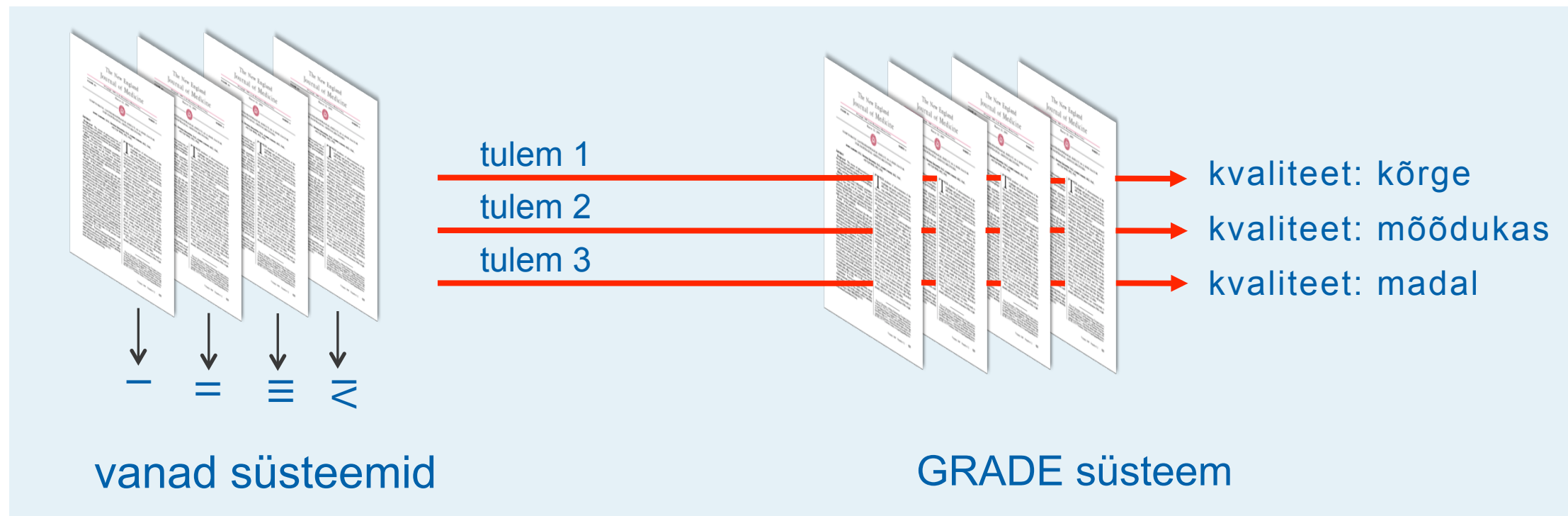
Revise if necessary by considering:

- Resource use (cost)



- "We recommend using..."
- "We suggest using..."
- "We recommend against using..."
- "We suggest against using..."

GRADE: tõendust vaadataks tulemite kaupa



Tõendus – et vastata kliinilisele küsimusele

GRADE: etapid

1. Tõenduse kvaliteedi taseme hindamine (4 taset)

- kõrge
- mõõdukas
- madal
- väga madal

2. Kliiniliste soovituste liigi hindamine (2 liiki)

- tugev
- nõrk

hindama – ingl *to grade*

1.1. GRADE: tõenduse kvaliteedi mõiste

Mida kvaliteetsem on tõendus, seda kindlamad me saame olla, et hinnang sekkumise mõjule on tõene

The quality of evidence reflect the extent of our confidence that the estimates of the effect are correct

1.2. GRADE: tõenduse kvaliteedi tasemed

Tõenduse kvaliteet	Määratlus
⊕⊕⊕⊕ kõrge	Oleme väga kindlad, et sekkumise tegelik mõju on väga lähedane uuringutes antud hinnangule
⊕⊕⊕○ mõõdukas	Oleme mõõdukalt kindlad, et sekkumise tegelik mõju on lähedane uuringutes antud hinnangule, ent see võib ka oluliselt erineda
⊕⊕○○ madal	Me ei ole kindlad sekkumise mõjule antud hinnangus, tegelik mõju võib hinnangust oluliselt erineda
⊕○○○ väga madal	Me ei ole üldse kindlad sekkumise mõjule antud hinnangus, tegelik mõju on tõenäoliselt hinnangust oluliselt erinev

GRADE: tõenduse kvaliteedi kriteeriumid



Uuringukavand	Tõenduse kvaliteedi algne tase	Langeta tõenduse kvaliteedi taset, kui uuringutes	Tõsta tõenduse kvaliteedi taset, kui uuringutes	Tõenduse kvaliteedi lõplik tase
randomiseeritud kontrollitud uuring	kõrge →	esinevad piirangud – nihke võimalus(ed) tulemused on	mõju/seos on suur esineb annus-vastus seos	kõrge
		<ul style="list-style-type: none"> mittekooskõlalised kaudsed 	kõik tõenäolised segavad tegurid ja nihked	mõõdukas
vaatlusuuring	madal →	<ul style="list-style-type: none"> ebatäpsed avaldatud valikuliselt 	<ul style="list-style-type: none"> oleks vähendanud sekkumise mõju kirjeldavad võimalikke põhjuseid, kui sekkumise mõju ei täheldatud 	madal
				väga madal

1.4. GRADE: tõenduse profiil (ingl *evidence profile*)

Author(s): Elie Akl & Holger Schunemann **Date:** 2008-09-11

Question: Should parenteral anticoagulation be used in prolonging survival of patients with cancer? **Settings:** Outpatient

Bibliography: EA Akl, FF van Doormaal, M Barba, G Kamath, SY Kim, S Kuipers, S Middeldorp, V Yosucio, H Dickinson, HJ Schünemann. Parenteral anticoagulation for prolonging survival in patients with cancer who have no other indication for anticoagulation. CDSR Reviews. 2007 Issue 3

Quality assessment							Summary of findings				Quality	Importance
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	No of patients		Effect			
							anticoagulation	control	Relative (95% CI)	Absolute		
Survival at 12 months (study follow up)												
5	randomised trials	no serious limitations ¹	no serious inconsistency	no serious indirectness ²	no serious imprecision	none	339/586 (57.8%)	390/588 (60%)	RR 0.87 (0.8 to 0.95)	78 fewer per 1000 (from 30 to 120 fewer)	⊕⊕⊕⊕ HIGH	CRITICAL
Survival (overall - study follow up at 24 to 84 months)												
5	randomised trials	no serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	477/586 (81.4%)	520/588 (85%)	HR 0.77 (0.65 to 0.91)	82 fewer per 1000 (from 28 to 141 fewer)	⊕⊕⊕⊕ HIGH	CRITICAL
DVT												
2	randomised trials	no serious limitations ¹	no serious inconsistency	no serious indirectness	very serious ³	reporting bias ⁴	1/232 (0.4%)	2/226 (4%)	RR 0.61 (0.08 to 4.91)	16 fewer per 1000 (from 37 fewer to 156 more)	⊕○○○ VERY LOW	CRITICAL
Major bleeding												
3	randomised trials	no serious limitations ¹	no serious inconsistency	no serious indirectness	serious ³	reporting bias ⁵	8/406 (2%)	6/408 (1.5%)	RR 1.50 (0.26 to 8.8)	7 more per 1000 (from 11 fewer to 117 more)	⊕⊕○○ LOW	CRITICAL
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¹ Unclear concealment in one of the five trials did not lead to downgrading the quality of evidence.

² The studies used different LMWHs but indirectness is not likely given the similarity in results across studies.

³ The 95% CI includes both negligible effect and appreciable benefit or appreciable harm

⁴ Out of 5 included studies, only 2 reported DVT. We assumed that this was based on selective reporting of outcomes. The authors of the study did not provide further information.

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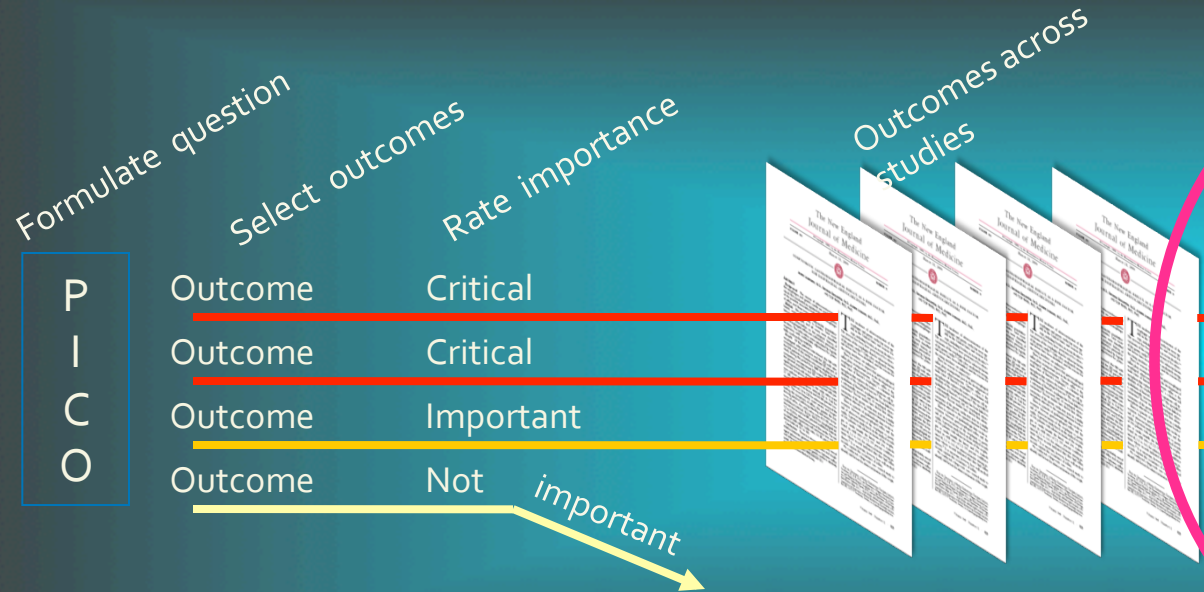
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GRADE's software for Summary of Findings tables, Health Technology Assessment and Guidelines

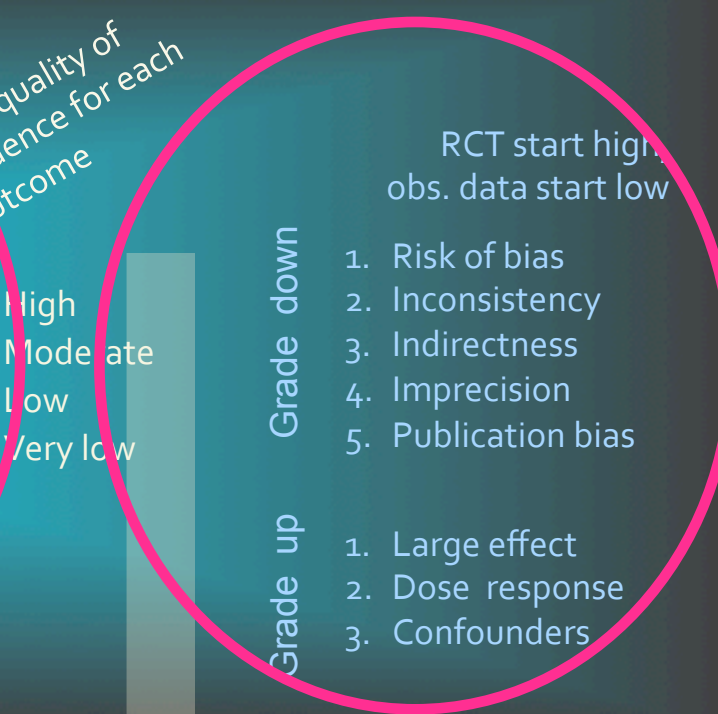
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Create evidence profile with GRADEpro

Summary of findings & estimate of effect for each outcome

Outcome	Quality	No. of patients		Relative Risk (95% CI)		Absolute	Quality	Importance
		Intervention	Control	Intervention	Control			
1. Nausea at 12 weeks (range up to 24 weeks)	CRITICAL	56	100	0.07	0.03 to 0.10	11 fewer per 1000 (over 24 weeks)	HIGH	CRITICAL
2. Vomiting at 12 weeks (range up to 24 weeks)	CRITICAL	84	100	0.10	0.04 to 0.16	17 fewer per 1000 (over 24 weeks)	MODERATE	CRITICAL
3. Nausea at 24 weeks (range up to 48 weeks)	CRITICAL	14	100	0.07	0.03 to 0.10	11 fewer per 1000 (over 48 weeks)	HIGH	CRITICAL
4. Vomiting at 24 weeks (range up to 48 weeks)	CRITICAL	14	100	0.07	0.03 to 0.10	11 fewer per 1000 (over 48 weeks)	HIGH	CRITICAL



Systematic review

Guideline development

Formulate recommendations:

- For or against (direction)
- Strong or weak (strength)

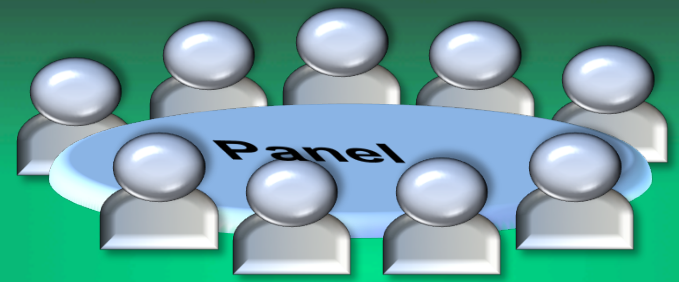
By considering:

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- Balance benefits/harms
- Values and preferences



Revise if necessary by considering:

- Resource use (cost)



Rate overall quality of evidence across outcomes based on lowest quality of *critical* outcomes



- "We recommend using..."
- "We suggest using..."
- "We recommend against using..."
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2. Kliinilise soovitusel liik: tugev vs nõrk

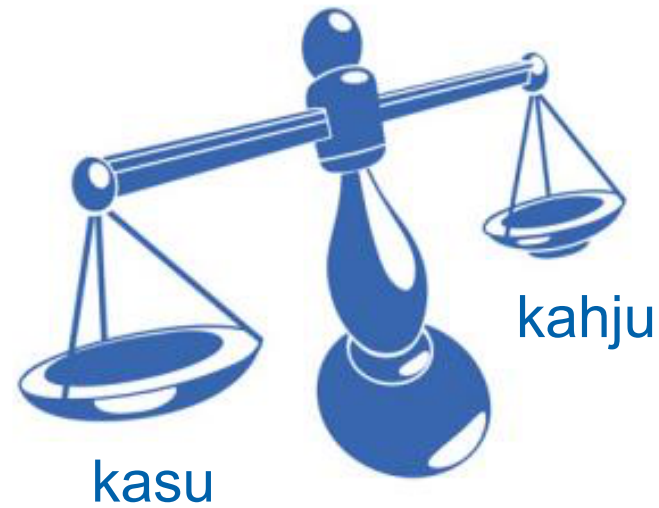
Soovitusel tugevus näitab seda, mil määral saab olla kindel, et soovitusel järgimisest tulenevad soovitud mõjud ületavad soovimatuid mõjusid

Soovitus võib olla nii sekkumise poolt kui ka selle vastu

2.1. Kaalule sekkumise soovitud ja soovimatud mõjud

- suremusele
- haiguse ja selle ravi kestusele
- ravikoormusele
- ravikulule
- elukvaliteedile

jmt-le



2.3. Kliinilise soovitus tugevust mõjutavad tegurid

- tõenduse kvaliteet ingl *quality of evidence*
- soovitud ja soovimatute mõjude (kasu-kahju) tasakaal ingl *balance between desirable and undesirable effects*
- väärtushinnangud ja eelistused ingl *values and preferences*
- kulud (ressursikasutus) ingl *costs (resource allocation)*
- õigluse (võrdsuse) põhimõte ingl *equity*
- vastuvõetavus ingl *acceptability*
- teostatavus ingl *feasibility*

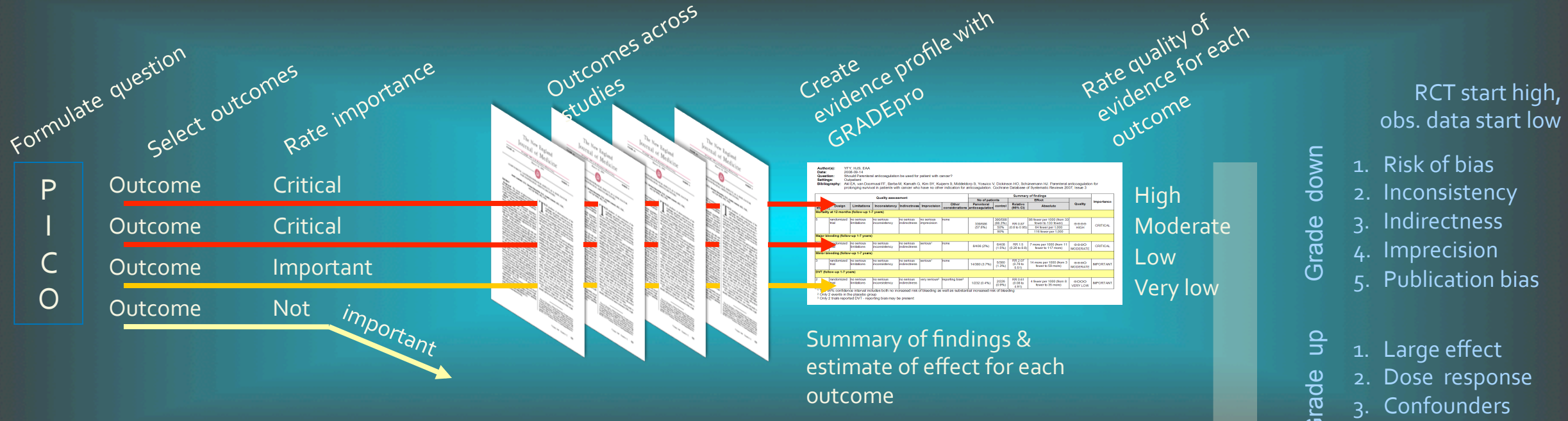
2.4. Tugeva soovitus tähendus

- **patsientidele:** valdav enamik* sellises olukorras olevaid inimesi tahaks soovitatud sekkumist ning ainult vähesed ei tahaks
- **tervishoiutöötajatele:** valdava enamiku* patsientide ravis peaks kasutama soovitatud sekkumist
- **tervishoiukorraldajatele:** soovitus on võimalik enamikes olukordades rakendada

* $\geq 85\%$

2.5. Nõrga soovitusel tähendus

- **patsientidele:** enamik sellises olukorras olevaid inimesi tahaks soovitatud sekkumist, kuid paljud siiski mitte
- **tervishoiutöötajatele:** peab olema valmis aitama patsiente sellise otsuse langetamisel, mis oleks kooskõlas nende (endi) väärtushinnangutega; valmis jagatud vastutusega otsustusprotsessiks
- **tervishoiukorraldajatele:** on vajadus põhjaliku arutelu ja huvitatud osapoolte kaasamise järele



Systematic review

Guideline development

Formulate recommendations:

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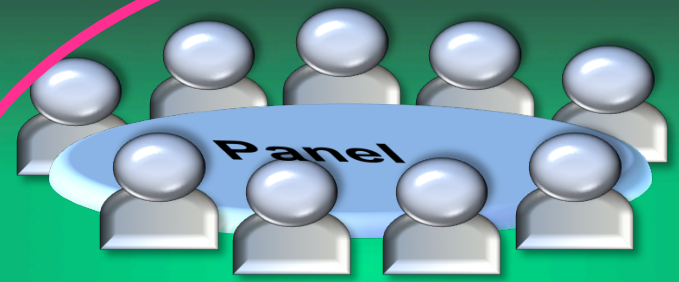
By considering:



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Revise if necessary by considering:

- Resource use (cost)



- "We recommend using..."
- "We suggest using..."
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Rate overall quality of evidence across outcomes based on lowest quality of **critical** outcomes