

Supplementary Materials

Supplementary 1: Search strategy

Supplementary 2: Table S1. Detailed characteristics of all included studies

Supplementary 1: Search strategy

PubMed

("Medical Overuse"[Mesh] OR "Unnecessary Procedures"[Mesh] OR Overdiagnosis[tiab] OR "Over-diagnosis"[tiab] OR "Over diagnosis"[tiab] OR "Unnecessary Procedures"[tiab] OR Overtreating[tiab] OR Overtreatment[tiab] OR Overmedicalization[tiab] OR Overmedicalisation[tiab] OR ((Overuse[ti] OR Unnecessary[ti] OR Unwarranted[ti] OR Inappropriate[ti] OR De-implementation[tiab] OR Deimplementation[tiab]) AND (Medication[tiab] OR Therapeutic[tiab] OR Antibiotics[tiab] OR Operation[tiab] OR Operations[tiab] OR Medical[ti])))

AND

(Overdiagnosis[tiab] OR "Over-diagnosis"[tiab] OR "Over diagnosis"[tiab] OR ((Overuse[ti] OR Overtreatment[tiab]) AND (Tests[tiab] OR Test[tiab] OR Screening[tiab]))) OR (("Diagnosis"[Mesh] OR "diagnosis"[sh] OR "diagnostic imaging"[sh] OR Diagnosis[tiab] OR Diagnostic[tiab] OR "Visual assessment"[tiab] OR "Visual assessment"[tiab]) AND ("Unnecessary Procedures"[Mesh] OR "Medical Overuse"[Mesh] OR Threshold[tiab] OR Thresholds[tiab] OR Overuse[tiab])))

AND

(afghanistan[Text Word] OR albania[Text Word] OR algeria[Text Word] OR american samoa[Text Word] OR angola[Text Word] OR antigua[Text Word] OR barbuda[Text Word] OR argentina[Text Word] OR armenia[Text Word] OR armenian[Text Word] OR aruba[Text Word] OR azerbaijan[Text Word] OR bahrain[Text Word] OR bangladesh[Text Word] OR barbados[Text Word] OR belarus[Text Word] OR byelarus[Text Word] OR belorussia[Text Word] OR byelorussian[Text Word] OR belize[Text Word] OR british honduras[Text Word] OR benin[Text Word] OR dahomey[Text Word] OR bhutan[Text Word] OR bolivia[Text Word] OR bosnia[Text Word] OR herzegovina[Text Word] OR botswana[Text Word] OR bechuanaland[Text Word] OR brazil[Text Word] OR brasil[Text Word] OR bulgaria[Text Word] OR burkina faso[Text Word] OR burkina fasso[Text Word] OR upper volta[Text Word] OR burundi[Text Word] OR urundi[Text Word] OR cabo verde[Text Word] OR cape verde[Text Word] OR cambodia[Text Word] OR kampuchea[Text Word] OR khmer republic[Text Word] OR cameroon[Text Word] OR cameron[Text Word] OR cameroun[Text Word] OR central african republic[Text Word] OR ubangi shari[Text Word] OR chad[Text Word] OR chile[Text Word] OR china[Text Word] OR colombia[Text Word] OR comoros[Text Word] OR comoro islands[Text Word] OR mayotte[Text Word] OR congo[Text Word] OR zaire[Text Word] OR costa rica[Text Word] OR cote d'ivoire[Text Word] OR cote d'ivoire[Text Word] OR cote divoire[Text Word] OR cote d ivoire[Text Word] OR ivory coast[Text Word] OR croatia[Text Word] OR cuba[Text Word] OR cyprus[Text Word] OR czech republic[Text Word] OR czechoslovakia[Text Word] OR djibouti[Text Word] OR french somaliland[Text Word] OR dominica[Text Word] OR dominican republic[Text Word] OR ecuador[Text Word] OR egypt[Text Word] OR united arab republic[Text Word] OR el salvador[Text Word] OR equatorial guinea[Text Word] OR spanish guinea[Text Word] OR eritrea[Text Word] OR estonia[Text Word] OR eswatini[Text Word] OR swaziland[Text Word] OR ethiopia[Text Word] OR fiji[Text Word] OR gabon[Text Word] OR gabonese republic[Text Word] OR gambia[Text Word] OR georgia[Text Word] OR georgian[Text Word] OR ghana[Text Word] OR gold coast[Text Word] OR gibraltar[Text Word] OR greece[Text Word] OR grenada[Text Word] OR guam[Text Word] OR guatemala[Text Word] OR guinea[Text Word] OR guyana[Text Word] OR guiana[Text Word] OR haiti[Text Word] OR hispaniola[Text Word] OR honduras[Text Word] OR hungary[Text Word] OR india[Text Word] OR indonesia[Text Word] OR timor[Text Word] OR iran[Text Word] OR iraq[Text Word] OR isle of man[Text Word] OR jamaica[Text Word] OR jordan[Text Word] OR kazakhstan[Text Word] OR kazakh[Text Word] OR kenya[Text Word] OR korea[Text Word] OR kosovo[Text Word] OR kyrgyzstan[Text Word] OR kirghizia[Text Word] OR kirgizstan[Text Word] OR kyrgyz republic[Text Word] OR kirghiz[Text Word] OR laos[Text Word] OR lao pdr[Text Word] OR lao people's democratic republic[Text Word] OR latvia[Text Word] OR lebanon[Text Word] OR lesotho[Text Word] OR basutoland[Text Word] OR liberia[Text Word] OR libya[Text Word] OR libyan arab jamahiriya[Text Word] OR lithuania[Text Word] OR macau[Text Word] OR macao[Text Word] OR macedonia[Text Word] OR madagascar[Text Word] OR malagasy republic[Text Word] OR malawi[Text

Word] OR nyasaland[Text Word] OR malaysia[Text Word] OR maldives[Text Word] OR indian ocean[Text Word] OR mali[Text Word] OR malta[Text Word] OR micronesia[Text Word] OR kiribati[Text Word] OR marshall islands[Text Word] OR nauru[Text Word] OR northern mariana islands[Text Word] OR palau[Text Word] OR tuvalu[Text Word] OR mauritania[Text Word] OR mauritius[Text Word] OR mexico[Text Word] OR moldova[Text Word] OR moldovian[Text Word] OR mongolia[Text Word] OR montenegro[Text Word] OR morocco[Text Word] OR ifni[Text Word] OR mozambique[Text Word] OR portuguese east africa[Text Word] OR myanmar[Text Word] OR burma[Text Word] OR namibia[Text Word] OR nepal[Text Word] OR netherlands antilles[Text Word] OR nicaragua[Text Word] OR niger[Text Word] OR nigeria[Text Word] OR oman[Text Word] OR muscat[Text Word] OR pakistan[Text Word] OR panama[Text Word] OR papua new guinea[Text Word] OR paraguay[Text Word] OR peru[Text Word] OR philippines[Text Word] OR philipines[Text Word] OR phillipines[Text Word] OR poland[Text Word] OR polish people's republic[Text Word] OR portugal[Text Word] OR portuguese republic[Text Word] OR puerto rico[Text Word] OR romania[Text Word] OR russia[Text Word] OR russian federation[Text Word] OR ussr[Text Word] OR soviet union[Text Word] OR union of soviet socialist republics[Text Word] OR rwanda[Text Word] OR ruanda[Text Word] OR samoa[Text Word] OR pacific islands[Text Word] OR polynesia[Text Word] OR samoan islands[Text Word] OR sao tome and principe[Text Word] OR saudi arabia[Text Word] OR senegal[Text Word] OR serbia[Text Word] OR seychelles[Text Word] OR sierra leone[Text Word] OR slovakia[Text Word] OR slovak republic[Text Word] OR slovenia[Text Word] OR melanesia[Text Word] OR solomon island[Text Word] OR solomon islands[Text Word] OR norfolk island[Text Word] OR somalia[Text Word] OR south africa[Text Word] OR south sudan[Text Word] OR sri lanka[Text Word] OR ceylon[Text Word] OR saint kitts and nevis[Text Word] OR st kitts and nevis[Text Word] OR saint lucia[Text Word] OR st lucia[Text Word] OR saint vincent[Text Word] OR st vincent[Text Word] OR grenadines[Text Word] OR sudan[Text Word] OR suriname[Text Word] OR surinam[Text Word] OR syria[Text Word] OR syrian arab republic[Text Word] OR tajikistan[Text Word] OR tadjikistan[Text Word] OR tadhikistan[Text Word] OR tadhik[Text Word] OR tanzania[Text Word] OR tanganyika[Text Word] OR thailand[Text Word] OR siam[Text Word] OR timor leste[Text Word] OR east timor[Text Word] OR togo[Text Word] OR togolese republic[Text Word] OR tonga[Text Word] OR trinidad[Text Word] OR tobago[Text Word] OR tunisia[Text Word] OR turkey[Text Word] OR turkmenistan[Text Word] OR turkmen[Text Word] OR uganda[Text Word] OR ukraine[Text Word] OR uruguay[Text Word] OR uzbekistan[Text Word] OR uzbek[Text Word] OR vanuatu[Text Word] OR new hebrides[Text Word] OR venezuela[Text Word] OR vietnam[Text Word] OR viet nam[Text Word] OR middle east[Text Word] OR west bank[Text Word] OR gaza[Text Word] OR palestine[Text Word] OR yemen[Text Word] OR yugoslavia[Text Word] OR zambia[Text Word] OR zimbabwe[Text Word] OR northern rhodesia[Text Word] OR global south[Text Word] OR africa south of the sahara[Text Word] OR sub saharan africa[Text Word] OR subsaharan africa[Text Word] OR central africa[Text Word] OR north africa[Text Word] OR northern africa[Text Word] OR magreb[Text Word] OR maghrib[Text Word] OR sahara[Text Word] OR southern africa[Text Word] OR east africa[Text Word] OR eastern africa[Text Word] OR west africa[Text Word] OR western africa[Text Word] OR west indies[Text Word] OR indian ocean islands[Text Word] OR caribbean[Text Word] OR central america[Text Word] OR latin america[Text Word] OR south america[Text Word] OR central asia[Text Word] OR north asia[Text Word] OR northern asia[Text Word] OR southeastern asia[Text Word] OR south eastern asia[Text Word] OR southeast asia[Text Word] OR south east asia[Text Word] OR western asia[Text Word] OR east europe[Text Word] OR eastern europe[Text Word] OR developing country[Text Word] OR developing countries[Text Word] OR developing nation[Text Word] OR developing nations[Text Word] OR developing population[Text Word] OR developing populations[Text Word] OR developing world[Text Word] OR less developed country[Text Word] OR less developed countries[Text Word] OR less developed nation[Text Word] OR less developed nations[Text Word] OR less developed world[Text Word] OR lesser developed countries[Text Word] OR lesser developed nations[Text Word] OR under developed country[Text Word] OR under developed countries[Text Word] OR under developed nations[Text Word] OR under developed world[Text Word] OR underdeveloped country[Text Word] OR underdeveloped countries[Text Word] OR underdeveloped nation[Text Word] OR

underdeveloped nations[Text Word] OR underdeveloped population[Text Word] OR underdeveloped populations[Text Word] OR underdeveloped world[Text Word] OR middle income country[Text Word] OR middle income countries[Text Word] OR middle income nation[Text Word] OR middle income nations[Text Word] OR middle income population[Text Word] OR middle income populations[Text Word] OR low income country[Text Word] OR low income countries[Text Word] OR low income nation[Text Word] OR low income nations[Text Word] OR low income population[Text Word] OR low income populations[Text Word] OR lower income country[Text Word] OR lower income countries[Text Word] OR lower income nations[Text Word] OR lower income population[Text Word] OR lower income populations[Text Word] OR underserved countries[Text Word] OR underserved nations[Text Word] OR underserved population[Text Word] OR underserved populations[Text Word] OR under served population[Text Word] OR under served populations[Text Word] OR deprived countries[Text Word] OR deprived population[Text Word] OR deprived populations[Text Word] OR poor country[Text Word] OR poor countries[Text Word] OR poor nation[Text Word] OR poor nations[Text Word] OR poor population[Text Word] OR poor populations[Text Word] OR poor world[Text Word] OR poorer countries[Text Word] OR poorer nations[Text Word] OR poorer population[Text Word] OR poorer populations[Text Word] OR developing economy[Text Word] OR developing economies[Text Word] OR less developed economy[Text Word] OR less developed economies[Text Word] OR underdeveloped economies[Text Word] OR middle income economy[Text Word] OR middle income economies[Text Word] OR low income economy[Text Word] OR low income economies[Text Word] OR lower income economies[Text Word] OR low gdp[Text Word] OR low gnp[Text Word] OR low gross domestic[Text Word] OR low gross national[Text Word] OR lower gdp[Text Word] OR lower gross domestic[Text Word] OR lmic[Text Word] OR lmic[Text Word] OR third world[Text Word] OR lami country[Text Word] OR lami countries[Text Word] OR transitional country[Text Word] OR transitional countries[Text Word] OR emerging economies[Text Word] OR emerging nation[Text Word] OR emerging nations[Text Word])

Embase

("Unnecessary Procedure"/exp OR Overdiagnosis:ti,ab OR Over-diagnosis:ti,ab OR "Over diagnosis":ti,ab OR "Unnecessary Procedures":ti,ab OR Overtreating:ti,ab OR Overtreatment:ti,ab OR Overmedicalization:ti,ab OR Overmedicalisation:ti,ab OR ((Overuse:ti OR Unnecessary:ti OR Unwarranted:ti OR Inappropriate:ti OR De-implementation:ti,ab OR Deimplementation:ti,ab) AND (Medication:ti,ab OR Therapeutic:ti,ab OR Antibiotics:ti,ab OR Operation:ti,ab OR Operations:ti,ab OR Medical:ti)))

AND

(Overdiagnosis:ti,ab OR Over-diagnosis:ti,ab OR "Over diagnosis":ti,ab OR ((Overuse:ti OR Overtreatment:ti,ab) AND (Tests:ti,ab OR Test:ti,ab OR Screening:ti,ab)) OR ((Diagnosis/exp OR Diagnosis:ti,ab OR Diagnostic:ti,ab OR "Visual assessment":ti,ab OR "Visual assessment":ti,ab) AND ("Unnecessary Procedure"/exp OR Threshold:ti,ab OR Thresholds:ti,ab OR Overuse:ti,ab)))

AND

(afghanistan OR albania OR algeria OR "american samoa" OR angola OR antigua OR barbuda OR argentina OR armenia OR armenian OR aruba OR azerbaijan OR bahrain OR bangladesh OR barbados OR belarus OR byelarus OR belorussia OR byelorussian OR belize OR "british honduras" OR benin OR dahomey OR bhutan OR bolivia OR bosnia OR herzegovina OR botswana OR bechuanaland OR brazil OR brasil OR bulgaria OR "burkina faso" OR "burkina fasso" OR "upper volta" OR burundi OR urundi OR "cabo verde" OR "cape verde" OR cambodia OR kampuchea OR "khmer republic" OR cameroon OR cameron OR cameroun OR "central african republic" OR "ubangi shari" OR chad OR chile OR china OR colombia OR comoros OR "comoro islands" OR mayotte OR congo OR zaire OR "costa rica" OR "cote divoire" OR "cote d ivoire" OR "cote divoire" OR "cote d ivoire" OR "ivory coast" OR croatia OR cuba OR cyprus OR "czech republic" OR czechoslovakia OR djibouti OR "french somaliland" OR dominica OR "dominican republic" OR ecuador OR egypt OR "united arab republic" OR "el salvador" OR "equatorial guinea" OR "spanish guinea" OR eritrea OR estonia OR eswatini OR swaziland OR ethiopia OR fiji OR gabon OR "gabonese republic" OR gambia OR

georgia OR georgian OR ghana OR "gold coast" OR gibraltar OR greece OR grenada OR guam OR guatemala OR guinea OR guyana OR guiana OR haiti OR hispaniola OR honduras OR hungary OR india OR indonesia OR timor OR iran OR iraq OR "isle of man" OR jamaica OR jordan OR kazakhstan OR kazakh OR kenya OR korea OR kosovo OR kyrgyzstan OR kirghizia OR kirgizstan OR "kyrgyz republic" OR kirghiz OR laos OR "lao pdr" OR "lao peoples democratic republic" OR latvia OR lebanon OR lesotho OR basutoland OR liberia OR libya OR "libyan arab jamahiriya" OR lithuania OR macau OR macao OR macedonia OR madagascar OR "malagasy republic" OR malawi OR nyasaland OR malaysia OR maldives OR "indian ocean" OR mali OR malta OR micronesia OR kiribati OR "marshall islands" OR nauru OR "northern mariana islands" OR palau OR tuvalu OR mauritania OR mauritius OR mexico OR moldova OR moldovian OR mongolia OR montenegro OR morocco OR ifni OR mozambique OR "portuguese east africa" OR myanmar OR burma OR namibia OR nepal OR "netherlands antilles" OR nicaragua OR niger OR nigeria OR oman OR muscat OR pakistan OR panama OR "papua new guinea" OR paraguay OR peru OR philippines OR philipines OR phillipines OR philippines OR poland OR "polish peoples republic" OR portugal OR "portuguese republic" OR "puerto rico" OR romania OR russia OR "russian federation" OR ussr OR "soviet union" OR "union of soviet socialist republics" OR russia OR ruanda OR samoa OR "pacific islands" OR polynesia OR "samoan islands" OR "sao tome" AND principe OR "saudi arabia" OR senegal OR serbia OR seychelles OR "sierra leone" OR slovakia OR "slovak republic" OR slovenia OR melanesia OR "solomon island" OR "solomon islands" OR "norfolk island" OR somalia OR "south africa" OR "south sudan" OR "sri lanka" OR ceylon OR "saint kitts" AND nevis OR "st kitts" AND nevis OR "saint lucia" OR "st lucia" OR "saint vincent" OR "st vincent" OR grenadines OR sudan OR suriname OR surinam OR syria OR "syrian arab republic" OR tajikistan OR tadjikistan OR tadjhikistan OR tadjhik OR tanzania OR tanganyika OR thailand OR siam OR "timor leste" OR "east timor" OR togo OR "togolese republic" OR tonga OR trinidad OR tobago OR tunisia OR turkey OR turkmenistan OR turkmen OR uganda OR ukraine OR uruguay OR uzbekistan OR uzbek OR vanuatu OR "new hebrides" OR venezuela OR vietnam OR "viet nam" OR "middle east" OR "west bank" OR gaza OR palestine OR yemen OR yugoslavia OR zambia OR zimbabwe OR "northern rhodesia" OR "global south" OR "africa south of the sahara" OR "sub saharan africa" OR "subsaharan africa" OR "central africa" OR "north africa" OR "northern africa" OR magreb OR maghrib OR sahara OR "southern africa" OR "east africa" OR "eastern africa" OR "west africa" OR "western africa" OR "west indies" OR "indian ocean islands" OR caribbean OR "central america" OR "latin america" OR "south america" OR "central asia" OR "north asia" OR "northern asia" OR "southeastern asia" OR "south eastern asia" OR "southeast asia" OR "south east asia" OR "western asia" OR "east europe" OR "eastern europe" OR "developing country" OR "developing countries" OR "developing nation" OR "developing nations" OR "developing population" OR "developing populations" OR "developing world" OR "less developed country" OR "less developed countries" OR "less developed nation" OR "less developed nations" OR "less developed world" OR "lesser developed countries" OR "lesser developed nations" OR "under developed country" OR "under developed countries" OR "under developed nations" OR "under developed world" OR "underdeveloped country" OR "underdeveloped countries" OR "underdeveloped nation" OR "underdeveloped nations" OR "underdeveloped population" OR "underdeveloped populations" OR "underdeveloped world" OR "middle income country" OR "middle income countries" OR "middle income nation" OR "middle income nations" OR "middle income population" OR "middle income populations" OR "low income country" OR "low income countries" OR "low income nation" OR "low income nations" OR "low income population" OR "low income populations" OR "lower income country" OR "lower income countries" OR "lower income nations" OR "lower income population" OR "lower income populations" OR "underserved countries" OR "underserved nations" OR "underserved population" OR "underserved populations" OR "under served population" OR "under served populations" OR "deprived countries" OR "deprived population" OR "deprived populations" OR "poor country" OR "poor countries" OR "poor nation" OR "poor nations" OR "poor population" OR "poor populations" OR "poor world" OR "poorer countries" OR "poorer nations" OR "poorer population" OR "poorer populations" OR "developing economy" OR "developing economies" OR "less developed economy" OR "less developed economies" OR "underdeveloped economies" OR "middle income economy" OR "middle income economies" OR "low income economy" OR "low income economies" OR "lower income economies" OR

"low gdp" OR "low gnp" OR "low gross domestic" OR "low gross national" OR "lower gdp" OR "lower gross domestic" OR "third world" OR "lami country" OR "lami countries" OR "transitional country" OR "transitional countries" OR "emerging economies" OR "emerging nation" OR "emerging nations")

PsycINFO

(Overdiagnosis.ti,ab. OR Over-diagnosis.ti,ab. OR "Over diagnosis".ti,ab. OR ((Overuse.ti. OR Overtreatment.ti,ab.) AND (Tests.ti,ab. OR Test.ti,ab. OR Screening.ti,ab.)) OR ((exp Diagnosis/ OR "Diagnosis" OR "Diagnostic Imaging" OR Diagnosis.ti,ab. OR Diagnostic.ti,ab. OR "Visual assessment".ti,ab. OR "Visual assessment".ti,ab.) AND (Thresholds.ti,ab. OR Overuse.ti,ab.)))

AND

(afghanistan.mp. OR albania.mp. OR algeria.mp. OR "american samoa".mp. OR angola.mp. OR antigua.mp. OR barbuda.mp. OR argentina.mp. OR armenia.mp. OR armenian.mp. OR aruba.mp. OR azerbaijan.mp. OR bahrain.mp. OR bangladesh.mp. OR barbados.mp. OR belarus.mp. OR byelarus.mp. OR belorussia.mp. OR byelorussian.mp. OR belize.mp. OR "british honduras".mp. OR benin.mp. OR dahomey.mp. OR bhutan.mp. OR bolivia.mp. OR bosnia.mp. OR herzegovina.mp. OR botswana.mp. OR bechuanaland.mp. OR brazil.mp. OR brasil.mp. OR bulgaria.mp. OR "burkina faso".mp. OR "burkina fasso".mp. OR "upper volta".mp. OR burundi.mp. OR urundi.mp. OR "cabo verde".mp. OR "cape verde".mp. OR cambodia.mp. OR kampuchea.mp. OR "khmer republic".mp. OR cameroon.mp. OR cameron.mp. OR cameroun.mp. OR "central african republic".mp. OR "ubangi shari".mp. OR chad.mp. OR chile.mp. OR china.mp. OR colombia.mp. OR comoros.mp. OR "comoro islands".mp. OR mayotte.mp. OR congo.mp. OR zaire.mp. OR "costa rica".mp. OR "cote d'ivoire".mp. OR "cote d'ivoire".mp. OR "cote divoire".mp. OR "cote d ivoire".mp. OR "ivory coast".mp. OR croatia.mp. OR cuba.mp. OR cyprus.mp. OR "czech republic".mp. OR czechoslovakia.mp. OR djibouti.mp. OR "french somaliland".mp. OR dominica.mp. OR "dominican republic".mp. OR ecuador.mp. OR egypt.mp. OR "united arab republic".mp. OR "el salvador".mp. OR "equatorial guinea".mp. OR "spanish guinea".mp. OR eritrea.mp. OR estonia.mp. OR eswatini.mp. OR swaziland.mp. OR ethiopia.mp. OR fiji.mp. OR gabon.mp. OR "gabonese republic".mp. OR gambia.mp. OR georgia.mp. OR georgian.mp. OR ghana.mp. OR "gold coast".mp. OR gibraltar.mp. OR greece.mp. OR grenada.mp. OR guam.mp. OR guatemala.mp. OR guinea.mp. OR guyana.mp. OR guiana.mp. OR haiti.mp. OR hispaniola.mp. OR honduras.mp. OR hungary.mp. OR india.mp. OR indonesia.mp. OR timor.mp. OR iran.mp. OR iraq.mp. OR "isle of man".mp. OR jamaica.mp. OR jordan.mp. OR kazakhstan.mp. OR kazakh.mp. OR kenya.mp. OR korea.mp. OR kosovo.mp. OR kyrgyzstan.mp. OR kirghizia.mp. OR kirgizstan.mp. OR "kyrgyz republic".mp. OR kirghiz.mp. OR laos.mp. OR "lao pdr".mp. OR "lao people's democratic republic".mp. OR latvia.mp. OR lebanon.mp. OR lesotho.mp. OR basutoland.mp. OR liberia.mp. OR libya.mp. OR "libyan arab jamahiriya".mp. OR lithuania.mp. OR macau.mp. OR macao.mp. OR macedonia.mp. OR madagascar.mp. OR "malagasy republic".mp. OR malawi.mp. OR nyasaland.mp. OR malaysia.mp. OR maldives.mp. OR "indian ocean".mp. OR mali.mp. OR malta.mp. OR micronesia.mp. OR kiribati.mp. OR "marshall islands".mp. OR nauru.mp. OR "northern mariana islands".mp. OR palau.mp. OR tuvalu.mp. OR mauritania.mp. OR mauritius.mp. OR mexico.mp. OR moldova.mp. OR moldovian.mp. OR mongolia.mp. OR montenegro.mp. OR morocco.mp. OR ifni.mp. OR mozambique.mp. OR "portuguese east africa".mp. OR myanmar.mp. OR burma.mp. OR namibia.mp. OR nepal.mp. OR "netherlands antilles".mp. OR nicaragua.mp. OR niger.mp. OR nigeria.mp. OR oman.mp. OR muscat.mp. OR pakistan.mp. OR panama.mp. OR "papua new guinea".mp. OR paraguay.mp. OR peru.mp. OR philippines.mp. OR philipines.mp. OR philippines.mp. OR poland.mp. OR "polish people's republic".mp. OR portugal.mp. OR "portuguese republic".mp. OR "puerto rico".mp. OR romania.mp. OR russia.mp. OR "russian federation".mp. OR ussr.mp. OR "soviet union".mp. OR "union of soviet socialist republics".mp. OR rwanda.mp. OR ruanda.mp. OR samoa.mp. OR "pacific islands".mp. OR polynesia.mp. OR "samoan islands".mp. OR "sao tome" AND principe.mp. OR "saudi arabia".mp. OR senegal.mp. OR serbia.mp. OR seychelles.mp. OR "sierra leone".mp. OR slovakia.mp. OR "slovak republic".mp. OR slovenia.mp. OR melanesia.mp. OR "solomon island".mp. OR "solomon islands".mp. OR "norfolk island".mp. OR

somalia.mp. OR "south africa".mp. OR "south sudan".mp. OR "sri lanka".mp. OR ceylon.mp. OR "saint kitts" AND nevis.mp. OR "st kitts" AND nevis.mp. OR "saint lucia".mp. OR "st lucia".mp. OR "saint vincent".mp. OR "st vincent".mp. OR grenadines.mp. OR sudan.mp. OR suriname.mp. OR surinam.mp. OR syria.mp. OR "syrian arab republic".mp. OR tajikistan.mp. OR tadjikistan.mp. OR tadjhikistan.mp. OR tadjhik.mp. OR tanzania.mp. OR tanganyika.mp. OR thailand.mp. OR siam.mp. OR "timor leste".mp. OR "east timor".mp. OR togo.mp. OR "togolese republic".mp. OR tonga.mp. OR trinidad.mp. OR tobago.mp. OR tunisia.mp. OR turkey.mp. OR turkmenistan.mp. OR turkmen.mp. OR uganda.mp. OR ukraine.mp. OR uruguay.mp. OR uzbekistan.mp. OR uzbek.mp. OR vanuatu.mp. OR "new hebrides".mp. OR venezuela.mp. OR vietnam.mp. OR "viet nam".mp. OR "middle east".mp. OR "west bank".mp. OR gaza.mp. OR palestine.mp. OR yemen.mp. OR yugoslavia.mp. OR zambia.mp. OR zimbabwe.mp. OR "northern rhodesia".mp. OR "global south".mp. OR "africa south of the sahara".mp. OR "sub saharan africa".mp. OR "subsaharan africa".mp. OR "central africa".mp. OR "north africa".mp. OR "northern africa".mp. OR magreb.mp. OR maghrib.mp. OR sahara.mp. OR "southern africa".mp. OR "east africa".mp. OR "eastern africa".mp. OR "west africa".mp. OR "western africa".mp. OR "west indies".mp. OR "indian ocean islands".mp. OR caribbean.mp. OR "central america".mp. OR "latin america".mp. OR "south america".mp. OR "central asia".mp. OR "north asia".mp. OR "northern asia".mp. OR "southeastern asia".mp. OR "south eastern asia".mp. OR "southeast asia".mp. OR "south east asia".mp. OR "western asia".mp. OR "east europe".mp. OR "eastern europe".mp. OR "developing country".mp. OR "developing countries".mp. OR "developing nation".mp. OR "developing nations".mp. OR "developing population".mp. OR "developing populations".mp. OR "developing world".mp. OR "less developed country".mp. OR "less developed countries".mp. OR "less developed nation".mp. OR "less developed nations".mp. OR "less developed world".mp. OR "lesser developed countries".mp. OR "lesser developed nations".mp. OR "under developed country".mp. OR "under developed countries".mp. OR "under developed nations".mp. OR "under developed world".mp. OR "underdeveloped country".mp. OR "underdeveloped countries".mp. OR "underdeveloped nation".mp. OR "underdeveloped nations".mp. OR "underdeveloped population".mp. OR "underdeveloped populations".mp. OR "underdeveloped world".mp. OR "middle income country".mp. OR "middle income countries".mp. OR "middle income nation".mp. OR "middle income nations".mp. OR "middle income population".mp. OR "middle income populations".mp. OR "low income country".mp. OR "low income countries".mp. OR "low income nation".mp. OR "low income nations".mp. OR "low income population".mp. OR "low income populations".mp. OR "lower income country".mp. OR "lower income countries".mp. OR "lower income nations".mp. OR "lower income population".mp. OR "lower income populations".mp. OR "underserved countries".mp. OR "underserved nations".mp. OR "underserved population".mp. OR "underserved populations".mp. OR "under served population".mp. OR "under served populations".mp. OR "deprived countries".mp. OR "deprived population".mp. OR "deprived populations".mp. OR "poor country".mp. OR "poor countries".mp. OR "poor nation".mp. OR "poor nations".mp. OR "poor population".mp. OR "poor populations".mp. OR "poor world".mp. OR "poorer countries".mp. OR "poorer nations".mp. OR "poorer population".mp. OR "poorer populations".mp. OR "developing economy".mp. OR "developing economies".mp. OR "less developed economy".mp. OR "less developed economies".mp. OR "underdeveloped economies".mp. OR "middle income economy".mp. OR "middle income economies".mp. OR "low income economy".mp. OR "low income economies".mp. OR "lower income economies".mp. OR "low gdp".mp. OR "low gnp".mp. OR "low gross domestic".mp. OR "low gross national".mp. OR "lower gdp".mp. OR "lower gross domestic".mp. OR lmic.mp. OR lmic.mp. OR "third world".mp. OR "lami country".mp. OR "lami countries".mp. OR "transitional country".mp. OR "transitional countries".mp. OR "emerging economies".mp. OR "emerging nation".mp. OR "emerging nations".mp.)

Global Index Medicus (WPRIM (Western Pacific); LILACS (Americas); IMSEAR (South-East Asia); IMEMR (Eastern Mediterranean); AIM (Africa))

("Medical Overuse" OR "Unnecessary Procedures" OR Overdiagnosis OR "Over diagnosis" OR "Unnecessary Procedures" OR Overtreating OR Overtreatment OR Overmedicalisation OR Overmedicalisation OR

((Overuse OR Unnecessary OR Unwarranted OR Inappropriate OR De-implementation OR Deimplementation) AND (Medication OR Therapeutic OR Antibiotics OR Operation OR Operations OR Medical)))

AND

(Overdiagnosis OR Over-diagnosis OR "Over diagnosis" OR ((Overuse OR Overtreatment) AND (Tests OR Test OR Screening)) OR ((Diagnosis OR "Diagnosis" OR "Diagnostic Imaging" OR Diagnosis OR Diagnostic OR "Visual assessment" OR "Visual assessment") AND ("Unnecessary Procedures" OR "Medical Overuse" OR Threshold OR Thresholds OR Overuse)))

Supplementary 2: Table S1. Detailed characteristics of all included studies**Table S1. Characteristics of included studies in the scoping review (n=129)**

Author, Year Country, Income level	Title, Journal	Study design, Analysis approach, Sample size	Condition, Diagnostic or screening Test,	Main context, Main theme, financial implications
Ahmadi K et al 2014 Iran, Upper middle income	Impact of intravenous acetaminophen therapy on the necessity of cervical spine imaging in patients with cervical spine trauma Chin J Traumatol	Observational e.g. cohort or cross-sectional studies Quantitative (n= 1309)	Condition: Trauma Test: Imaging - CT, X-ray	Overuse of tests Potential Solutions Financial Impact: No
Alimoglu O et al 2020 Turkey, Upper middle income	Do all detected thyroid cancers correspond to 'real cancer'? Br J Surg	Observational e.g. cohort or cross-sectional studies Quantitative (n= 335)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact:
Almenas M et al 2018 Latin America,	Prevención cuaternaria: como hacer, como enseñar Rev bras med fam comunidade	Observational e.g. cohort or cross-sectional studies Mixed (n= 309)	Condition: N/A Test: N/A	Both Potential Solutions Financial Impact:

Alpay Ozbek O et al 2007 Turkey, Upper middle income	[Unnecessary test repeats in viral hepatitis serology] Mikrobiyol Bul	Observational e.g. cohort or cross-sectional studies Quantitative (n= 23705)	Condition: Infectious Test: Pathology - Hepatitis	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: Yes
Al-Selwi K 2009 Yemen, Low income	Overdiagnosis of malaria among the health services providers in Hodeida-Yemen Giornale Italiano di Medicina Tropicale	Observational e.g. cohort or cross-sectional studies Qualitative (n= N/A)	Condition: Infectious Test: N/A	Overdiagnosis Drivers and factors related to OD or overuse of tests Financial Impact:
Ameyaw E et al 2014 Ghana, Lower middle income	The outcome of a test-treat package versus routine outpatient care for Ghanaian children with fever: a pragmatic randomized control trial Malar J	Interventional e.g. randomised trial Quantitative (n= 240)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact:
Ansah EK et al 2015 Ghana, Lower middle income	The impact of providing rapid diagnostic malaria tests on fever management in the private retail sector in Ghana: a cluster randomized trial BMJ	Interventional e.g. randomised trial Quantitative (n= 4603)	Condition: Infectious Test: N/A	Both Potential Solutions Financial Impact: No

Arena TR et al 2014 Brazil, Upper middle income	[Spending with unnecessary complementary tests for hypertension and diabetes in health services] Rev Gaucha Enferm	Observational e.g. cohort or cross-sectional studies Quantitative (n= 293)	Condition: CVD Test: N/A	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Aroonpruksakul N et al 2015 Thailand, Upper middle income	The prevalence of inappropriate blood tests in pediatric patients scheduled for elective surgery in Thailand: A retrospective chart review Asian Biomedicine	Observational e.g. cohort or cross-sectional studies Quantitative (n= 285)	Condition: N/A Test: Pathology - Pre-operative tests	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: Yes
Aske H et al 2015 Cameroon, Lower middle income	Febrile Illness and Intravenous Antimalarial Treatment at a District Hospital in Cameroon West Afr J Med	Observational e.g. cohort or cross-sectional studies Quantitative (n= 91)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Attard SM et al 2015 China, Upper middle income	Implications of iron deficiency/anemia on the classification of diabetes using HbA1c Nutr Diabetes	Observational e.g. cohort or cross-sectional studies Quantitative (n= 7308)	Condition: Diabetes Test: N/A	Overdiagnosis Drivers and factors related to OD or overuse of tests Financial Impact: No

Aydođdu M et al 2014 Turkey, Upper middle income	Wells score and pulmonary embolism rule out criteria in preventing over investigation of pulmonary embolism in emergency departments Tuberkuloz ve Toraks	Observational e.g. cohort or cross-sectional studies Quantitative (n= 108)	Condition: CVD Test: Imaging - CT & US	Overuse of tests Potential Solutions Financial Impact: Yes
Bhattacharyya A et al 2012 India, Lower middle income	A Comparative Study of the Management Decisions by IMNCI Algorithm and by Pediatricians of a Teaching Hospital for the Children Between 2 Months to 5 Years Indian J Community Med	Observational e.g. cohort or cross-sectional studies Quantitative (n= 131)	Condition: Infectious Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No
Bohara TP et al 2018 Nepal, Lower middle income	Appropriateness of Indications of Upper Gastrointestinal Endoscopy and its Association With Positive Finding JNMA J Nepal Med Assoc	Observational e.g. cohort or cross-sectional studies Quantitative (n= 79)	Condition: N/A Test: Procedure - GI Endoscopy	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: Yes
Borges A et al 2018 Colombia, Costa Rica, Brazil, Ecuador,	Thyroid Cancer Incidences From Selected South America Population-Based Cancer Registries: An Age-Period-Cohort Study J Glob Oncol	Observational e.g. cohort or cross-sectional studies Quantitative (n= 7889)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No

Bruxvoort K et al 2011 Tanzania, Lower middle income	Over and under-use of artemisinin based combination therapy at public health facilities in three regions of Tanzania Am J Trop Med Hyg	Observational e.g. cohort or cross-sectional studies Quantitative (n= 1779)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact:
Buendía JA et al 2020 Colombia, Upper middle income	A predictive model of inappropriate use of medical tests and medications in Bronchiolitis Pan Afr Med J	Observational e.g. cohort or cross-sectional studies Quantitative (n= 1930)	Condition: Lung Test: Pathology and Imaging	Overuse of tests Drivers and factors related to OD or overuse of tests Financial Impact: Yes
Caliskan E et al 2004 Turkey, Upper middle income	A population-based risk factor scoring will decrease unnecessary testing for the diagnosis of gestational diabetes mellitus Acta Obstet Gynecol Scand	Observational e.g. cohort or cross-sectional studies Quantitative (n= 425)	Condition: Diabetes Test: N/A	Overdiagnosis Potential Solutions Financial Impact: Yes
Chan TH et al 2006 Malaysia, Upper middle income	Appropriateness of colonoscopy using the ASGE guidelines: experience in a large Asian hospital Chin J Dig Dis	Observational e.g. cohort or cross-sectional studies Quantitative (n= 380)	Condition: N/A Test: Procedure - GI Endoscopy, colonoscopy	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Chandler CI et al 2008 Tanzania, Lower middle income	Malaria overdiagnosis: is patient pressure the problem? Health Policy Plan	Observational e.g. cohort or cross-sectional studies Qualitative (n= 669)	Condition: Infectious Test: Pathology	Overdiagnosis Drivers and factors related to OD or overuse of tests Financial Impact: No

Chandler CI et al 2014 Tanzania, Lower middle income	The development of effective behaviour change interventions to support the use of malaria rapid diagnostic tests by Tanzanian clinicians Implement Sci	Observational e.g. cohort or cross-sectional studies Qualitative (n= 231)	Condition: Infectious Test: N/A	Both Potential Solutions Financial Impact: No
Chandler CI et al 2008 Tanzania, Lower middle income	Guidelines and mindlines: why do clinical staff over-diagnose malaria in Tanzania? A qualitative study Malar J	Observational e.g. cohort or cross-sectional studies Qualitative (n= 34)	Condition: Infectious Test: N/A	Both Drivers and factors related to OD or overuse of tests Financial Impact: No
Chipwaza B et al 2014 Tanzania, Lower middle income	Community knowledge and attitudes and health workers' practices regarding non- malaria febrile illnesses in eastern Tanzania PLoS Negl Trop Dis	Observational e.g. cohort or cross-sectional studies Qualitative (n= 107)	Condition: Infectious Test: N/A	Overdiagnosis Drivers and factors related to OD or overuse of tests Financial Impact: No
Cui Y et al 2021 China, Upper middle income	Trend dynamics of thyroid cancer incidence among China and the U.S. adult population from 1990 to 2017: a joinpoint and age-period-cohort analysis BMC Public Health	Observational e.g. cohort or cross-sectional studies Quantitative (n= N/A)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No
D'Acromont V et al 2011 Tanzania, Lower middle income	Reduction of anti-malarial consumption after rapid diagnostic tests implementation in Dar es Salaam: a before-after and cluster randomized controlled study Malar J	Interventional e.g. randomised trial Quantitative (n= N/A)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No

Dai S, Huang B, Zou Y, Guo J, Liu Z, Pi D, et al 2018 China, Upper middle income	The HEART score is useful to predict cardiovascular risks and reduces unnecessary cardiac imaging in low-risk patients with acute chest pain Medicine (Baltimore)	Observational e.g. cohort or cross-sectional studies Quantitative (n= 244)	Condition: CVD Test: N/A	Overuse of tests Potential Solutions Financial Impact: No
Dejsomritrutai W et al 2016 Thailand, Upper middle income	Impact of GLI-2012 spirometric references and lower limit of normal on prevalence of COPD in older urban Thai persons Journal of the Medical Association of Thailand	Observational e.g. cohort or cross-sectional studies Qualitative (n= 3094)	Condition: Lung Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact:
Demir S et al 2016 Turkey, Upper middle income	Unnecessary repeated total cholesterol tests in biochemistry laboratory Biochemia Medica	Observational e.g. cohort or cross-sectional studies Quantitative (n= 86817)	Condition: N/A Test: Pathology	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Esteban S et al 2017 Argentina, Upper middle income	Colonoscopy overuse in colorectal cancer screening and associated factors in Argentina: a retrospective cohort study BMC Gastroenterol	Observational e.g. cohort or cross-sectional studies Quantitative (n= 389)	Condition: Cancer Test: Procedure - GI Endoscopy, colonoscopy	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Faust C et al 2015 Senegal, Lower middle income	Assessing drivers of full adoption of test and treat policy for malaria in Senegal Am J Trop Med Hyg	Observational e.g. cohort or cross-sectional studies Quantitative (n= 28527)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No

Fehintola FA et al 2010 Nigeria , Lower middle income	Malaria: passive case detection and healthcare providers' choices of chemotherapy Afr J Med Med Sci	Observational e.g. cohort or cross-sectional studies Quantitative (n= 630)	Condition: Infectious Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No
Floriani ID, Borgmann AV, Barreto MR, Ribeiro ER 2022 China, Turkey,	Exposure of pediatric emergency patients to imaging exams, nowadays and in times of covid-19: an integrative review Rev Paul Pediatr (Ed Port, Online)	Review Qualitative (n= N/A)	Condition: Trauma Test: Imaging - CT, X-ray, US	Overuse of tests Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: Yes
Ganiele MdIN et al 2016 Argentina, Upper middle income	Excesivo rastreo de osteoporosis en mujeres menores de 65 años: estudio de corte transversal Salud colect	Observational e.g. cohort or cross-sectional studies Quantitative (n= 4310)	Condition: Diabetes Test: Imaging	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No
Genç O et al 2014 Turkey, Upper middle income	[Inappropriate use of serological tests for hepatitis B virus in Evliya Celebi Education and Research Hospital of Dumlupinar University, Kütahya] Mikrobiyol Bul	Observational e.g. cohort or cross-sectional studies Qualitative (n= 179640)	Condition: Infectious Test: Pathology - Hepatitis	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: Y

Georgakis MK et al 2018 11 countries (Belarus, Croatia, Cyprus, Greece, Malta, Poland, Portugal, Romania, Slovenia, Turkey, Ukraine),	Neuroblastoma among children in Southern and Eastern European cancer registries: Variations in incidence and temporal trends compared to US Int J Cancer	Review Quantitative (n= 1859)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact:
Gómez-Landeros O et al 2020 Mexico, Upper middle income	[Radio-diagnostic congruence improvement in a first-level unit] Rev Med Inst Mex Seguro Soc	Interventional e.g. randomised trial Quantitative (n= N/A)	Condition: N/A Test: Imaging	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Gonzaga MA, Kiguli-Malwadde E, Businge F, Byanyima RK 2010 Uganda, Low income	Utilisation of obstetric sonography at a peri-urban health centre in Uganda Pan Afr Med J	Observational e.g. cohort or cross-sectional studies Quantitative (n= 105)	Condition: N/A Test: Imaging - US	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Goonetilleke MPB et al 2013 Sri Lanka, Lower middle income	An audit on the outcome of children referred to the paediatric cardiology unit with a previous echocardiographic diagnosis of mitral valve prolapse	Observational e.g. cohort or cross-sectional studies Qualitative (n= 141)	Condition: CVD Test: Imaging - Echo	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact:
Günəsti S et al 2010 Turkey, Upper middle income	Evaluation of a guideline for etiological diagnosis of chronic urticaria Turkiye Klinikleri Journal of Medical Sciences	Observational e.g. cohort or cross-sectional studies Quantitative (n= 903)	Condition: Others Test: N/A	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No

Hajeer MH et al 2018 Jordan, Upper middle income	The rising trend in papillary thyroid carcinoma. True increase or over diagnosis? Saudi Med J	Review Quantitative (n= 313)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact:
Hamer DH et al 2007 Zambia, Lower middle income	Improved diagnostic testing and malaria treatment practices in Zambia JAMA	Observational e.g. cohort or cross-sectional studies Quantitative (n= 1717)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Harchut K et al 2013 Tanzania, Lower middle income	Over-diagnosis of malaria by microscopy in the Kilombero Valley, Southern Tanzania: an evaluation of the utility and cost-effectiveness of rapid diagnostic tests Malar J	Observational e.g. cohort or cross-sectional studies Quantitative (n= 9575)	Condition: Infectious Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: Yes
Harutyunyan V 2010 Tanzania, Lower middle income	Quality assurance of malaria rapid diagnostic tests (RDT) and its implication for clinical management of malaria Am J Trop Med Hyg	Diagnostic Test Accuracy Mixed (n= 513)	Condition: Infectious Test: N/A	Overdiagnosis Potential Solutions Financial Impact:
Hawkes S et al 1999 Bangladesh , Lower middle income	Reproductive-tract infections in women in low-income, low-prevalence situations: assessment of syndromic management in Matlab, Bangladesh Lancet	Observational e.g. cohort or cross-sectional studies Quantitative (n= 465)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: Yes

He AJ 2014 China, Upper middle income	The doctor-patient relationship, defensive medicine and overprescription in Chinese public hospitals: evidence from a cross-sectional survey in Shenzhen city Soc Sci Med	Observational e.g. cohort or cross-sectional studies Qualitative (n= 504)	Condition: N/A Test: N/A	Overuse of tests Drivers and factors related to OD or overuse of tests Financial Impact: No
Henao-Villada R et al 2016 Colombia, Upper middle income	Impact of the implementation of an evidence-based guideline on diagnostic testing, management, and clinical outcomes for infants with bronchiolitis Ther Adv Respir Dis	Interventional e.g. randomised trial Quantitative (n= 1365)	Condition: Lung Test: N/A	Overuse of tests Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact:
Ho T, Cusack RP, Chaudhary N, Satia I, Kurmi OP 2019 Africa (Uganda, Nigeria, Malawi, Cameroon); Central and South America (Peru, Mexico, Brazil, Colombia); South-East Asia (China, Vietnam, Malaysia, Thailand, Indonesia, Philippines, Taiwan *Note there are also HIC reported from SEA region),	Under- and over-diagnosis of COPD: a global perspective Breathe (Sheff)	Review Unclear (n= N/A)	Condition: Lung Test: Procedure - Spirometry	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No

Hu XF et al 2017 China, Upper middle income	[The impact of broadened diagnostic criteria on the prevalence of hypertension, hyperlipidemia and diabetes mellitus in China] Zhonghua Yu Fang Yi Xue Za Zhi	Observational e.g. cohort or cross-sectional studies Quantitative (n= 154067)	Condition: CVD Test: N/A	Overdiagnosis Impact of expanding disease definitions and thresholds Financial Impact: Yes
Hume JC et al 2008 Mozambique, Low income	Household cost of malaria overdiagnosis in rural Mozambique Malar J	Observational e.g. cohort or cross-sectional studies Quantitative (n= 535)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: Yes
Ishengoma DS et al 2011 Tanzania, Lower middle income	Declining burden of malaria in a rural community in Muheza district northeastern Tanzania over a period of 18 years (1992-2010) and its impact on antimalarial prescription Am J Trop Med Hyg	Observational e.g. cohort or cross-sectional studies Quantitative (n= 5755)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No

Ishengoma DS et al 2011 Tanzania, Lower middle income	Accuracy of malaria rapid diagnostic tests in community studies and their impact on treatment of malaria in an area with declining malaria burden in north-eastern Tanzania Malar J	Diagnostic Test Accuracy Quantitative (n= 23793)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Janovsky C et al 2018 Brazil, Upper middle income	Thyroid cancer burden and economic impact on the Brazilian public health system Arch Endocrinol Metab	Observational e.g. cohort or cross-sectional studies Quantitative (n= N/A)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: Yes
Javed H et al 2019 Pakistan, Lower middle income	Increased trend of unnecessary use of radiological diagnostic modalities in Pakistan: radiologists perspective Int J Qual Health Care	Observational e.g. cohort or cross-sectional studies Qualitative (n= 105)	Condition: N/A Test: Imaging	Overuse of tests Drivers and factors related to OD or overuse of tests Financial Impact: No
Kahama-Maró J et al 2011 Tanzania, Lower middle income	Low quality of routine microscopy for malaria at different levels of the health system in Dar es Salaam Malar J	Observational e.g. cohort or cross-sectional studies Quantitative (n= 20386)	Condition: Infectious Test: N/A	Overdiagnosis Potential Solutions Financial Impact: No

Kamolratanapiboon K et al 2019 Thailand, Upper middle income	Inappropriate use of D-dimer and impact on the test characteristics for deep vein thrombosis exclusion Scand J Clin Lab Invest	Observational e.g. cohort or cross-sectional studies quantitative (n= 300)	Condition: CVD Test: Pathology - D-dimer	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact:
Kaur S, Singh V, Dutta AK, Chandra J 2011 India, Lower middle income	Validation of IMNCI algorithm for young infants (0-2 months) in India Indian J Pediatr	Observational e.g. cohort or cross-sectional studies Quantitative (n= 419)	Condition: Infectious Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact:
Kavosi Z et al 2021 Iran, Upper middle income	The inappropriateness of brain MRI prescriptions: a study from Iran Cost Eff Resour Alloc	Observational e.g. cohort or cross-sectional studies Qualitative (n= 385)	Condition: N/A Test: Imaging - MRI	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: Y
Kılıncarslan MG et al 2019 Turkey, Upper middle income	Prevalence and associated factors of inappropriate repeat test Postgrad Med J	Observational e.g. cohort or cross-sectional studies Quantitative (n= 673794)	Condition: N/A Test: Pathology	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: Yes
Kumar N et al 2011 Kenya, Lower middle income	Educational needs and causes of false diagnosis of atypical squamous cells of unknown significance at a university hospital African Journal of Reproductive Health	Observational e.g. cohort or cross-sectional studies Unclear (n= 6500)	Condition: Cancer Test: Procedure - Pap smear	Overdiagnosis Drivers and factors related to OD or overuse of tests Financial Impact:

Lee WS et al 2013 Malaysia, Upper middle income	Appropriateness, endoscopic findings and contributive yield of pediatric gastrointestinal endoscopy World J Gastroenterol	Observational e.g. cohort or cross-sectional studies Quantitative (n= 301)	Condition: N/A Test: Procedure - GI Endoscopy	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Leslie T et al 2017 Afghanistan, Low income	Use of malaria rapid diagnostic tests by community health workers in Afghanistan: cluster randomised trial BMC Med	Interventional e.g. randomised trial Quantitative (n= 2400)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Leslie T et al 2012 Afghanistan, Low income	Overdiagnosis and mistreatment of malaria among febrile patients at primary healthcare level in Afghanistan: observational study BMJ	Observational e.g. cohort or cross-sectional studies Quantitative (n= 2381)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Li M et al 2021 China, Upper middle income	Mapping overdiagnosis of thyroid cancer in China Lancet Diabetes Endocrinol	Observational e.g. cohort or cross-sectional studies Quantitative (n= 27842)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No
Li R et al 2020 China, Upper middle income	A rapidly increasing trend of thyroid cancer incidence in selected East Asian countries: Joinpoint regression and age-period-cohort analyses Gland Surg	Observational e.g. cohort or cross-sectional studies Quantitative (n= N/A)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact:

Lortet-Tieulent J et al 2019 Ecuador, Thailand, Algeria, Argentina, Brazil, China, India, Turkey, Costa Rica, Belarus, Colombia, Peru, Uruguay, Vietnam, Philippines, Chile, Ukraine, Russia, Jordan, Zimbabwe, Kenya, Malaysia, Iran, Uganda,	Thyroid cancer "epidemic" also occurs in low- and middle-income countries Int J Cancer	Observational e.g. cohort or cross-sectional studies Quantitative (n= 599851)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No
M F et al 2005 Iran, Upper middle income	[Identification and prediction of overdiagnosis of dystocia]	Observational e.g. cohort or cross-sectional studies Qualitative (n= 248)	Condition: Trauma Test: N/A	Overdiagnosis Drivers and factors related to OD or overuse of tests Financial Impact: No
Mamova A et al 2017 Kenya, Lower middle income	Misdiagnosing of malaria as RTI decreased after introduction of RDTs in rural areas of Kenya Neuro Endocrinol Lett	Observational e.g. cohort or cross-sectional studies Quantitative (n= N/A)	Condition: Infectious Test: N/A	Overdiagnosis Drivers and factors related to OD or overuse of tests Financial Impact:
Manguin S et al 2017 Angola, Lower middle income	Malaria overdiagnosis and subsequent overconsumption of antimalarial drugs in Angola: Consequences and effects on	Observational e.g. cohort or cross-sectional studies Quantitative (n= 724)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or

	human health Acta Trop			Overuse of tests Financial Impact: No
Masanja IM et al 2012 Tanzania, Lower middle income	Increased use of malaria rapid diagnostic tests improves targeting of anti-malarial treatment in rural Tanzania: implications for nationwide rollout of malaria rapid diagnostic tests Malar J	Observational e.g. cohort or cross-sectional studies Quantitative (n= 1471)	Condition: Infectious Test: N/a	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact:
Masika PM et al 2006 Tanzania, Lower middle income	Over-diagnosis of malaria is not a lost cause Malar J	Interventional e.g. randomised trial Quantitative (n= N/A)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Mathew IE et al 2017 India, Lower middle income	Rising Thyroid Cancer Incidence in Southern India: An Epidemic of Overdiagnosis? J Endocr Soc	Review Quantitative (n= N/A)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No
Maung K et al 2015 Malaysia, Upper middle income	Assessment of documentation of DSM-IV-TR Criteria A for diagnosis of schizophrenia in psychiatric unit, tertiary hospital, Malaysia Clin Ter	Observational e.g. cohort or cross-sectional studies quantitative (n= 107)	Condition: Mental Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact:

Mbonye AK et al 2010 Uganda , Low income	Symptom-based diagnosis of malaria and its implication on antimalarial drug use in pregnancy in Central Uganda: results from a community trial Int J Adolesc Med Health	Interventional e.g. randomised trial Quantitative (n= 2785)	Condition: Infectious Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No
Mbonye AK et al 2015 Uganda, Low income	A Cluster Randomised Trial Introducing Rapid Diagnostic Tests into Registered Drug Shops in Uganda: Impact on Appropriate Treatment of Malaria PLoS One	Interventional e.g. randomised trial Quantitative (n= 15517)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
McPherson K et al 2018 Palestine, Lower middle income	The overestimation and the inappropriate promotion of the benefits of mammographic screening in breast cancer research and interventions in the Gaza Strip Lancet	Observational e.g. cohort or cross-sectional studies Qualitative (n= N/A)	Condition: Cancer Test: N/A	Overdiagnosis Drivers and factors related to OD or overuse of tests Financial Impact: No
Mendonça DR et al 2020 Brazil, Upper middle income	Implementation of the Choosing Wisely Campaign at a Medical Clinic Internship Rev bras educ méd	Interventional e.g. randomised trial quantitative (n= 208)	Condition: N/A Test: N/A	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact:

Mianji F et al 2020 Iran, Upper middle income	The Globalization of Biological Psychiatry and the Rise of Bipolar Spectrum Disorder in Iran Cult Med Psychiatry	Observational e.g. cohort or cross-sectional studies Qualitative (n= 25)	Condition: Mental Test: N/A	Both Drivers and factors related to OD or overuse of tests Financial Impact: No
Mosha JF et al 2010 Tanzania, Lower middle income	Cost implications of improving malaria diagnosis: findings from north-eastern Tanzania PLoS One	Observational e.g. cohort or cross-sectional studies Quantitative (n= N/A)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: Yes
Mudawi HM et al 2012 Sudan, Low income	American Society for Gastrointestinal Endoscopy guidelines for appropriate use of colonoscopy: are they suitable for African patients? Trop Doct	Observational e.g. cohort or cross-sectional studies Quantitative (n= 311)	Condition: N/A Test: Procedure - GI Endoscopy, colonoscopy	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Muwonge R et al 2014 India, Lower middle income	Evaluation of cytology and visual triage of human papillomavirus-positive women in cervical cancer prevention in India International Journal of Cancer	Interventional e.g. randomised trial Quantitative (n= 42768)	Condition: Cancer Test: N/A	Both Potential Solutions Financial Impact: No

Mwanziva C et al 2011 Tanzania, Lower middle income	Defining malaria burden from morbidity and mortality records, self treatment practices and serological data in Magugu, Babati District, northern Tanzania Tanzan J Health Res	Observational e.g. cohort or cross-sectional studies Quantitative (n= 470)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Na R et al 2017 China, Upper middle income	Prostate health index significantly reduced unnecessary prostate biopsies in patients with PSA 2-10 ng/mL and PSA >10 ng/mL: Results from a Multicenter Study in China Prostate	Observational e.g. cohort or cross-sectional studies Quantitative (n= 1538)	Condition: Cancer Test: Procedure - Prostate biopsy	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Nankabirwa J et al 2009 Uganda, Low income	Malaria misdiagnosis in Uganda-- implications for policy change Malar J	Observational e.g. cohort or cross-sectional studies Quantitative (n= 1763)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Nascimento-Júnior VP et al 2021 Brazil, Upper middle income	Inappropriate requests for tumor markers in patients aged 50 years and older: lessons not learned Geriatr, Gerontol Aging (Impr)	Observational e.g. cohort or cross-sectional studies Quantitative (n= 1112)	Condition: N/A Test: Pathology - Tumor marker	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: Yes
Nguyen MH et al 2009 Vietnam, Lower middle income	Reproductive tract infections in northern Vietnam: health providers' diagnostic dilemmas Women Health	Observational e.g. cohort or cross-sectional studies Mixed (n= 748)	Condition: Infectious Test: N/A	Overdiagnosis Drivers and factors related to OD or overuse of tests Financial Impact: No

Niu XK et al 2017 China, Upper middle income	Developing a nomogram based on multiparametric magnetic resonance imaging for forecasting high-grade prostate cancer to reduce unnecessary biopsies within the prostate-specific antigen gray zone BMC Med Imaging	Observational e.g. cohort or cross-sectional studies quantitative (n= 151)	Condition: Cancer Test: Imaging - MRI	Overdiagnosis Impact of expanding disease definitions and thresholds Financial Impact:
Nomhwange TI et al 2009 Nigeria, Lower middle income	Diagnosis of malaria in children's outpatient departments in Abuja, Nigeria Trop Doct	Observational e.g. cohort or cross-sectional studies Quantitative (n= 1000)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Nsutebu EF et al 2002 Cameroon, Lower middle income	The increase in occurrence of typhoid fever in Cameroon: overdiagnosis due to misuse of the Widal test? Trans R Soc Trop Med Hyg	Observational e.g. cohort or cross-sectional studies Qualitative (n= 84)	Condition: Infectious Test: Imaging	Overdiagnosis Drivers and factors related to OD or overuse of tests Financial Impact: Misdiagnosis of typhoid fever leads to unnecessary expenditure and exposure of patients to the side-effects of antibiotics
Olcay A et al 2017 Turkey, Upper middle income	The opinion of Turkish cardiologists on current malpractice system and an alternative patient compensation system proposal: PCS study group Turk Kardiyol Dern Ars	Observational e.g. cohort or cross-sectional studies Qualitative (n= 253)	Condition: N/A Test: unclear	Overuse of tests Drivers and factors related to OD or overuse of tests Financial Impact:

Osei-Kwakye K et al 2013 Ghana, Lower middle income	The benefits or otherwise of managing malaria cases with or without laboratory diagnosis: the experience in a district hospital in Ghana PLoS One	Observational e.g. cohort or cross-sectional studies Quantitative (n= 936)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: Yes
Ozbek OA et al 2004 Turkey, Upper middle income	Application of hepatitis serology testing algorithms to assess inappropriate laboratory utilization J Eval Clin Pract	Observational e.g. cohort or cross-sectional studies Quantitative (n= 3341)	Condition: Infectious Test: Pathology - Hepatitis	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Ozbek OA et al 2010 Turkey, Upper middle income	[Inappropriately ordered tests from hepatitis B vaccinated subjects] Mikrobiyol Bul	Observational e.g. cohort or cross-sectional studies Quantitative (n= 88174)	Condition: Infectious Test: Pathology - Hepatitis	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: Yes
Panato C et al 2020 India, Lower middle income	Thyroid Cancer Incidence in India Between 2006 and 2014 and Impact of Overdiagnosis J Clin Endocrinol Metab	Observational e.g. cohort or cross-sectional studies Quantitative (n= N/A)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No
Pema AK et al 2018 South Africa, Upper middle income	Demand management by electronic gatekeeping of test requests does not influence requesting behaviour or save costs dramatically Ann Clin Biochem	Observational e.g. cohort or cross-sectional studies Quantitative (n= N/A)	Condition: N/A Test: Pathology	Overuse of tests Drivers and factors related to OD or overuse of tests Financial Impact: yes

Pezeshki MZ et al 2020 Iran, Upper middle income	Medical Overuse in the Iranian Healthcare System: A Systematic Scoping Review and Practical Recommendations for Decreasing Medical Overuse During Unexpected COVID-19 Pandemic Opportunity Risk Manag Healthc Policy	Review Mixed (n= N/A)	Condition: N/A Test: N/A	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Pizzanelli M et al 2016 Latin America ,	Prevención Cuaternaria: Ética Médica, Evaluación y Eficiencia en los Sistemas de Salud Rev bras med fam comunidade	Review Qualitative (n= N/A)	Condition: N/A Test: N/A	Both Potential Solutions Financial Impact: No
Rehmani R et al 1999 Pakistan, Lower middle income	Analysis of blood tests in the emergency department of a tertiary care hospital Postgrad Med J	Observational e.g. cohort or cross-sectional studies Quantitative (n= 6401)	Condition: N/A Test: Pathology	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Reyburn H et al 2007 Tanzania, Lower middle income	Rapid diagnostic tests compared with malaria microscopy for guiding outpatient treatment of febrile illness in Tanzania: randomised trial BMJ	Interventional e.g. randomised trial Quantitative (n= 2416)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No

Reyburn H et al 2004 Tanzania, Lower middle income	Overdiagnosis of malaria in patients with severe febrile illness in Tanzania: a prospective study BMJ	Observational e.g. cohort or cross-sectional studies Quantitative (n= 17313)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Salgado MV et al 2016 Argentina, Upper middle income	Sobreuso de mamografía para rastreo en un hospital académico de Buenos Aires Rev argent salud publica	Observational e.g. cohort or cross-sectional studies Quantitative (n= 399)	Condition: Cancer Test: Imaging - Mammography	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact:
Samarakoon Y et al 2018 Sri Lanka, Lower middle income	Appropriateness of colonoscopy according to EPAGE II in a low resource setting: a cross sectional study from Sri Lanka BMC Gastroenterol	Observational e.g. cohort or cross-sectional studies Quantitative (n= 325)	Condition: N/A Test: Procedure - GI Endoscopy, colonoscopy	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Sator L et al 2019 Turkey, South Africa, China, Nigeria, Phillipines, India, Tunisia,	Overdiagnosis of COPD in Subjects With Unobstructed Spirometry: A BOLD Analysis Chest	Observational e.g. cohort or cross-sectional studies Quantitative (n= 16177)	Condition: Lung Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No
Savitha MR et al 2008 India, Lower middle income	Redefining the World Health Organization algorithm for diagnosis of pneumonia with simple additional markers Indian J Pediatr	Observational e.g. cohort or cross-sectional studies Quantitative (n= 50)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No

Schmulson MJ 2008 Mexico, Upper middle income	[Limited diagnostic testing can decrease the direct economic impact of irritable bowel syndrome] Rev Med Chil	Observational e.g. cohort or cross-sectional studies quantitative (n= 98)	Condition: GIT Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: Limited diagnostic testing recommended by the LATAM Consensus for IBS can significantly decrease the economic impact of this disease in Mexico
Sibai AM et al 2008 Lebanon, Upper middle income	The appropriateness of use of coronary angiography in Lebanon: implications for health policy Health Policy Plan	Observational e.g. cohort or cross-sectional studies Quantitative (n= 5418)	Condition: N/A Test: Procedure - Coronary angiography	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Sievers AC et al 2008 Rwanda, Low income	Reduced paediatric hospitalizations for malaria and febrile illness patterns following implementation of a community-based malaria control programme in rural Rwanda World Hosp Health Serv	Observational e.g. cohort or cross-sectional studies Quantitative (n= 551)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Silva HS et al 2019 Brazil, Upper middle income	Abdominal Computed Tomography in the Emergency Room: Overuse of Medical Technologies and the Depreciation of Clinical Diagnosis Rev bras educ méd	Observational e.g. cohort or cross-sectional studies Qualitative (n= 834)	Condition: N/A Test: Imaging - CT	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact:

Skarbinski J et al 2009 Kenya, Lower middle income	Effect of malaria rapid diagnostic tests on the management of uncomplicated malaria with artemether-lumefantrine in Kenya: a cluster randomized trial Am J Trop Med Hyg	Interventional e.g. randomised trial Quantitative (n= 1540)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
SM AE et al 2009 Sudan, Low income	Malaria overdiagnosis and burden of malaria misdiagnosis in the suburbs of central Sudan: special emphasis on artemisinin-based combination therapy era Diagn Microbiol Infect Dis	Observational e.g. cohort or cross-sectional studies Quantitative (n= 3613)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: Yes
Sodhi KS et al 2015 India, Lower middle income	Clinical application of 'Justification' and 'Optimization' principle of ALARA in pediatric CT imaging: "How many children can be protected from unnecessary radiation?" Eur J Radiol	Observational e.g. cohort or cross-sectional studies quantitative (n= 1302)	Condition: N/A Test: Imaging - CT	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact:
Sonkar SC et al 2016 India, Lower middle income	Comparative analysis of syndromic and PCR-based diagnostic assay reveals misdiagnosis/ overtreatment for trichomoniasis based on subjective judgment in symptomatic patients Infect Dis Poverty	Diagnostic Test Accuracy Quantitative (n= 820)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No

Steinhardt LC et al 2014 Malawi, Low income	Patient-, health worker-, and health facility-level determinants of correct malaria case management at publicly funded health facilities in Malawi: results from a nationally representative health facility survey Malar J	Observational e.g. cohort or cross-sectional studies Quantitative (n= 2155)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Tachi K et al 2011 Ghana, Lower middle income	Appropriateness and diagnostic yield of referrals for oesophagogastroduodenoscopy at the Korle Bu Teaching Hospital West Afr J Med	Observational e.g. cohort or cross-sectional studies Quantitative (n= 375)	Condition: N/A Test: Procedure - GI Endoscopy	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Tambe J et al 2020 Cameroon, Lower middle income	Multidetector computed tomography utilization in an urban sub-Saharan Africa setting: user characteristics, indications and appropriateness Pan Afr Med J	Observational e.g. cohort or cross-sectional studies Quantitative (n= 511)	Condition: N/A Test: Imaging - CT	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Tan YM et al 2004 Malaysia, Upper middle income	Appropriateness of colonoscopy in a university hospital Med J Malaysia	Observational e.g. cohort or cross-sectional studies Quantitative (n= 499)	Condition: N/A Test: Procedure - GI Endoscopy, colonoscopy	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No

Tawiah T et al 2016 Ghana, Lower middle income	Cost-Effectiveness Analysis of Test-Based versus Presumptive Treatment of Uncomplicated Malaria in Children under Five Years in an Area of High Transmission in Central Ghana PLoS One	Interventional e.g. randomised trial Quantitative (n= 3046)	Condition: Infectious Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: Yes
Timire C et al 2019 Zimbabwe, Lower middle income	Targeted active screening for tuberculosis in Zimbabwe: are field digital chest X-ray ratings reliable? Public Health Action	Observational e.g. cohort or cross-sectional studies Quantitative (n= 230)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Torres-Castro I et al 2011 Colombia, Upper middle income	[Lipid profile frequency and relevancy as an initial test for peripheral vertigo] Rev Salud Publica (Bogota)	Observational e.g. cohort or cross-sectional studies Quantitative (n= 201)	Condition: Others Test: Pathology	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: Yes

Vaccarella S et al 2021 Ukraine, Russia, Bulgaria, Turkey, China, Thailand, Vietnam, Jordan, Philippines, India, Pakistan, Puerto Rico, Colombia, Peru, Costa Rica, Ecuador, Cuba, Argentina, Morocco, Algeria, Egypt, Kenya, Mali, Uganda,	Global patterns and trends in incidence and mortality of thyroid cancer in children and adolescents: a population-based study Lancet Diabetes Endocrinol	Observational e.g. cohort or cross-sectional studies Quantitative (n= 8049)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No
Van Dillen J et al 2007 Namibia, Upper middle income	Overdiagnosis of malaria in hospitalized patients in Namibia Trop Doct	Observational e.g. cohort or cross-sectional studies Quantitative (n= 176)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Vassilakos P et al 2021 Cameroon, Lower middle income	A cross-sectional study exploring triage of human papillomavirus (HPV)-positive women by visual assessment, manual and computer-interpreted cytology, and HPV-16/18-45 genotyping in Cameroon Int J Gynecol Cancer	Diagnostic Test Accuracy Quantitative (n= 1598)	Condition: Cancer Test: N/A	Both Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Veedu JS et al 2019 India, Lower middle income	Overdiagnosis of thyroid cancer: A problem of greater access to healthcare Anticancer Research	Observational e.g. cohort or cross-sectional studies Quantitative (n= N/A)	Condition: Cancer Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No

Velicković JV et al 2013 Serbia, Upper middle income	Routine chest radiographs in the surgical intensive care unit: can we change clinical habits with no proven benefit? Acta Chir Iugosl	Observational e.g. cohort or cross-sectional studies Quantitative (n= 97)	Condition: N/A Test: Imaging - X-ray	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: No
Visser T et al 2017 Liberia, Ghana, Myanmar, Uganda, Tanzania, Nigeria, Kenya, Zambia,	Introducing malaria rapid diagnostic tests in private medicine retail outlets: A systematic literature review PLoS One	Review Quantitative (n= N/A)	Condition: Infectious Test: N/A	Overdiagnosis Impact on further testing or treatment i.e. consequence of OD or Overuse of tests Financial Impact: No
Xie M et al 2020 China , Upper middle income	Impacts of Different Spirometry Reference Equations and Diagnostic Criteria on the Frequency of Airway Obstruction in Adult People of North China Int J Chron Obstruct Pulmon Dis	Observational e.g. cohort or cross-sectional studies Quantitative (n=)	Condition: Lung Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No
Xu Y et al 2016 China, Upper middle income	Plasma glucose and hemoglobin A1c for the detection of diabetes in Chinese adults J Diabetes	Observational e.g. cohort or cross-sectional studies Quantitative (n= 98658)	Condition: Diabetes Test: N/A	Overdiagnosis Overdiagnosis or Overuse of tests estimation Financial Impact: No

Yilmaz FM et al 2016 Turkey, Upper middle income	Impact of laboratory test use strategies in a Turkish hospital PLOS One	Observational e.g. cohort or cross-sectional studies Quantitative (n= 480000)	Condition: N/A Test: Pathology	Overuse of tests Potential Solutions Financial Impact: Yes
Zhang H et al 2018 China, Upper middle income	Extent and cost of inappropriate use of tumour markers in patients with pulmonary disease: a multicentre retrospective study in Shanghai, China BMJ Open	Observational e.g. cohort or cross-sectional studies Quantitative (n= 2706)	Condition: Lung Test: Pathology - Tumor marker	Overuse of tests Overdiagnosis or Overuse of tests estimation Financial Impact: Yes
Zhao J et al 2017 China , Upper middle income	Risk assessment models to evaluate the necessity of prostate biopsies in North Chinese patients with 4-50 ng/mL PSA Oncotarget	Observational e.g. cohort or cross-sectional studies Quantitative (n= 702)	Condition: Cancer Test: N/A	Overuse of tests Potential Solutions Financial Impact: No