

Criteria for scoring (title and abstract)		
Criterion	Outcome	Description
Full-text available	Yes / No	Is a full-text available from pubmed?
Veterinary study	Yes / No	Is the paper a study with animals?
Overdiagnosis as a dominant theme	Yes / No	<p>Is overdiagnosis discussed as a specific dominant theme</p> <p>Include: Prognostic / prediction studies relating to disease progression</p> <p>Include: Trend studies. Index test will often be not addressed</p> <p>Include: Active surveillance studies that assess what the impact is of having a in-between category, next to treat and do not treat</p> <p>Exclude: Studies in which no diagnostic method is evaluated</p> <p>Exclude: Erratums</p> <p>Exclude: Case-studies (n = < 10)</p> <p>Exclude: Overview articles without a specific focus on diagnostics</p> <p>Exclude: Articles not mentioning overdiagnosis or only briefly commenting on it (particularly in the discussion)</p> <p>Example: Exclude article which states: "When Diagnostic test X is replaced with Diagnostic test Y sensitivity and specificity may be improved. As a result overdiagnosis of Disease Z may be reduced"</p>
Clinical field	Bone & connective tissue	Examples: Myopathy, osteoporosis, dental problems
	Cancer	Examples: Prostate cancer, breast cancer, leukemia Exclude: cervical cancer caused by HPV (=infection)
	Cardiovascular	Examples: Pulmonary embolism, angina
	Congenital	Examples: Down syndrome, hypospadias
	Ear	Example: Tinnitus
	Eye	Example: Juncuveitis
	Gastrointestinal	Examples: Crohn's disease, reflux disease, liver failure
	Gynaecology & Obstetrics	Example: Preeclampsia
	Immune system	Examples: Allergic reactions, autoimmune disorders, Heparin induced thrombocytopenia (HIT), PANDA's, Rheumatoid arthritis
	Infection	Examples: Malaria, HIV, HPV, Clostridium difficile, pneumonia
	Mental	Examples: ADHD, autism, depression, schizophrenia, bipolar disorder, (vascular) dementia Include: Diseases that are primarily psychiatric disorders and often result in impaired cognitive function Exclude: See neurological disorders
	Metabolic	Examples: Diabetes, hypogonadism, hypothyroidism, growth related 'disorders', nutrition status
	Neurological	Example: Multiple sclerosis, Parkinsons, Alzheimer Include: Diseases of the central / peripheral nervous system, that often have motorical implications Exclude: See mental disorders
	Perinatal	Example: Malnutrition of the unborn child, child specific problems during pregnancy Include: disease in the unborn child
	Respiratory	Examples: COPD, asthma, nasal disorders
Skin	Example: Eczema	
Trauma	Examples: Car accidents, cuts, fractures, sprains, injury during surgery	
Urogenital	Examples: Chronic kidney failure, kidney stones	
No specific clinical field	Multiple clinical domains are assessed OR it is unclear if the paper focusses on a specific clinical domains Example: a methodological paper on how we should quantify overdiagnosis	
Study aim	Methodological	<p>Papers describing a theoretical framework for assessing overdiagnosis</p> <p>Include: Commentaries discussing the way overdiagnosis was determined in a different empirical primary study</p> <p>Include: Combination papers; Papers that are empirical, but also have a strong methodological focus on overdiagnosis</p> <p>Include: Modelling studies</p>
	Non-methodological	Results from a primary study or assessment of outcomes by a review / overview paper
Article type	Commentary	A comment, reply or rebuttal on a previously published paper or commentary
	Narrative review	<p>A paper giving a broad oversight of a specific topic, often from one particular authors view</p> <p>Include: editorials</p> <p>Include: opinion pieces</p> <p>Include: interviews</p> <p>Include: guidelines</p> <p>Exclude: Overviews that only refer to 1 or 2 accuracy studies, without further discussion on the topic of overdiagnosis</p>
	Primary paper	Consists of a collection of original primary data collected by the researcher
	Systematic review	<p>Collection and synthesis of available evidence on a topic.</p> <p>Include: Systematic assessments / meta-analyses of various articles within a specific domain</p> <p>Exclude: General discussions and exposes about a subject without a clear structural approach</p>
Type of diagnostic test	Biomarker	<p>Any measurement of chemicals in the human body as well as genotyping</p> <p>Include: immunohistochemistry (even though this may be assessed via microscopy in some cases)</p> <p>Include: Rapid diagnostic test for malaria</p>
	Histology	<p>Qualitative visual assessment of a target tissue through biopsy under a microscope (or similar devices)</p> <p>Exclude: Rapid diagnostic test for malaria (biomarker)</p> <p>Exclude: Scopy's (medical examination)</p>
	Imaging	<p>Any form of digital visualisation of the human body, such as MRI, CT, EKG, EEG, etc</p> <p>Exclude: Scopy's (medical examination)</p>
	Medical examination	<p>(Quick) medical tests that are performed directly by the clinician, either with or without specific medical equipment</p> <p>Include: Endoscopy, coloscopy, spirometry, reflex test, exploratory surgery, DSM-V assessment, psychological evaluations, skin prick tests (for allergy), blood pressure measurement</p> <p>Include: Assessment of medical history of the patient by a clinician, such as age, gender, smoking habits, exercise pattern, etc</p>
	Prediction model	<p>List of predictors used in a prediction model</p> <p>Exclude: Overall assessments using multiple tests (= "none")</p> <p>Exclude: Modelling studies that evaluate one particular index test, while using input on transition predictions in the rest of that model</p> <p>Note: Other index tests can not be checked with a prediction model, since they will be part of that model</p>
	None	<p>Not one specific test is studied (so a broad range of tests or no specific one is addressed)</p> <p>Include: Overview papers that only discuss the general topic of overdiagnosis</p> <p>Include: Papers discussing various tests (hence there is no specific index test)</p>

Screening	Yes / No	<p>Is the primary focus of the study on diagnosis or detection in asymptomatic patients?</p> <p>Include: Screening is mentioned multiple times and explicitly</p> <p>Exclude: Screening as an example in an overview / review paper</p> <p>Exclude: Prognostic studies in patients that already received diagnosis</p>
Overdiagnosis context	Overdiagnosis estimation	<p>Overdiagnosis relating to the effect that a diagnostic test has on the number of excess cases found</p> <p>Include: Overdiagnosis mentioned in the results</p> <p>Include: Accuracy studies quantifying false-positive findings or % of overdiagnosis</p> <p>Include: Modelling papers that quantify overdiagnosis</p> <p>Exclude: Comparison of two diagnostic tests, without explicit quantification / assessment of overdiagnosis</p> <p>Exclude: Misdiagnosis / misclassification (= disease definition)</p> <p>Exclude: Overview papers that only briefly mention results from other primary studies</p> <p>Exclude: Overview papers that mention some quantitative results of overdiagnosis, but predominantly have a more broad discussion in general (=other)</p>
	Disease definition	<p>Overdiagnosis as a result of shifting the disease definition in terms of biomarker threshold or criteria in a scoring list</p> <p>Include: Misclassification / misdiagnosis</p> <p>Include: Papers assessing pathologic / biologic / mechanistic background of the disease in context with overdiagnosis. <i>However be critical whether these directly link particular biologic subclassifications of a disease to overdiagnosis</i></p>
	Overdiagnosis communication	<p>Overdiagnosis as subject of communication between clinicians and/or patients</p> <p>Include: Studies that assess overdiagnosis communication to patients before or after diagnostic tests</p> <p>Include: Studies assessing people's general understanding of the concept of overdiagnosis</p>
	Incidental findings	<p>Overdiagnosis as a coincidental finding resulting from diagnostic testing of an unrelated illness</p>
	Genomics	<p>Overdiagnosis resulting from genome (screening) assessments, determining high-risk groups</p>
	Other	<p>Overdiagnosis that can not be related to any of the categories above</p> <p>Include: Overview paper describing multiple aspects of overdiagnosis (e.g. accuracy, definition, litigation, methodology)</p> <p>Include: Studies looking at the downstream consequences of overdiagnosis (e.g. quality of life)</p> <p>Include: Studies looking at overall reasons for clinicians to overdiagnose (e.g. litigation risk, carefullness, unaware of negative consequences)</p> <p>Include: Trend studies</p> <p>Include: Studies on drivers and consequences of overdiagnosis</p>