Kritičko čitanje znanstvenog članka

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ZNANSTVENI ČLANAK

- Posebna vrsta publikacije kojom se prenosi znanstvena informacija
- Obavijest o novom znanstvenom otkriću

OBLICI ZNANSTVENIH ČLANAKA

- Izvorni znanstveni
- Pregledni
- Prikaz bolesnika
- Pismo uredniku

IMRaD

ICMJE

(International Committee of Medical Journal Editors)

Uniform Requirements for Manuscripts Submitted to Biomedical Journals

http://www.icmje.org/

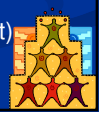
STRUKTURA IZVORNOG RADA

Uvod
Postupci → Ustroj, Mjesto, Ispitanici, Intervencija, Glavna mjera ishoda
Rezultati
Rasprava

- strukturirana informacija
- potpuna informacija
- istinita informacija

HIJERARHIJA VRIJEDNOSTI ISTRAŽIVANJA

1. Meta-analiza / sustavni pregled
2. Randomizirani kontrolirani klinički pokus
3. Kohortno prospektivno istraživanje
4. Retrospektivno istraživanje (case-control study)
5. Presječno istraživanje
6. Prikaz slučaja (case series & case report)



U praksi

- Bolesnik
- Pitanje: PICO (ključne riječi)
- Pretraživanje literature
- Pronalaženje "najboljeg" dokaza
- KRITIČKA PROCJENA VRIJEDNOSTI

Najčešća pitanja

- Dijagnoza: pouzdanost testa u prepoznavanju bolesti?
- Etiologija/štetnost: izloženost uzročnom čimbeniku?
- Terapija: koja i koliko djelotvorna?
- Prognoza: ishod bolesti?

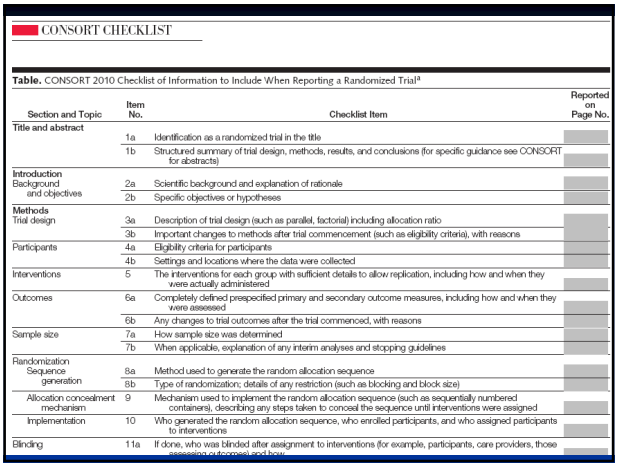
3 koraka kritičke procjene dokaza

- 1. Je li valjan (istinit, koliko to može biti)?
- 2. Je li važan? (kakvi su rezultati?)
- 3. Je li primjenjiv? (na našeg bolesnika, u našoj situaciji…)

CATs

"Critical Appraisal Tools"

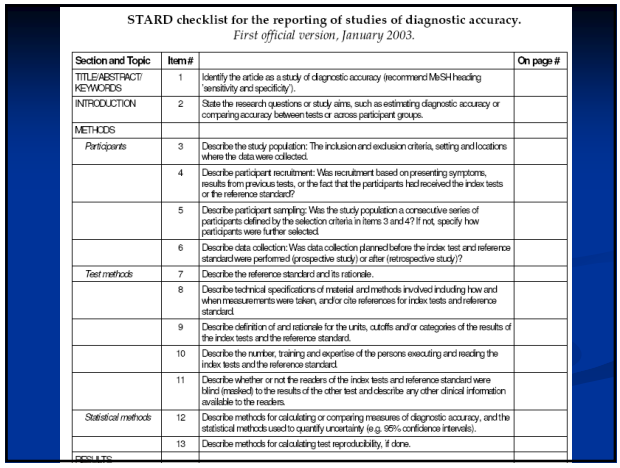
- CONSORT (Consolidated Standards of Reporting Trials) - RCT (terapija)
- STARD (Standards for Reporting of Diagnostic Accuracy) – za dijagnostičke testove
- STROBE (Strengthening the Reporting of *Observational* Studies in Epidemiology) – za opažajna ispitivanja
- QUORUM (Quality of Reporting Meta-analyses) – za metaanalize
- AGREE (Appraisal of *Guidelines* Research & Evaluation) – za smjernice



CONSORT CHECKLIST

Table. CONSORT 2010 Checklist of Information to Include When Reporting a Randomized Trial[a]

Section and Topic	Item No.	Checklist Item	Reported on Page No.
Title and abstract			
	1a	Identification as a randomized trial in the title	
	1b	Structured summary of trial design, methods, results, and conclusions (for specific guidance see CONSORT for abstracts)	
Introduction			
Background and objectives	2a	Scientific background and explanation of rationale	
	2b	Specific objectives or hypotheses	
Methods			
Trial design	3a	Description of trial design (such as parallel, factorial) including allocation ratio	
	3b	Important changes to methods after trial commencement (such as eligibility criteria), with reasons	
Participants	4a	Eligibility criteria for participants	
	4b	Settings and locations where the data were collected	
Interventions	5	The interventions for each group with sufficient details to allow replication, including how and when they were actually administered	
Outcomes	6a	Completely defined prespecified primary and secondary outcome measures, including how and when they were assessed	
	6b	Any changes to trial outcomes after the trial commenced, with reasons	
Sample size	7a	How sample size was determined	
	7b	When applicable, explanation of any interim analyses and stopping guidelines	
Randomization			
Sequence generation	8a	Method used to generate the random allocation sequence	
	8b	Type of randomization; details of any restriction (such as blocking and block size)	
Allocation concealment mechanism	9	Mechanism used to implement the random allocation sequence (such as sequentially numbered containers), describing any steps taken to conceal the sequence until interventions were assigned	
Implementation	10	Who generated the random allocation sequence, who enrolled participants, and who assigned participants to interventions	
Blinding	11a	If done, who was blinded after assignment to interventions (for example, participants, care providers, those assessing outcomes) and how	



STARD checklist for the reporting of studies of diagnostic accuracy.
First official version, January 2003.

Section and Topic	Item #		On page #
TITLE/ABSTRACT/ KEYWORDS	1	Identify the article as a study of diagnostic accuracy (recommend MeSH heading 'sensitivity and specificity').	
INTRODUCTION	2	State the research questions or study aims, such as estimating diagnostic accuracy or comparing accuracy between tests or across participant groups.	
METHODS			
Participants	3	Describe the study population: The inclusion and exclusion criteria, setting and locations where the data were collected.	
	4	Describe participant recruitment: Was recruitment based on presenting symptoms, results from previous tests, or the fact that the participants had received the index tests or the reference standard?	
	5	Describe participant sampling: Was the study population a consecutive series of participants defined by the selection criteria in items 3 and 4? If not, specify how participants were further selected.	
	6	Describe data collection: Was data collection planned before the index test and reference standard were performed (prospective study) or after (retrospective study)?	
Test methods	7	Describe the reference standard and its rationale.	
	8	Describe technical specifications of material and methods involved including how and when measurements were taken, and/or cite references for index tests and reference standard.	
	9	Describe definition of and rationale for the units, cutoffs and/or categories of the results of the index tests and the reference standard.	
	10	Describe the number, training and expertise of the persons executing and reading the index tests and the reference standard.	
	11	Describe whether or not the readers of the index tests and reference standard were blind (masked) to the results of the other test and describe any other clinical information available to the readers.	
Statistical methods	12	Describe methods for calculating or comparing measures of diagnostic accuracy, and the statistical methods used to quantify uncertainty (e.g. 95% confidence intervals).	
	13	Describe methods for calculating test reproducibility, if done.	
RESULTS			

STROBE Statement—checklist of items that should be included in reports of observational studies

	Item No	Recommendation
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found
Introduction		
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported
Objectives	3	State specific objectives, including any prespecified hypotheses
Methods		
Study design	4	Present key elements of study design early in the paper
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection
Participants	6	(*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls

STROBE Statement—Checklist of items that should be included in reports of ***case-control studies***

	Item No	Recommendation
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found
Introduction		
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported
Objectives	3	State specific objectives, including any prespecified hypotheses
Methods		
Study design	4	Present key elements of study design early in the paper
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls
		(*b*) For matched studies, give matching criteria and the number of controls per case
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is

ČITANJE

Primjer

Pediat Res 1972;6:26

Krv za analizu uzeta je od 48 osoba koje smo upoznali s pokusom i koje su pristale na istraživanje (informed and consenting subjects); dob ispitanika bila je od 6 mjeseci do 22 godine.