

# ■ SORT

## *The Strength-of-Recommendation Taxonomy*

AFP uses the Strength-of-Recommendation Taxonomy (SORT),<sup>1</sup> to label key recommendations in clinical review articles. In general, only key recommendations are given a Strength-of-Recommendation grade. Grades are assigned on the basis of the quality and consistency of available evidence. *Table 1* shows the three grades recognized.

As the table indicates, the strength-of-recommendation grade depends on the quality and consistency of the evidence for the recommendation. Quality and consistency of evidence are determined as indicated in *Table 2* and *Table 3*.

An alternative way to understand the significance of a strength-of-recommendation grade is

**Table 1. Strength-of-Recommendation Grades**

| <i>Strength of recommendation</i> | <i>Basis for recommendation</i>   |
|-----------------------------------|---|
| A                                 | Consistent, good-quality patient-oriented evidence*   |
| B                                 | Inconsistent or limited-quality patient-oriented evidence*  |
| C                                 | Consensus, disease-oriented evidence,* usual practice, expert opinion, or case series for studies of diagnosis, treatment, prevention, or screening |

\*—Patient-oriented evidence measures outcomes that matter to patients: morbidity, mortality, symptom improvement, cost reduction, and quality of life. Disease-oriented evidence measures intermediate, physiologic, or surrogate end points that may or may not reflect improvements in patient outcomes (e.g., blood pressure, blood chemistry, physiologic function, pathologic findings).

**Table 2. Assessing Quality of Evidence**

| <i>Study quality</i>                               | <i>Diagnosis</i>   | <i>Treatment/prevention/<br/>screening</i>   | <i>Prognosis</i>   |
|--|--|--|--|
| Level 1: good-quality, patient-oriented evidence   | Validated clinical decision rule<br>SR/meta-analysis of high-quality studies<br>High-quality diagnostic cohort study*  | SR/meta-analysis or RCTs with consistent findings<br>High-quality individual RCT†<br>All-or-none study‡  | SR/meta-analysis of good-quality cohort studies<br>Prospective cohort study with good follow-up  |
| Level 2: limited-quality patient-oriented evidence | Unvalidated clinical decision rule<br>SR/meta-analysis of lower quality studies or studies with inconsistent findings<br>Lower quality diagnostic cohort study or diagnostic case-control study  | SR/meta-analysis of lower quality clinical trials or of studies with inconsistent findings<br>Lower quality clinical trial<br>Cohort study<br>Case-control study | SR/meta-analysis of lower quality cohort studies or with inconsistent results<br>Retrospective cohort study or prospective cohort study with poor follow-up<br>Case-control study<br>Case series |
| Level 3: other evidence                            | Consensus guidelines, extrapolations from bench research, usual practice, opinion, disease-oriented evidence (intermediate or physiologic outcomes only), or case series for studies of diagnosis, treatment, prevention, or screening |  |  |

\*—High-quality diagnostic cohort study: cohort design, adequate size, adequate spectrum of patients, blinding, and a consistent, well-defined reference standard.

†—High-quality RCT: allocation concealed, blinding if possible, intention-to-treat analysis, adequate statistical power, adequate follow-up (greater than 80 percent).

‡—In an all-or-none study, the treatment causes a dramatic change in outcomes, such as antibiotics for meningitis or surgery for appendicitis, which precludes study in a controlled trial.

(SR = systematic review; RCT = randomized controlled trial)

## Strength-of-Recommendation Taxonomy

through the algorithm generally followed by authors and editors in assigning grades based on a body of evidence (Figure 1). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation based on the benefits, harms, and costs of the intervention being recommended.

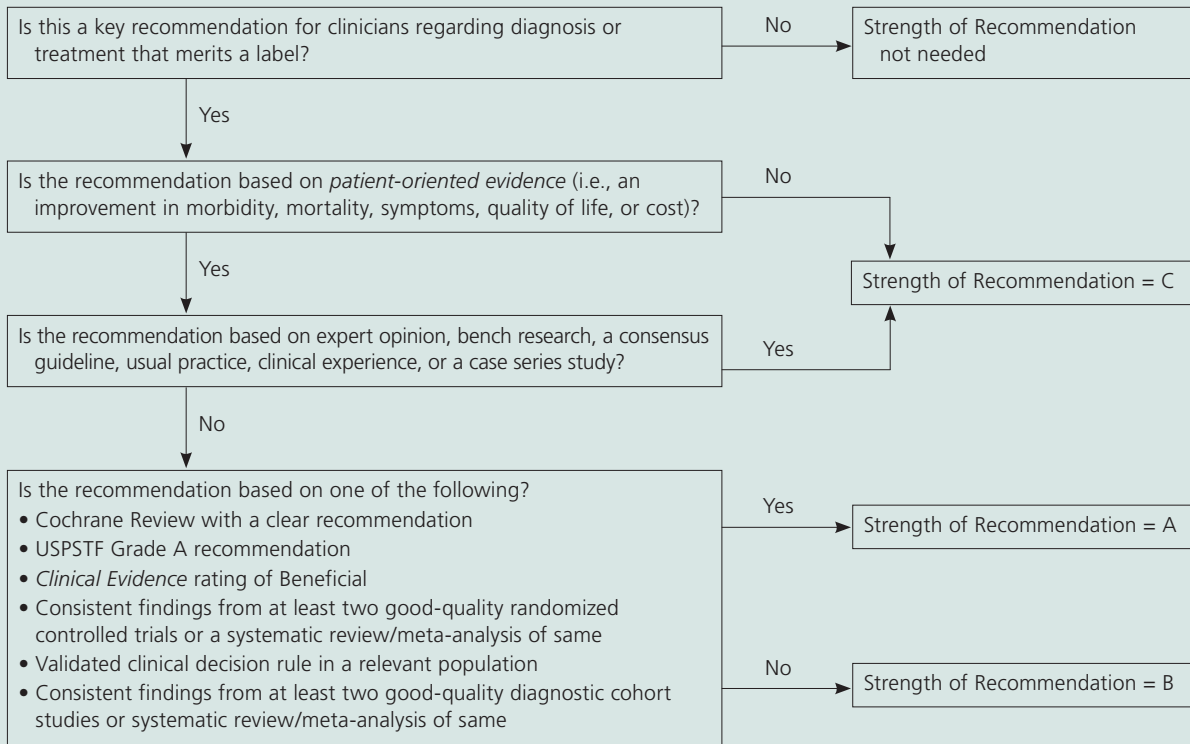
### REFERENCE

1. Ebell MH, Siwek J, Weiss BD, Woolf SH, Susman J, Ewigman B, et al. Strength of Recommendation Taxonomy (SORT): a patient-centered approach to grading evidence in the medical literature. *Am Fam Physician* 2004;69:549-57. ■

**Table 3. Assessing Consistency of Evidence Across Studies**

|              |  |
|--------------|--|
| Consistent   | Most studies found similar or at least coherent conclusions (coherence means that differences are explainable).<br><i>or</i><br>If high-quality and up-to-date systematic reviews or meta-analyses exist, they support the recommendation. |
| Inconsistent | Considerable variation among study findings and lack of coherence<br><i>or</i><br>If high-quality and up-to-date systematic reviews or meta-analyses exist, they do not find consistent evidence in favor of the recommendation.           |

### Strength of Recommendation Based on a Body of Evidence



**Figure 1.** Assigning a Strength-of-Recommendation grade based on a body of evidence. (USPSTF = U.S. Preventive Services Task Force)