

Supplementary File 1

Search Strategy

PubMed

((("carcinoma, hepatocellular"[MeSH Terms] OR "carcinoma, hepatocellular/drug therapy"[MeSH Terms] OR "Liver Neoplasms"[MeSH Terms] OR "liver neoplasms/drug therapy"[MeSH Terms] OR ("liver cancer"[Title/Abstract] OR "hepatocellular carcinoma"[Title/Abstract] OR "HCC"[Title/Abstract])) AND ("advanced"[Title/Abstract] OR "unresectable"[Title/Abstract] OR "metastas*"[Title/Abstract] OR "metastat*"[Title/Abstract])) AND ("Drug Therapy"[MeSH Terms] OR "Drug Therapy"[MeSH Subheading] OR "drug therapy, combination"[MeSH Terms] OR "Antineoplastic Agents"[MeSH Terms] OR "Antineoplastic Agents"[Pharmacological Action] OR "Protein Kinase Inhibitors"[MeSH Terms] OR "Protein Kinase Inhibitors"[Pharmacological Action] OR "Immunotherapy"[MeSH Terms] OR "Immune Checkpoint Inhibitors"[MeSH Terms] OR "Immune Checkpoint Inhibitors"[Pharmacological Action] OR "antibodies, monoclonal, humanized"[MeSH Terms] OR "antibodies, monoclonal, humanized/adverse effects"[MeSH Terms] OR "antibodies, monoclonal, humanized/therapeutic use"[MeSH Terms] OR "antineoplastic combined chemotherapy protocols/adverse effects"[MeSH Terms] OR "antineoplastic combined chemotherapy protocols/therapeutic use"[MeSH Terms] OR "Placebos"[MeSH Terms])) AND ("Survival"[MeSH Terms] OR "Mortality"[MeSH Terms] OR "Mortality"[MeSH Subheading] OR "Survival Analysis"[MeSH Terms] OR "Kaplan-Meier Estimate"[MeSH Terms] OR "Progression-Free Survival"[MeSH Terms] OR "Survival Rate"[MeSH Terms] OR "treatment outcome/adverse effects"[MeSH Terms] OR "treatment outcome/mortality"[MeSH Terms])) AND (("randomized controlled trial"[Publication Type] OR "controlled clinical trial"[Publication Type] OR "randomized "[Title/Abstract] OR "placebo"[Title/Abstract] OR "clinical trials as topic"[MeSH Terms:noexp] OR "randomly"[Title/Abstract] OR "trial"[Title]) NOT ("animals"[MeSH Terms] NOT "humans"[MeSH Terms]))

Records: **1190**

Embase

- #1 'liver cell carcinoma'/exp OR 'liver cancer'/exp OR 'hepatocellular carcinoma':ti,ab,kw OR hcc:ti,ab,kw 317,241
- #2 'advanced cancer'/exp OR advanced:ti,ab,kw OR unresectable:ti,ab,kw OR 'metastasis'/exp OR metastas*:ti,ab,kw 1,561,038
- #3 'drug therapy'/exp OR 'combination drug therapy'/exp OR 'antineoplastic agent'/exp OR 'protein kinase inhibitor'/exp OR 'protein tyrosine kinase inhibitor'/exp OR 'angiogenesis inhibitor'/exp OR 'immunotherapy'/exp OR

- 'cancer immunotherapy'/exp OR 'immune checkpoint inhibitor'/exp OR
'placebo'/exp 5,329,783
- #4 'survival'/exp OR 'survival rate'/exp OR 'survival time'/exp OR 'survival
analysis'/exp OR 'median survival time'/exp OR 'progression free survival'/exp
OR 'mortality'/exp 2,317,752
- #5 'randomized controlled trial'/exp OR ('randomized controlled trial'/exp AND
topic) OR 'phase 3 clinical trial'/exp OR ('phase 3 clinical trial'/exp AND topic)
737,436
- #6 #1 AND #2 123,049
- #7 #3 AND #4 AND #5 AND #6 1,776
- #8 #7 AND 'phase 3 clinical trial'/de AND [english]/lim 757

Records: **757**

Web of Science

- #1 TS=("hepatocellular carcinoma") OR TS=("advanced hepatocellular
carcinoma") OR TS=("metastatic hepatocellular carcinoma") OR
TS=("metastatic HCC") OR TS=("advanced HCC") OR TS=("advanced liver
cancer") AND TS=("metastatic liver cancer") 222,179
- #2 TS=(antineoplastic) OR TS=("protein Kinase inhibitors") OR TS=(pki) OR
TS=("tyrosine kinase inhibitor") OR TS=(tki) OR TS=(angiogenesis) AND
TS=(immunotherapy) OR TS=("immune checkpoint inhibitor") OR
TS=(placebo) 1,417,259
- #3 TS=(survival) OR TS=("survival rate") OR TS=("survival time") OR
TS=("survival analysis") OR TS=("median survival time") OR TS=("overall
survival") OR TS=(OS) OR TS=("progression free survival") OR TS=(PFS)
2,557,784
- #4 TS=(phase 3) OR TS=(phase III) 1931479
- #5 (TS=(randomized) OR TS=(randomised)) AND TS=(trial) 897,102
- #6 #4 AND #5 78,800
- #7 #1 AND #2 AND #3 AND #6 Refined by: LANGUAGES: (ENGLISH)
Indexes=SCI-EXPANDED, Timespan=All years 473

Records: **473**

Cochrane

- #1 MeSH descriptor: [Carcinoma, Hepatocellular] explode all trees 1968
- #2 (hepatocellular carcinoma):ti,ab,kw OR (liver cancer):ti,ab,kw OR
(HCC):ti,ab,kw 14899
- #3 #1 OR #2 14899
- #4 (unresectable):ti,ab,kw OR (advanced):ti,ab,kw OR (metastas*):ti,ab,kw OR
(metastat*):ti,ab,kw 95049
- #5 #3 AND #4 7799
- #6 MeSH descriptor: [Drug Therapy] explode all trees 147649

#7 MeSH descriptor: [Antineoplastic Agents] explode all trees 13167
#8 MeSH descriptor: [Protein Kinase Inhibitors] explode all trees 1093
#9 MeSH descriptor: [Angiogenesis Inhibitors] explode all trees 1338
#10 MeSH descriptor: [Immunotherapy] explode all trees 8657
#11 MeSH descriptor: [Immune Checkpoint Inhibitors] explode all trees 70
#12 MeSH descriptor: [Placebos] explode all trees 24595
#13 #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 177510
#14 MeSH descriptor: [Survival] explode all trees 134
#15 MeSH descriptor: [Survival Analysis] explode all trees 21860
#16 MeSH descriptor: [Kaplan-Meier Estimate] explode all trees 5218
#17 MeSH descriptor: [Survival Rate] explode all trees 10483
#18 MeSH descriptor: [Progression-Free Survival] explode all trees 845
#19 (overall survival):ti,ab,kw OR (OS):ti,ab,kw OR (PFS):ti,ab,kw 66435
#20 #14 OR #15 OR #16 OR #17 OR #18 OR #19 84883
#21 MeSH descriptor: [Randomized Controlled Trial] explode all trees 119
#22 (random*):ti,ab,kw AND (trial):ti,ab,kw 790154
#23 #21 OR #22 790154
#24 (phase 3):ti,ab,kw OR (phase III):ti,ab,kw 142964
#25 #23 AND #24 90159
#26 #5 AND #13 AND #20 AND #25 in Trials 401

Records: **401**