
# MAGICAPP

## Authoring and publication platform for guideline development

# MAGICAPP PARTNERS

Cochrane

McMaster University

NICE National Institute for Health and Care Excellence

Sykehuset Innlandet HF

Australian Government National Health and Medical Research Council NHMRC

ADA American Dental Association

UiO : University of Oslo

ebpracticenet

folkehelseinstituttet

thebmj

KDIGO Kidney Disease Improving Global Outcomes

# WHAT IS MAGICAPP

- MAGICapp is a Norwegian not-for-profit Foundation
- Provides an authoring and publication platform used to make clinical practice guidelines, evidence summaries, and accompanying decision-aids (clinical decision support tools)
- Leader in dynamic updating, resulting in the first true “Living” Guidelines in Nephrology
- KDIGO Guidelines for BP, GN and Diabetes will be presented in Magicapp

# MAGICAPP FORMAT

- Structured recommendations presented in formats that enable users to access details and tailoring of recommendations to specific patients.

- Can be used online, on mobile, and incorporated into journal publications, like *Kidney International*.

- Decision aids connected directly to recommendations, allowing a conversation between clinicians and patients about treatment choices (shared decision-making).

# STRUCTURED AUTHORING

- MAGICapp facilitates using standards for guidelines (e.g. GRADE methodology)
- Quality of the evidence, balance of benefits and harms, values and preferences, resources and other considerations
- Emphasis on transparency, linking recommendations to evidence (or detailed expert opinion, where appropriate)
- KDIGO is partnering with the Cochrane ERT for guidelines in Magicapp

Guidelines
Recommendations
Evidence Summaries
Decision Aids
HTAs

Publish

1

## Formulate PICO questions

**1a. Define**
Population
Intervention
Comparator

**1b. Define**
Patient-important Outcomes

| | |
|---|---|
| **Outcome 1** | Critical |
| **Outcome 2** | Critical |
| **Outcome 3** | Important |
| **Outcome 4** | Not important |

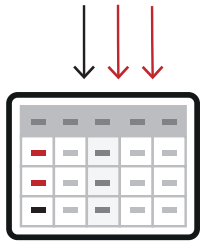
2

## Find outcomes across studies

3

## Make evidence profiles

- Plot study details
- Plot effect estimates,
- Rate quality of evidence
- Write summary



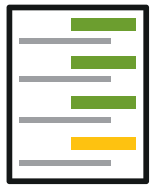
For each outcome, rate the quality of all included studies combined, using study design, 5 downgrade factors and upgrade factors into: **High, Moderate, Low, Very low**

4

## Go from evidence to recommendations

Assess Evidence to Decision factors

- The balance between benefits & harms
- Quality of the documentation
- Values & preferences
- Resource use and other considerations



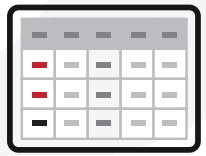
5

## Formulate recommendations

- For or against (direction)
- Strong or weak (strength)
  "We recommend…"
  "We suggest…"
- Formulate Rationale
- Include Practical information if needed

Guideline panel
GRADE

Now you have your evidence base



Summary of Findings

MAGIC app

KDIGO

# DISSEMINATION

- KDIGO Website & App
- MAGICapp Site
- KI and cross disciplinary journals

## 2017 Canadian Guideline for Opioids for Chronic Pain

The 2017 Canadian Guideline for Opioid Therapy and Chronic Non-Cancer Pain was developed in response to concerns that Canadians are the second highest users per capita of opioids in the world, while the rates of opioid prescribing and opioid-related hospital visits and deaths have been increasing rapidly.

The guideline's recommendations for clinical practice have been developed by an international team of clinicians, researchers and patients, led by the Michael G. DeGroote National Pain Centre at McMaster University and funded by Health Canada and the Canadian Institutes of Health Research. The guideline was published by the Canadian Medical Association Journal (CMAJ).

The guideline incorporates medical evidence published since the previous national opioid use guideline was made available in 2010. They are recommendations for physicians, but are not regulatory requirements.

The guideline does not look at opioid use for acute pain, nor for patients with pain due to cancer or in palliative care, or those under treatment for opioid use disorder or opioid addiction



Find recommendations, evidence summaries and consultation decision aids for use in your practice MAGIC app

2017 Canadian Guideline for Opioids for Chronic Non-Cancer Pain

Download PDF

Lignes directrices canadiennes relatives à l'utilisation des opioïdes pour le traitement de la douleur chronique non cancéreuse, édition 2017

Download PDF

### Appendicies

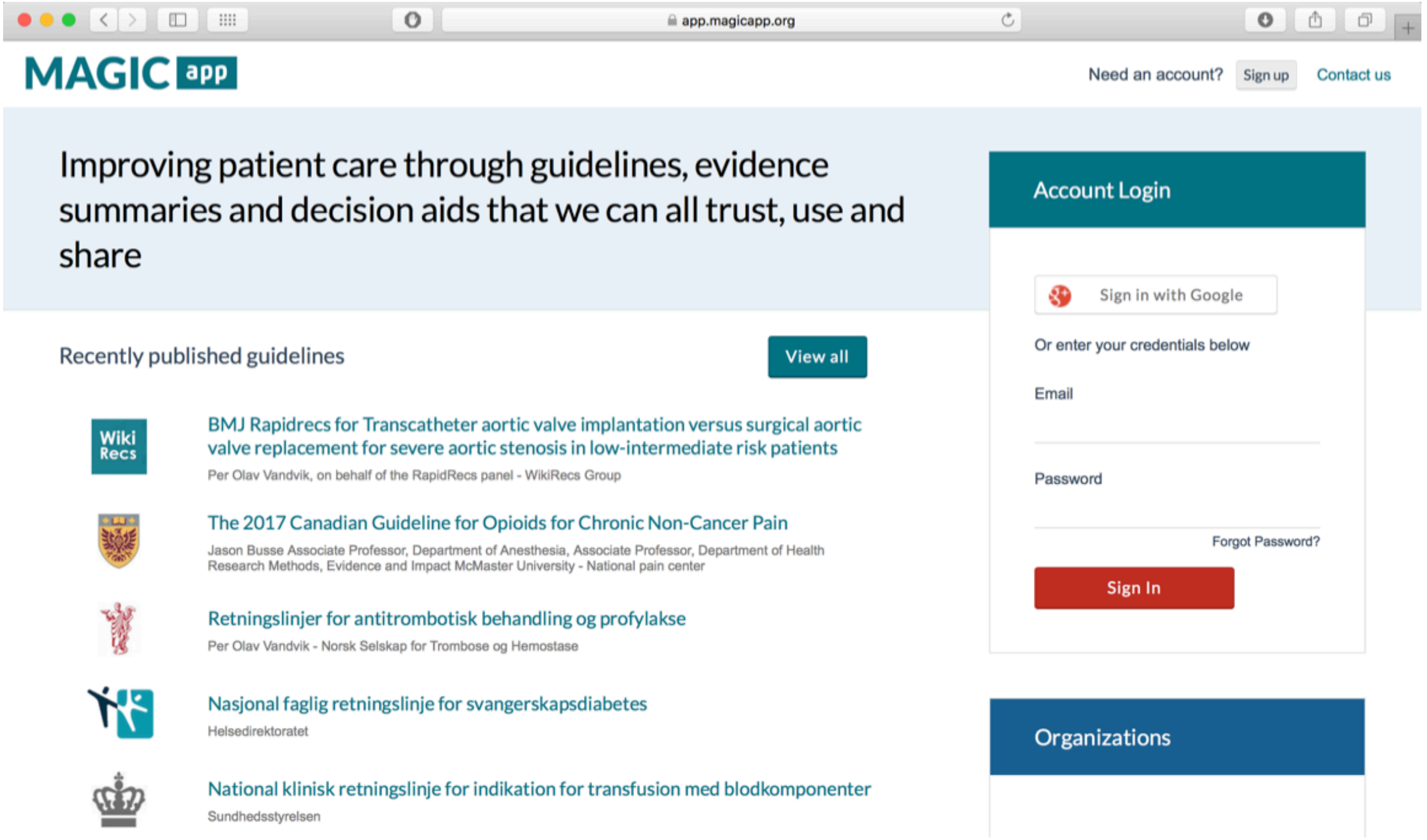
- Values and Preferences Statement (English)
- Values and Preferences Statement (French)

### Tools

- Opioid Tapering *(Patient Info English)*
- Opioid Tapering *(Patient Info French)*

# DYNAMIC UPDATING

- Guidelines in journals are static, but in MAGICapp they are in a web-based application, so much easier to update.
- Each recommendation statement can be updated separately, reducing time needed to update content.
- “Living” guidelines = continuous updating, so that they are always up to date.
  - Note: new evidence does not always change recommendations; focus of updates would be where recommendations need change.
  - KDIGO may make a note where new evidence was reviewed but no change was made.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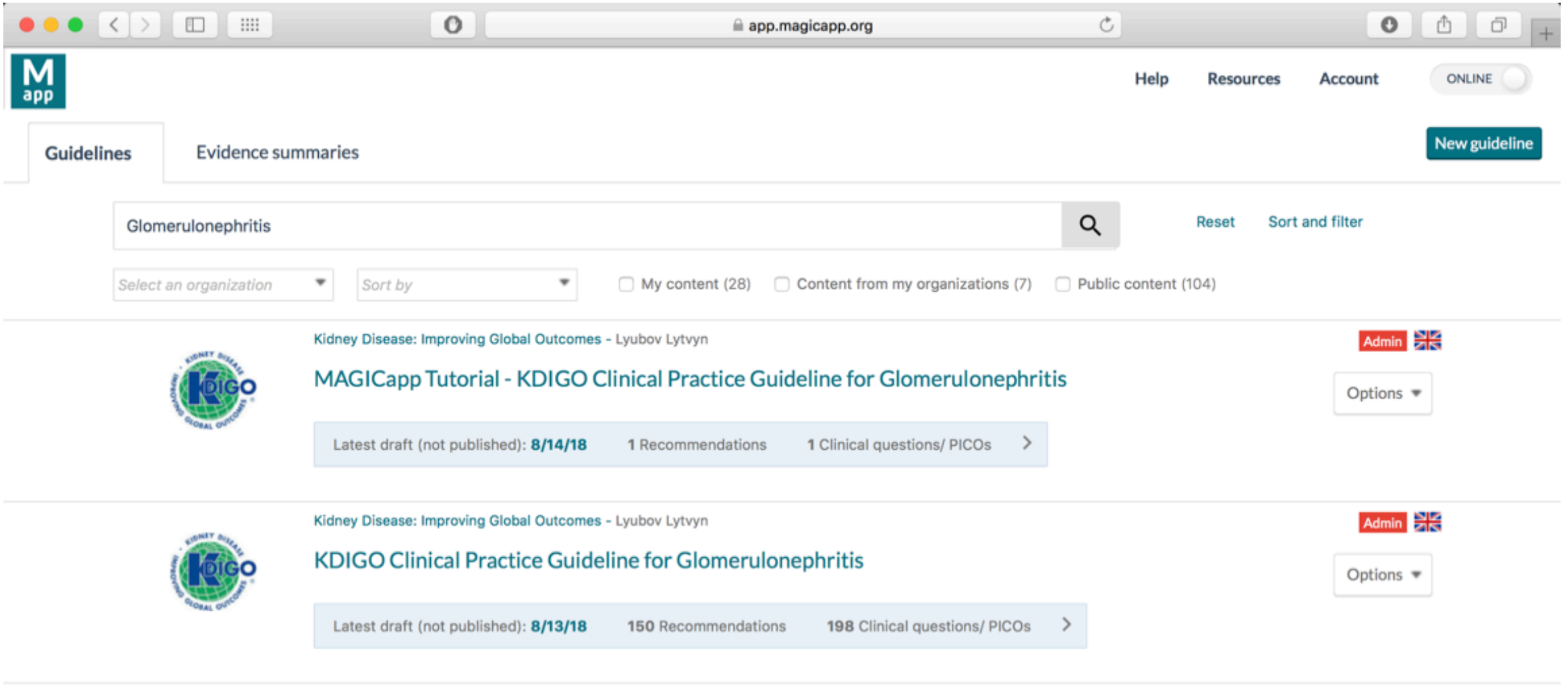
Improving patient care through guidelines, evidence summaries and decision aids that we can all trust, use and share
Recently published guidelines
View all
Wiki Recs
BMJ Rapidrecs for Transcatheter aortic valve implantation versus surgical aortic valve replacement for severe aortic stenosis in low-intermediate risk patients
Per Olav Vandvik, on behalf of the RapidRecs panel - WikiRecs Group
The 2017 Canadian Guideline for Opioids for Chronic Non-Cancer Pain
Jason Busse Associate Professor, Department of Anesthesia, Associate Professor, Department of Health Research Methods, Evidence and Impact McMaster University - National pain center
Retningslinjer for antitrombotisk behandling og profylakse
Per Olav Vandvik - Norsk Selskap for Trombose og Hemostase
Nasjonal faglig retningslinje for svangerskapsdiabetes
Helsedirektoratet
National klinisk retningslinje for indikation for transfusion med blodkomponenter
Sundhedsstyrelsen
Account Login
Sign in with Google
Or enter your credentials below
Email
Password
Forgot Password?
Sign In
Organizations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Glomerulonephritis
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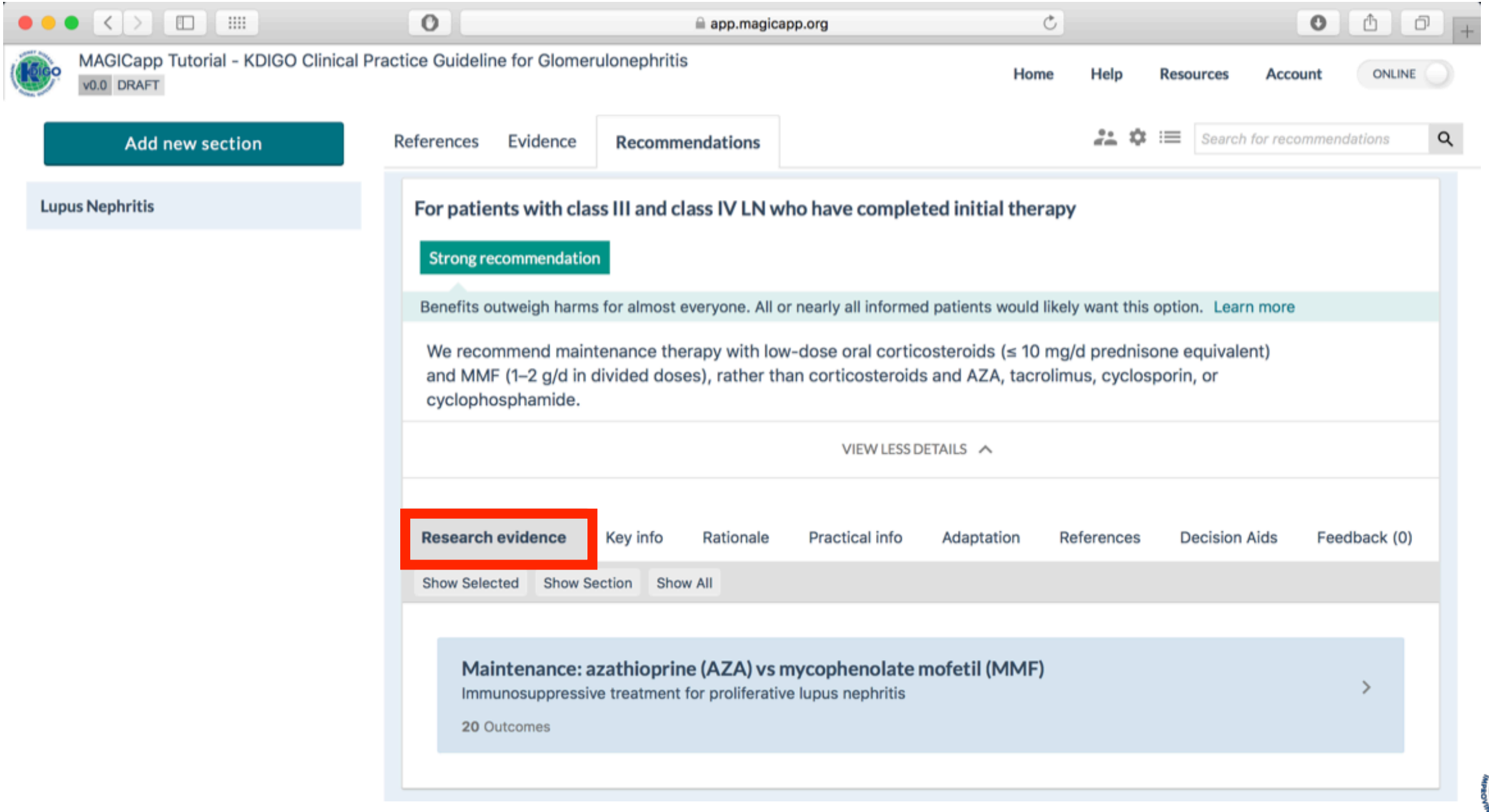
Sort by
My content (28)
Content from my organizations (7)
Public content (104)
Kidney Disease: Improving Global Outcomes - Lyubov Lytvyn
Admin
MAGICapp Tutorial - KDIGO Clinical Practice Guideline for Glomerulonephritis
Options
Latest draft (not published): 8/14/18
1 Recommendations
1 Clinical questions/ PICOs
Kidney Disease: Improving Global Outcomes - Lyubov Lytvyn
Admin
KDIGO Clinical Practice Guideline for Glomerulonephritis
Options
Latest draft (not published): 8/13/18
150 Recommendations
198 Clinical questions/ PICOs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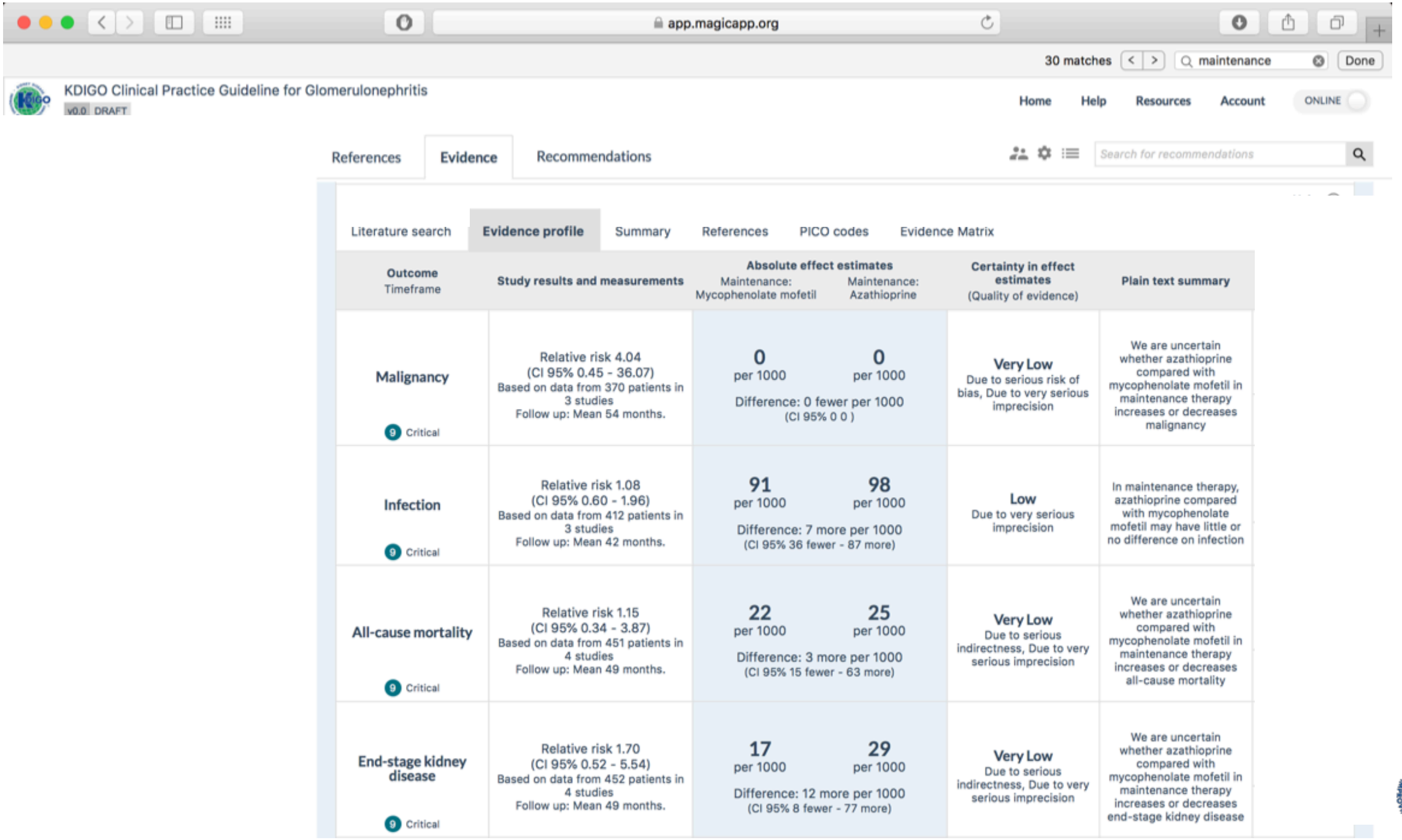
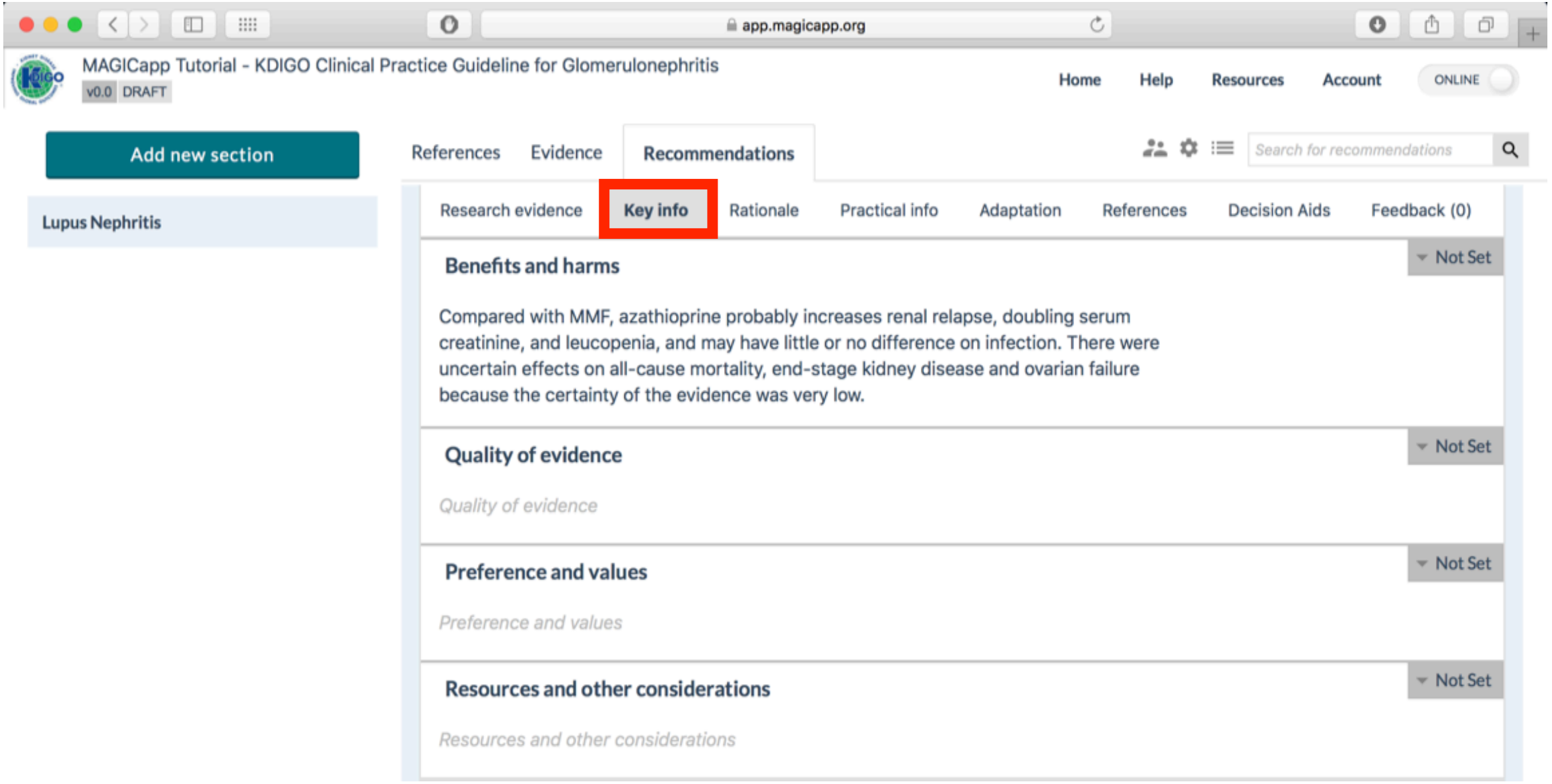
Lupus Nephritis
For patients with class III and class IV LN who have completed initial therapy
Strong recommendation
Benefits outweigh harms for almost everyone. All or nearly all informed patients would likely want this option. Learn more
We recommend maintenance therapy with low-dose oral corticosteroids (≤ 10 mg/d prednisone equivalent) and MMF (1–2 g/d in divided doses), rather than corticosteroids and AZA, tacrolimus, cyclosporin, or cyclophosphamide.
VIEW LESS DETAILS
Research evidence
Key info
Rationale
Practical info
Adaptation
References
Decision Aids
Feedback (0)
Show Selected
Show Section
Show All
Maintenance: azathioprine (AZA) vs mycophenolate mofetil (MMF)
Immunosuppressive treatment for proliferative lupus nephritis
20 Outcomes




| Outcome<br>Timeframe | Study results and measurements | Absolute effect estimates<br>Maintenance: Mycophenolate mofetil | <br>Maintenance: Azathioprine | Certainty in effect estimates<br>(Quality of evidence) | Plain text summary |
|---|---|---|---|---|---|
| **Malignancy**<br>9 Critical | Relative risk 4.04<br>(CI 95% 0.45 - 36.07)<br>Based on data from 370 patients in 3 studies<br>Follow up: Mean 54 months. | 0<br>per 1000 | 0<br>per 1000<br>Difference: 0 fewer per 1000<br>(CI 95% 0 0 ) | **Very Low**<br>Due to serious risk of bias, Due to very serious imprecision | We are uncertain whether azathioprine compared with mycophenolate mofetil in maintenance therapy increases or decreases malignancy |
| **Infection**<br>9 Critical | Relative risk 1.08<br>(CI 95% 0.60 - 1.96)<br>Based on data from 412 patients in 3 studies<br>Follow up: Mean 42 months. | 91<br>per 1000 | 98<br>per 1000<br>Difference: 7 more per 1000<br>(CI 95% 36 fewer - 87 more) | **Low**<br>Due to very serious imprecision | In maintenance therapy, azathioprine compared with mycophenolate mofetil may have little or no difference on infection |
| **All-cause mortality**<br>9 Critical | Relative risk 1.15<br>(CI 95% 0.34 - 3.87)<br>Based on data from 451 patients in 4 studies<br>Follow up: Mean 49 months. | 22<br>per 1000 | 25<br>per 1000<br>Difference: 3 more per 1000<br>(CI 95% 15 fewer - 63 more) | **Very Low**<br>Due to serious indirectness, Due to very serious imprecision | We are uncertain whether azathioprine compared with mycophenolate mofetil in maintenance therapy increases or decreases all-cause mortality |
| **End-stage kidney disease**<br>9 Critical | Relative risk 1.70<br>(CI 95% 0.52 - 5.54)<br>Based on data from 452 patients in 4 studies<br>Follow up: Mean 49 months. | 17<br>per 1000 | 29<br>per 1000<br>Difference: 12 more per 1000<br>(CI 95% 8 fewer - 77 more) | **Very Low**<br>Due to serious indirectness, Due to very serious imprecision | We are uncertain whether azathioprine compared with mycophenolate mofetil in maintenance therapy increases or decreases end-stage kidney disease |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Key info
Rationale
Practical info
Adaptation
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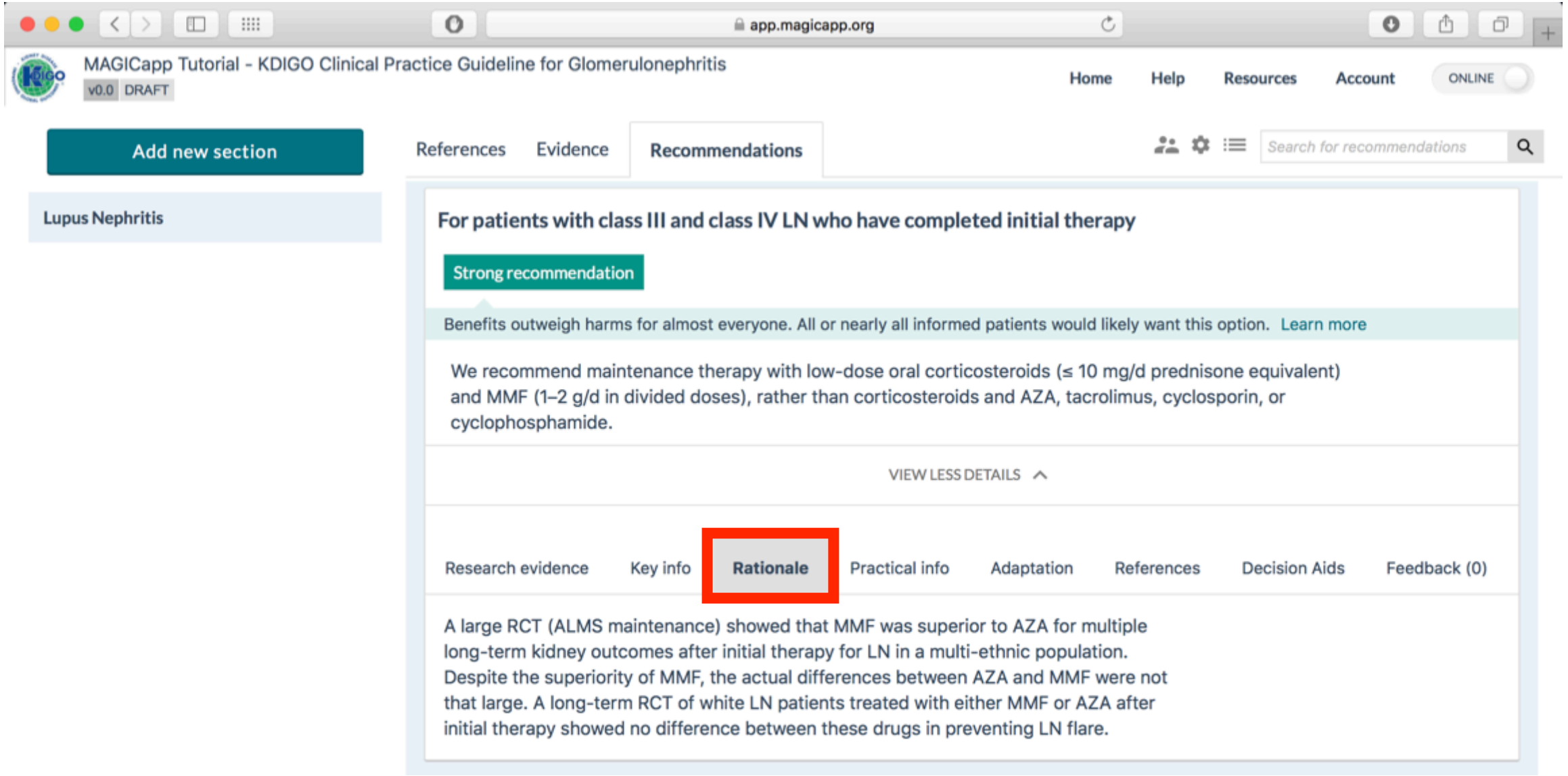
Decision Aids
Feedback (0)
Benefits and harms
Not Set
Compared with MMF, azathioprine probably increases renal relapse, doubling serum creatinine, and leucopenia, and may have little or no difference on infection. There were uncertain effects on all-cause mortality, end-stage kidney disease and ovarian failure because the certainty of the evidence was very low.
Quality of evidence
Not Set
Quality of evidence
Preference and values
Not Set
Preference and values
Resources and other considerations
Not Set
Resources and other considerations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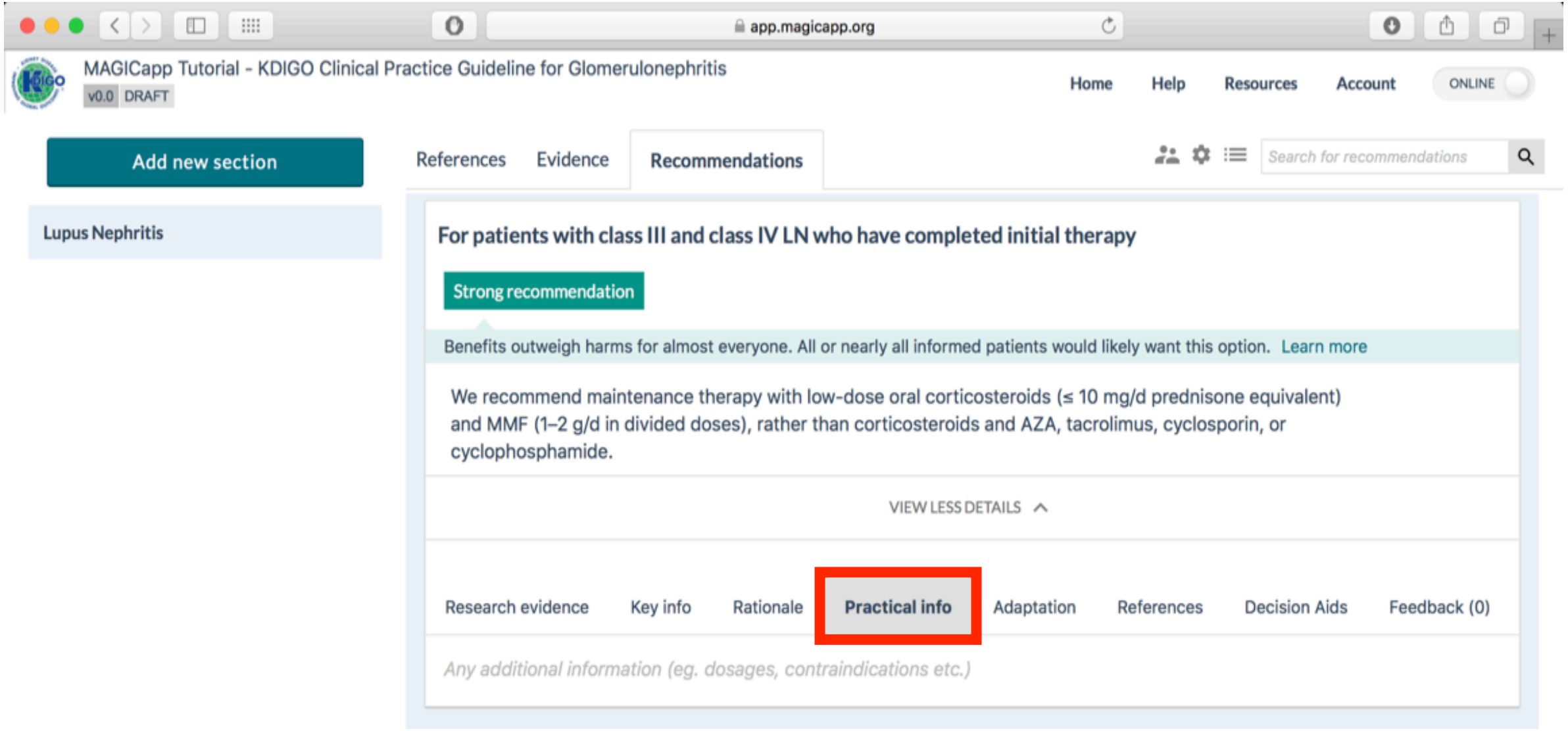
For patients with class III and class IV LN who have completed initial therapy
Strong recommendation
Benefits outweigh harms for almost everyone. All or nearly all informed patients would likely want this option. Learn more
We recommend maintenance therapy with low-dose oral corticosteroids (≤ 10 mg/d prednisone equivalent) and MMF (1–2 g/d in divided doses), rather than corticosteroids and AZA, tacrolimus, cyclosporin, or cyclophosphamide.
VIEW LESS DETAILS
Research evidence
Key info
Rationale
Practical info
Adaptation
References
Decision Aids
Feedback (0)
A large RCT (ALMS maintenance) showed that MMF was superior to AZA for multiple long-term kidney outcomes after initial therapy for LN in a multi-ethnic population. Despite the superiority of MMF, the actual differences between AZA and MMF were not that large. A long-term RCT of white LN patients treated with either MMF or AZA after initial therapy showed no difference between these drugs in preventing LN flare.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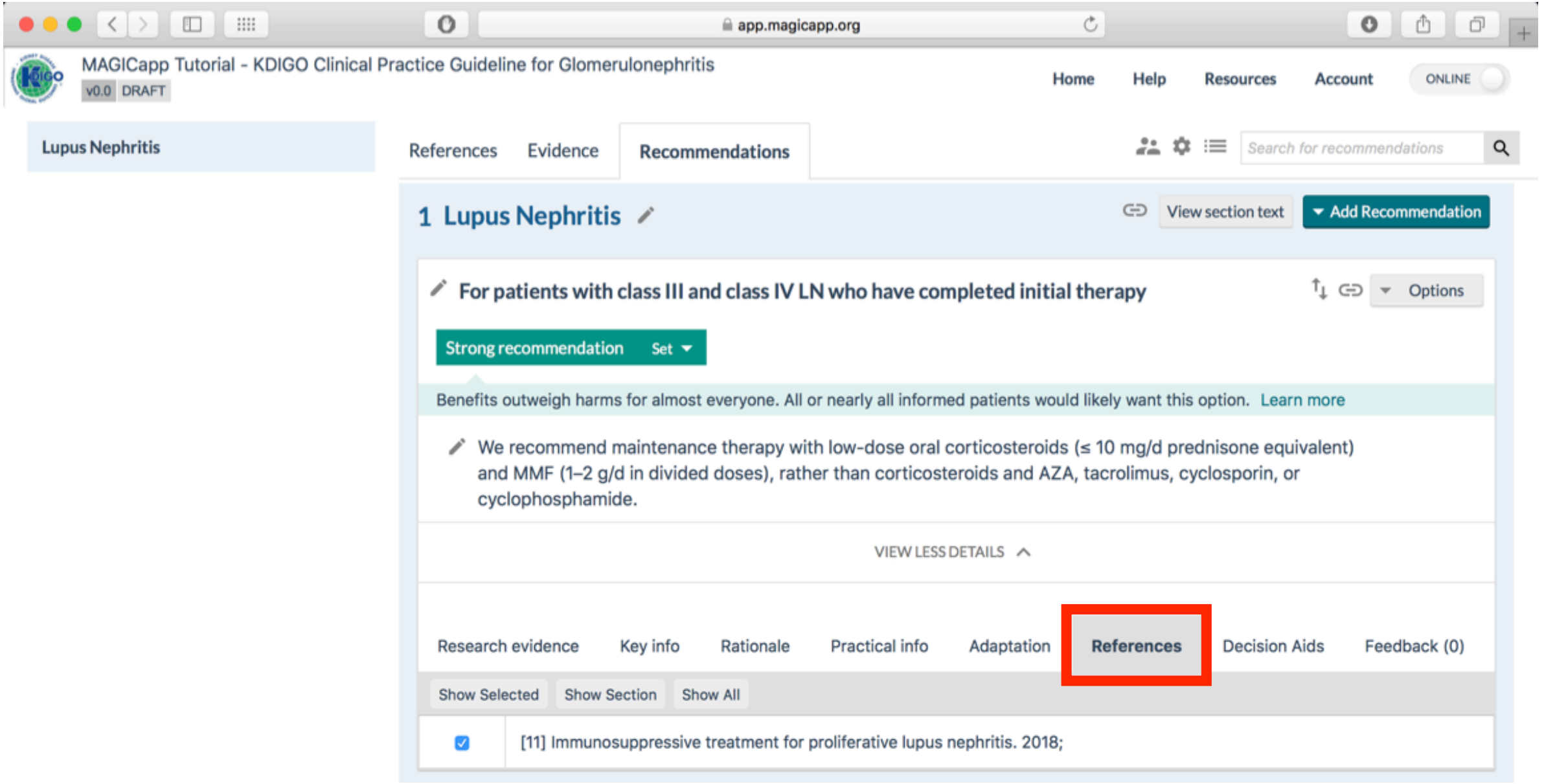
VIEW LESS DETAILS
Research evidence
Key info
Rationale
Practical info
Adaptation
References
Decision Aids
Feedback (0)
Any additional information (eg. dosages, contraindications etc.)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1 Lupus Nephritis
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For patients with class III and class IV LN who have completed initial therapy
Options
Strong recommendation
Set
Benefits outweigh harms for almost everyone. All or nearly all informed patients would likely want this option. Learn more
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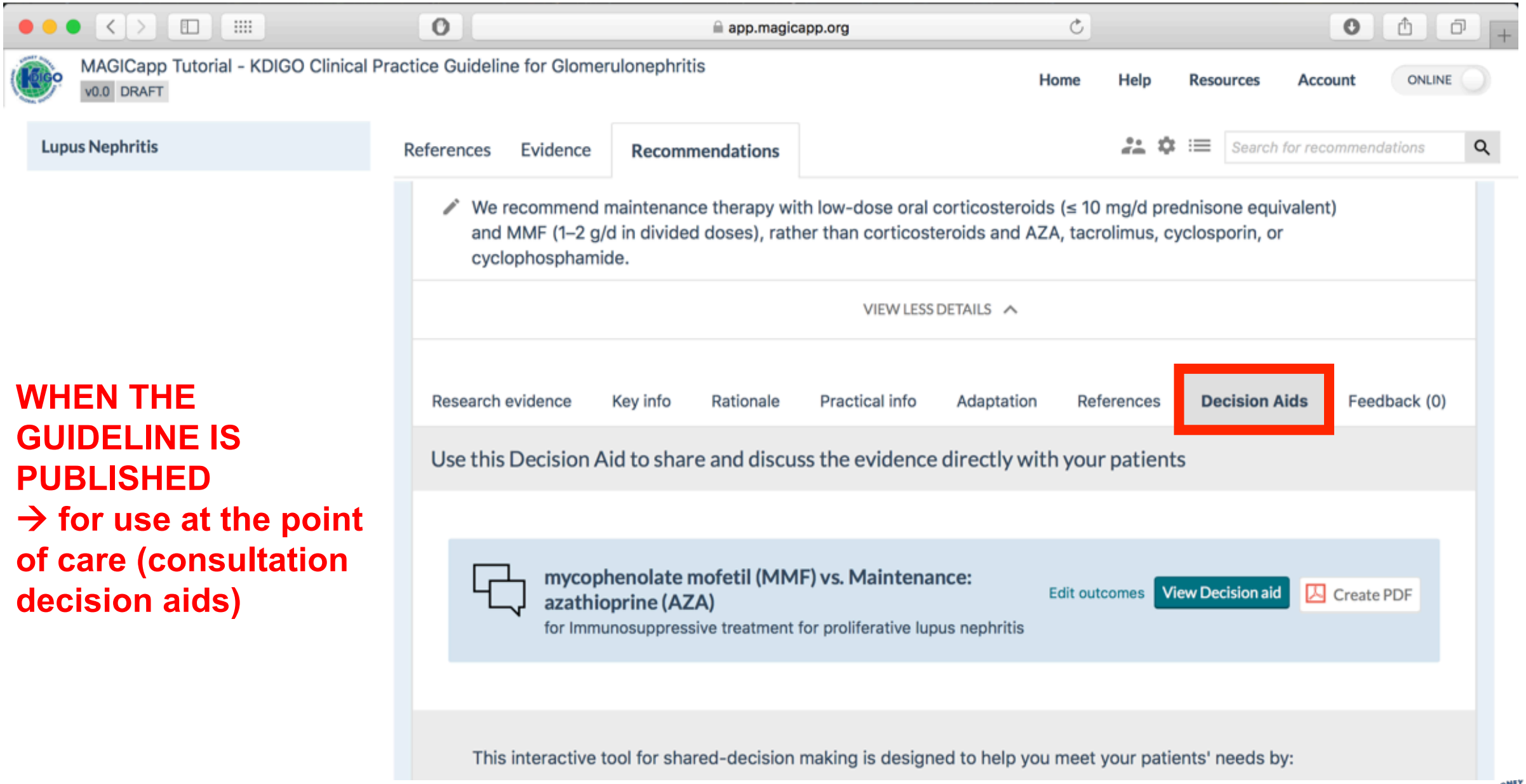
VIEW LESS DETAILS
Research evidence
Key info
Rationale
Practical info
Adaptation
References
Decision Aids
Feedback (0)
Show Selected
Show Section
Show All
[11] Immunosuppressive treatment for proliferative lupus nephritis. 2018;

**WHEN THE GUIDELINE IS PUBLISHED**
**→ for use at the point of care (consultation decision aids)**



This interactive tool for shared-decision making is designed to help you meet your patients' needs by:

- Exploring what outcomes they wish to discuss
- Communicating the benefits and harms of each alternative, as well as their (un)certainty
- Discussing practical issues associated with each alternative

This decision aid does not replace clinical judgment. Adapt it to the context as needed and use your own communication style.

View educational module

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mycophenolate mofetil (MMF) vs. Maintenance: azathioprine (AZA) for Immunosuppressive treatment for proliferative lupus nephritis

## Among a 1000 patients like you, on average with Maintenance: azathioprine (AZA)

### Death - At end of treatment duration or follow-up

↑ 3 more

| mycophenolate mofetil (MMF) | Maintenance: azathioprine (AZA) |
|---|---|
| 22 per 1000 | 25 per 1000 |

Certainty ○○○○

### Renal relapse - At end of treatment duration or follow-up

↑ 114 more

| mycophenolate mofetil (MMF) | Maintenance: azathioprine (AZA) |
|---|---|
| 152 per 1000 | 266 per 1000 |

Certainty ○○○○

### Ovarian failure

↓ 10 fewer

| mycophenolate mofetil (MMF) | Maintenance: azathioprine (AZA) |
|---|---|
| 45 per 1000 | 35 per 1000 |

Certainty ○○○○

Death - At 10 years

Renal relapse - At 10 years

End-stage kidney disease - At end of treatment duration or follow-up

app.magicapp.org

mycophenolate mofetil (MMF) vs. Maintenance: azathioprine (AZA) for Immunosuppressive treatment for proliferative lupus nephritis

## Death - At end of treatment duration or follow-up

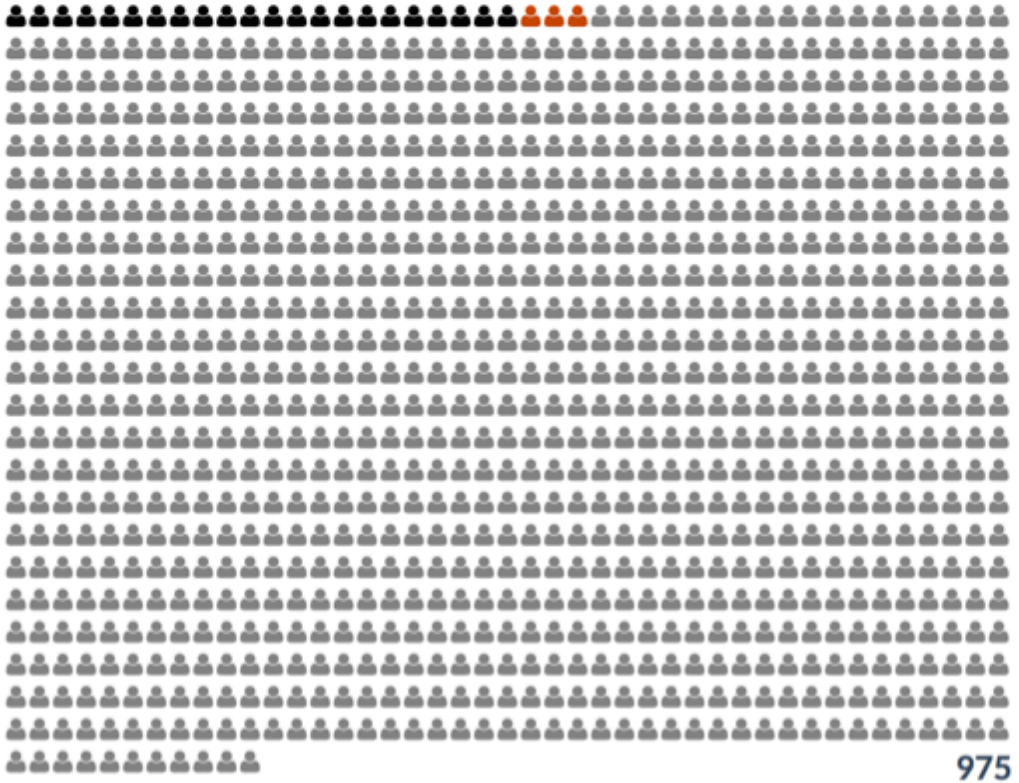
Among a 1000 patients like you, with Maintenance: azathioprine (AZA)

**3 more**

| mycophenolate mofetil (MMF) | Maintenance: azathioprine (AZA) |
|---|---|
| 22 per 1000 | 25 per 1000 |

Certainty

○○○○




Death -

low-up

## Alkylating agents vs Placebo or no treatment or steroids

Adults with idiopathic membranous nephropathy with nephrotic syndrome

10 Outcomes

| Outcome<br>Timeframe | Study results and measurements | Absolute effect estimates<br>Placebo/no treatment/steroids | Absolute effect estimates<br>Alkylating agents | Certainty in effect estimates<br>(Quality of evidence) | Plain text summary |
|---|---|---|---|---|---|
| **All-cause mortality**<br>9 Critical | Relative risk 0.67<br>(CI 95% 0.25 - 1.81)<br>Based on data from 445 patients in 8 studies<br>Follow up: Mean 46 months. | **45**<br>per 1000 | **30**<br>per 1000<br>Difference: 15 fewer per 1000<br>(CI 95% 34 fewer - 36 more) | **Low**<br>Due to serious risk of bias, Due to serious imprecision | Alkylating agents, cyclopshophamide or chlorambucil compared with placebo or no treatment or steroids may have little or no difference on all-cause mortality |
| **End-stage kidney disease**<br>9 Critical | Relative risk 0.31<br>(CI 95% 0.15 - 0.61)<br>Based on data from 392 patients in 8 studies<br>Follow up: Mean 43 months. | **158**<br>per 1000 | **49**<br>per 1000<br>Difference: 109 fewer per 1000<br>(CI 95% 134 fewer - 62 fewer) | **Moderate**<br>Due to serious risk of bias, Due to serious imprecision, Upgraded due to Very large magnitude of effect, Due to serious indirectness | Alkylating agents, cyclopshophamide or chlorambucil compared with placebo or no treatment or steroids probably decreases end-stage kidney disease |
| **≥50% loss of GFR**<br>9 Critical | Relative risk<br>(CI 95% - ) | per 1000 | per 1000<br>(CI 95% ) | | No studies were found that looked at ≥50% loss of GFR |
| **Infection**<br>9 Critical | Relative risk<br>(CI 95% - ) | per 1000 | per 1000<br>(CI 95% ) | | No studies were found that looked at infection |

## Alkylating agents vs Placebo or no treatment or steroids

Adults with idiopathic membranous nephropathy with nephrotic syndrome

**10** Outcomes

| Outcome<br>Timeframe | Study results and measurements | Absolute effect estimates<br>Placebo/no treatment/steroids | <br>Alkylating agents | Certainty in effect estimates<br>(Quality of evidence) | Plain text summary |
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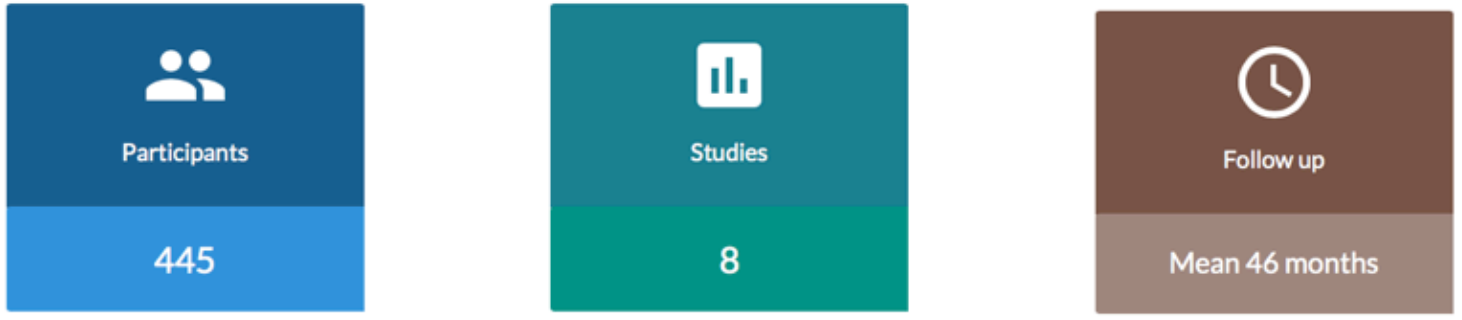
Close

Data source for the relative effect (risk ratio, odds ratio, or hazard ratio)

### Alkylating agents




Source of evidence

Systematic review

Study Design

Randomized controlled

Systematic review

[256] Immunosuppressive treatment for idiopathic membranous nephropathy in adults with nephrotic syndrome. 2018;

Included studies

| Name | Duration Of Follow Up | Total Participants | Intervention Events | Intervention Participants | Control Events | Control Participants | Weight % |
|---|---|---|---|---|---|---|---|
| Howman 2013 | 12 months | 70 | 2 (6.06%) | 33 | 1 (2.7%) | 37 | 18.0008 |
| Jha 2007 | Median 11 years | 104 | 1 (1.96%) | 51 | 3 (5.66%) | 53 | 20.0557 |
| Braun 1995 | 60 months | 26 | 1 (6.67%) | 15 | 0 | 11 | 10.3018 |
| Tiller 1981 | 36 months | 54 | 0 | 27 | 2 (7.41%) | 27 | 11.1524 |
| Imbasciati 1980 | 60 months | 81 | 1 (2.38%) | 42 | 3 (7.69%) | 39 | 20.2271 |
| Ponticelli 1983 | 31 months | 62 | 0 | 32 | 1 (3.33%) | 30 | 9.97242 |
| Murphy 1992 | 24 months | 26 | 1 (7.69%) | 13 | 0 | 13 | 10.2897 |
| Donadio 1974a | 12 months | 22 | 0 | 11 | 0 | 11 | 0 |

Attachments (forest plots, images)

2_1_Alkylating_vs_placebo_-_death_od_70781.png

Data source for the typical outcome for people who receive the comparator

## Placebo or no treatment or steroids

Source of evidence

Control arm of reference used for intervention

# RAPID RECOMMENDATIONS

- MAGICapp also develops Rapid Recommendations in collaboration with BMJ

# Rapid Recommendation 1 Example

## Recommendation 1: Dual vs single antiplatelet therapy

### Population

Patients that have experienced:

High risk transient ischaemic attack (TIA)

A score of 4 or more on the ABCD2 scale, which estimates the risk of recurrent stroke after a TIA

0 — 7

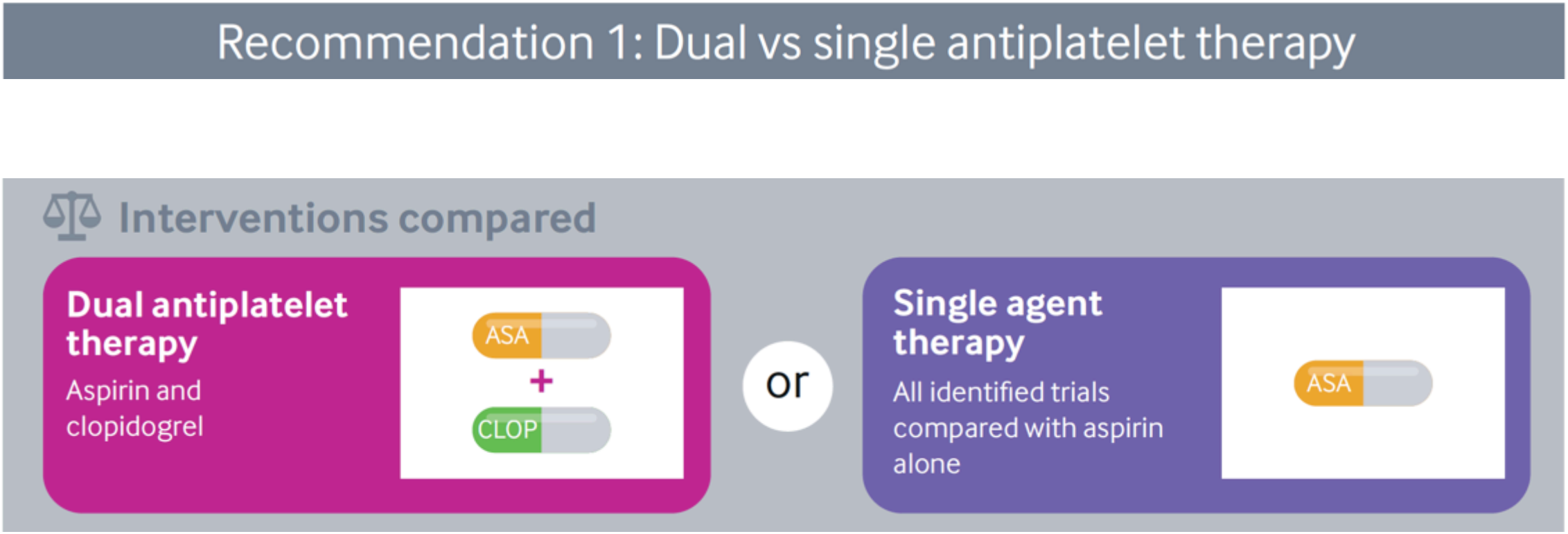
or

Minor ischaemic stroke

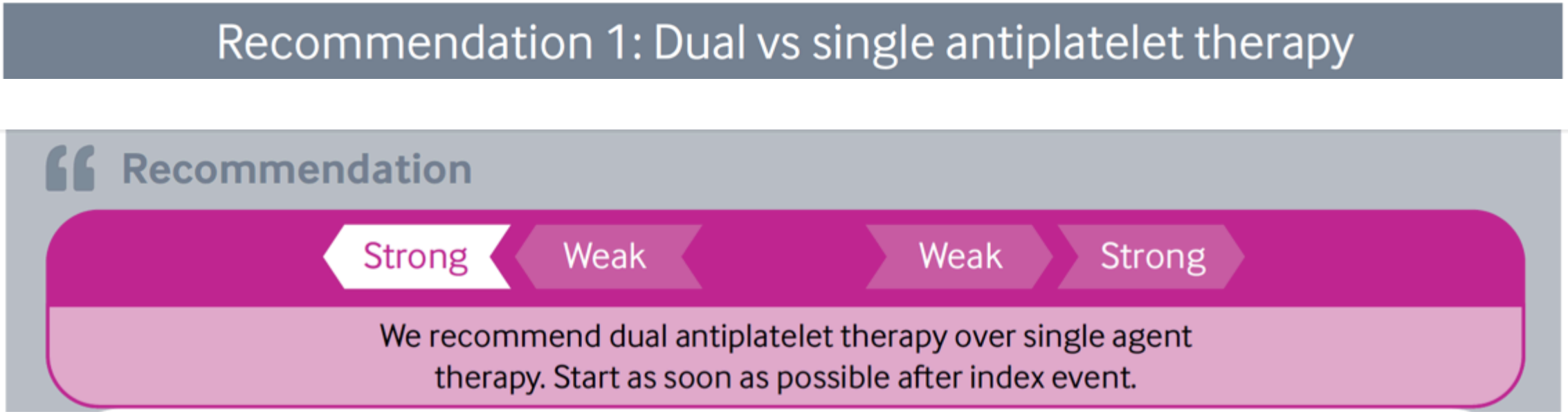
A score of 3 or less on the National Institutes of Health Stroke Scale (NIHSS), and no persistent disabling neurological deficit

0 — 42

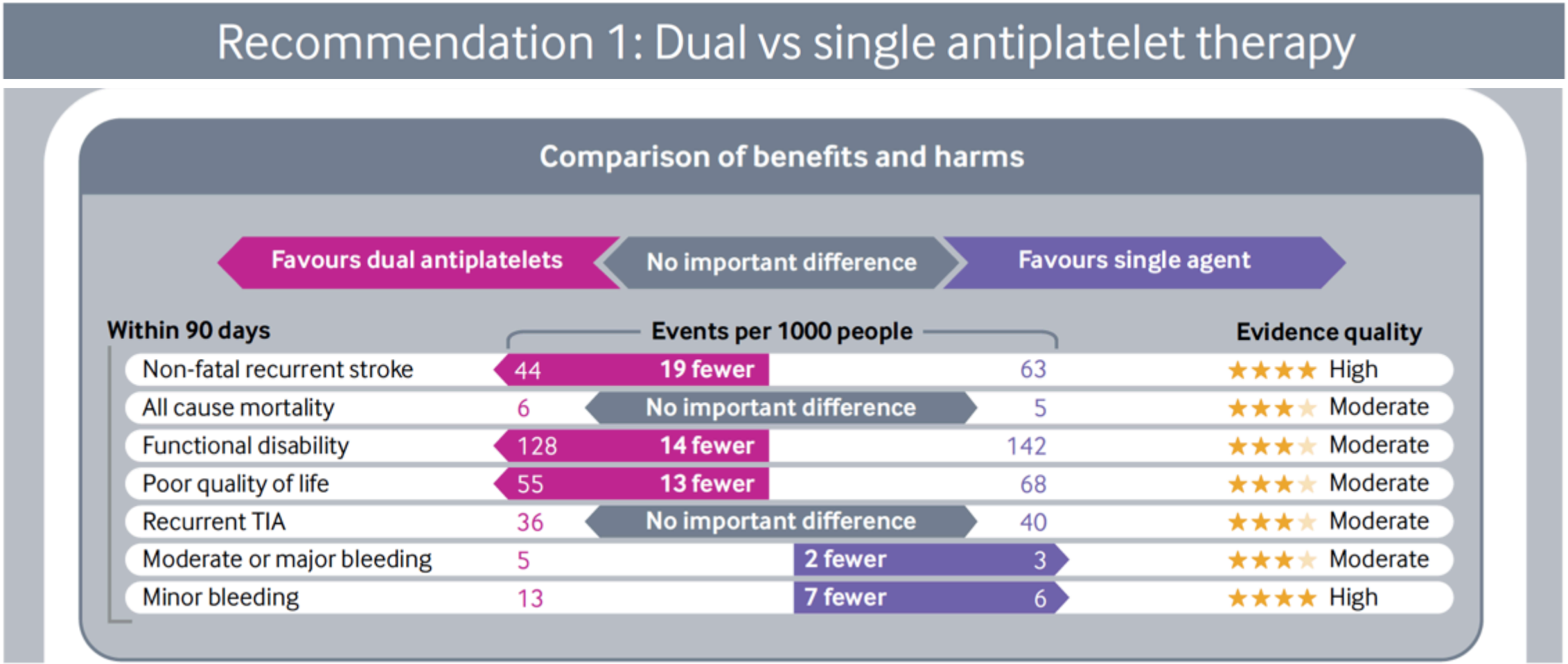
# Rapid Recommendation 1 Example



# RAPID RECOMMENDATION 1 EXAMPLE



# RAPID RECOMMENDATION 1 EXAMPLE



# Rapid Recommendation 1 Example

## Recommendation 1: Dual vs single antiplatelet therapy

### Key practical issues

| Dual antiplatelets | Single agent |
| --- | --- |
| Two different tablets taken once daily at same time | A single aspirin tablet once daily |

Aspirin tablet should be swallowed whole, but clopidogrel tablet can be crushed or split

### Dosing

Although dosing varied slightly in the included trials, for clopidogrel, most physicians and patients would probably prefer a loading dose of 300 mg rather than a higher dose. For aspirin, a daily dose between 75 mg and 81 mg represents a reasonable choice.

### Values and preferences

The panel believes almost all patients place a high value on avoiding a recurrent stroke and a lower value on avoiding moderate or major bleeding.

# Rapid Recommendation 2 Example

## Recommendation 2: Duration of dual antiplatelet therapy

### Population

ASA + CLOP

Patients initiating dual antiplatelet therapy after TIA or minor ischaemic stroke

### Interventions compared

**Shorter duration**

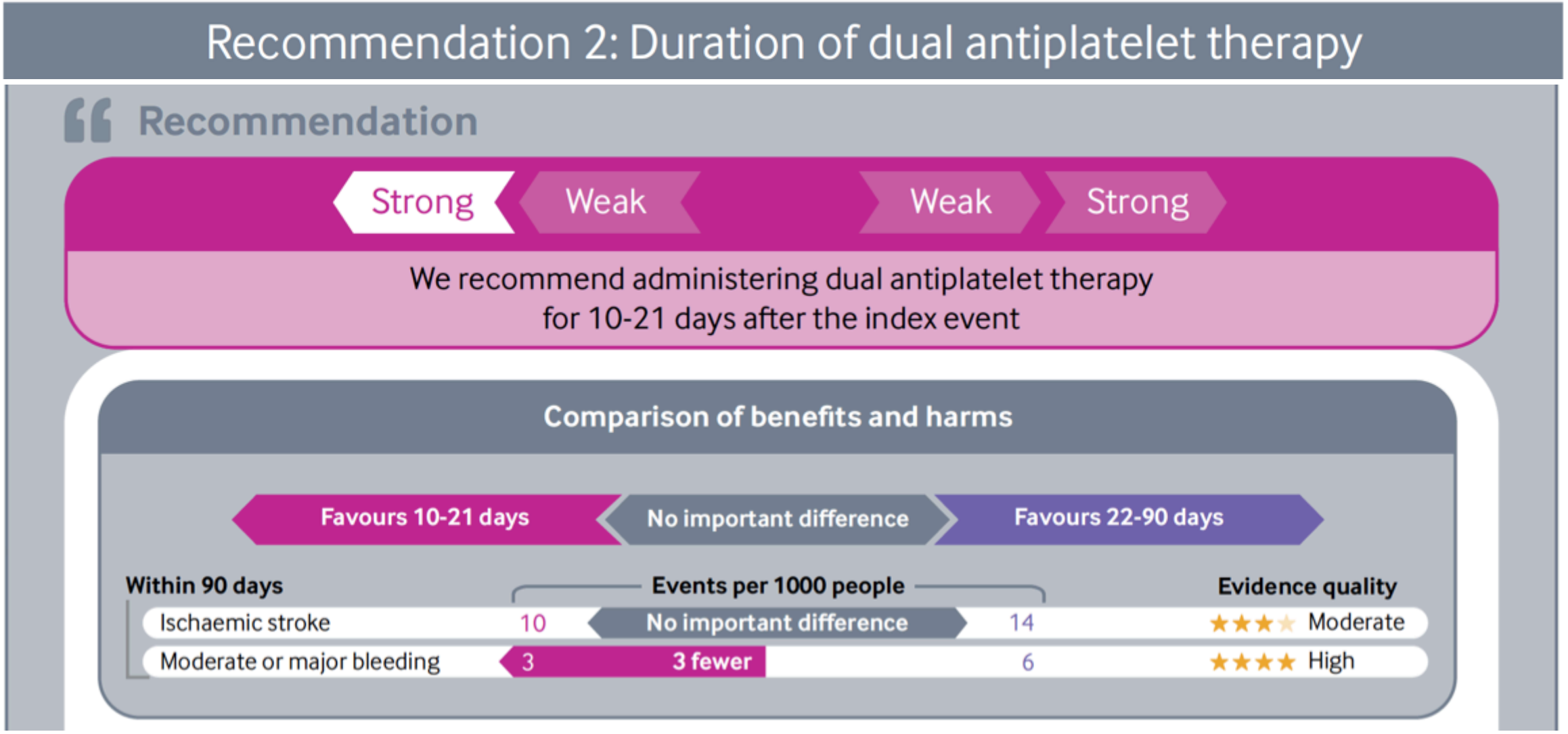
Dual antiplatelet therapy for 10-21 days after TIA or minor stroke

or

**Longer duration**

Dual antiplatelet therapy for 22-90 days after TIA or minor stroke

# RAPID RECOMMENDATION 2 EXAMPLE



# RAPID RECOMMENDATION 2 EXAMPLE