Systematic review

A list of fields that can be edited in an update can be found here

1. * Review title.

Give the title of the review in English

Neoadjuvant chemoradiation plus surgery for resectable and borderline resectable pancreatic cancer compared to upfront surgery: a meta-analysis of randomized controlled trials

2. Original language title.

For reviews in languages other than English, give the title in the original language. This will be displayed with the English language title.

Meta-analysis of neoadjuvant chemoradiation plus surgery for resectable and borderline resectable pancreatic cancer compared to upfront surgery in the randomized controlled trials

3. * Anticipated or actual start date.

Give the date the systematic review started or is expected to start.

01/02/2022

4. * Anticipated completion date.

Give the date by which the review is expected to be completed.

30/06/2022

5. * Stage of review at time of this submission.

This field uses answers to initial screening questions. It cannot be edited until after registration.

Tick the boxes to show which review tasks have been started and which have been completed.

Update this field each time any amendments are made to a published record.

The review has not yet started: Yes

Review stage	Started	Completed
Preliminary searches	No	No
Piloting of the study selection process	No	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

Provide any other relevant information about the stage of the review here.

No

No

6. * Named contact.

The named contact is the guarantor for the accuracy of the information in the register record. This may be any member of the review team.

Xin Liu

Email salutation (e.g. "Dr Smith" or "Joanne") for correspondence:

Mr Liu

7. * Named contact email.

Give the electronic email address of the named contact.

liuxin5626855@sina.com

8. Named contact address

Give the full institutional/organisational postal address for the named contact.

Cancer hospital of China medical university, Liaoning cancer hospital and institute\nshenyang, xiao he yan road, No.44, Liaoning Province CHINA

9. Named contact phone number.

Give the telephone number for the named contact, including international dialling code.

8618900918981

10. * Organisational affiliation of the review.

Full title of the organisational affiliations for this review and website address if available. This field may be completed as 'None' if the review is not affiliated to any organisation.

Cancer Hospital of China Medical University. Liaoning Cancer Hospital and Institute

Organisation web address:

http://www.lnszl.com/

11. * Review team members and their organisational affiliations.

Give the personal details and the organisational affiliations of each member of the review team. Affiliation refers to groups or organisations to which review team members belong. **NOTE: email and country now MUST be entered for each person, unless you are amending a published record.**

Mr Xin Liu. Cancer Hospital of China Medical University. Liaoning Cancer Hospital and Institute
Zhi-Yong Xiang. Department of Hepatobiliary Pancreatic Surgery, The Third Affiliated Hospital of Chongqing Medical University.
Xiao-Quan Yang. Department of general surgery, Cancer Hospital of China Medical University. Liaoning Cancer Hospital and Institute
Guang-yue Zhao. Department of Colorectal surgery, Cancer Hospital of China Medical University. Liaoning Cancer Hospital and Institute
Feng-jian Wang. Department of Colorectal surgery, Cancer Hospital of China Medical University. Liaoning Cancer Hospital and Institute

12. * Funding sources/sponsors.

Details of the individuals, organizations, groups, companies or other legal entities who have funded or sponsored the review.

No

Grant number(s)

State the funder, grant or award number and the date of award

No

13. * Conflicts of interest.

List actual or perceived conflicts of interest (financial or academic).

None

No

14. Collaborators.

Give the name and affiliation of any individuals or organisations who are working on the review but who are not listed as review team members. **NOTE: email and country must be completed for each person, unless you are amending a published record.**

15. * Review question.

State the review question(s) clearly and precisely. It may be appropriate to break very broad questions down into a series of related more specific questions. Questions may be framed or refined using PI(E)COS or similar where relevant.

Several relevant meta-analyses have been published and confirmed the advantages of NAT in pancreatic cancer [8-9]. But there is no consensus on the specific clinical strategy formulation, chemotherapy and chemoradiation treatment options, treatment cycle and efficacy prediction of neoadjuvant therapy for pancreatic cancer at present [10]. Since most of the previous articles mainly focused on neoadjuvant chemotherapy, the effect of neoadjuvant chemoradiotherapy on pancreatic cancer was not fully disclosed

[11-12]. Therefore, we collected RCT (Randomized Controlled Trial) about neoadjuvant chemoradiation and compare the difference between the overall survival (OS), R0 resection rate and lymph node positive rate and other outcomes of BRPC and RPC who received neoadjuvant chemoradiation and upfront surgery.

16. * Searches.

State the sources that will be searched (e.g. Medline). Give the search dates, and any restrictions (e.g. language or publication date). Do NOT enter the full search strategy (it may be provided as a link or attachment below.)

By searching the PubMed, Embase, Cochrane Library, CNKI(China National Knowledge Infrastructure) and Wanfang databases, we found the relevant literature that met the exclusion and inclusion criteria (up to January 2022). The search string was built as follows: “pancreatic cancer” and “neoadjuvant chemoradiation” and “randomized controlled trial”. Supplementary material 4 showed the relevant search terms and search strategies

17. URL to search strategy.

Upload a file with your search strategy, or an example of a search strategy for a specific database, (including the keywords) in pdf or word format. In doing so you are consenting to the file being made publicly accessible. Or provide a URL or link to the strategy. Do NOT provide links to your search **results**.

https://PubMed.ncbi.nlm.nih.gov/?term=pancreatic+cancer+and+neoadjuvant+chemoradiation+and+randomized+controlled+trial

Alternatively, upload your search strategy to CRD in pdf format. Please note that by doing so you are consenting to the file being made publicly accessible.

Do not make this file publicly available until the review is complete

18. * Condition or domain being studied.

Give a short description of the disease, condition or healthcare domain being studied in your systematic review.

Pancreatic cancer is a malignant tumor in the digestive system with difficult early diagnosis, extremely high degree of malignancy and poor prognosis. Pancreatic cancer has posed a serious threat to human health. In particular, BRPC often has unfavorable features such as nerve invasion, vascular invasion, local recurrence, distant metastasis and other features, simple surgery is likely to produce positive margins and poor prognosis. Simple surgery for pancreatic cancer is likely to produce positive margins and poor prognosis, relevant studies have shown that neoadjuvant therapy (NAT) for pancreatic cancer could improve the prognosis of patients by reducing the positive rate of surgical margins and prolonging survival. NCCN guidelines recommend that NAT is preferred for all BRPC and RPC with high risk factors. Several meta-analyses have confirmed the advantages of NAT in pancreatic cancer. But there is no consensus on the specific clinical strategy formulation, chemotherapy and chemoradiation treatment options, treatment cycle and efficacy prediction of neoadjuvant therapy for pancreatic cancer at present. Since most of the previous articles mainly focused on neoadjuvant chemotherapy, the effect of neoadjuvant chemoradiotherapy on pancreatic cancer was not fully disclosed.

19. * Participants/population.

Specify the participants or populations being studied in the review. The preferred format includes details of both inclusion and exclusion criteria.

Population: resectable and borderline resectable pancreatic cancer patients.

Inclusion criteria were as follows: (1) resectable and borderline resectable pancreatic cancer with neoadjuvant chemoradiotherapy or upfront surgery, (2) randomized Controlled Trial (RCTs), (3) the included studies have both group A and group B.

The exclusion criteria were as follows: a significant difference in baseline data and no valuable information of the study; as well as rectal cancer patients who did not achieve cCR status after nCRT; and reviews, case reports or other unsuitable types. Reviews, prospective study, retrospective study and other unsuitable types were excluded, as well as patients without surgery or no control group.

20. * Intervention(s), exposure(s).

Give full and clear descriptions or definitions of the interventions or the exposures to be reviewed. The preferred format includes details of both inclusion and exclusion criteria.

intervention: neoadjuvant chemoradiation and surgery;

21. * Comparator(s)/control.

Where relevant, give details of the alternatives against which the intervention/exposure will be compared (e.g. another intervention or a non-exposed control group). The preferred format includes details of both inclusion and exclusion criteria.

comparator: upfront surgery;

22. * Types of study to be included.

Give details of the study designs (e.g. RCT) that are eligible for inclusion in the review. The preferred format includes both inclusion and exclusion criteria. If there are no restrictions on the types of study, this should be stated.

RCTs (Randomized Controlled Trial)

23. Context.

Give summary details of the setting or other relevant characteristics, which help define the inclusion or exclusion criteria.

24. * Main outcome(s).

Give the pre-specified main (most important) outcomes of the review, including details of how the outcome is defined and measured and when these measurement are made, if these are part of the review inclusion criteria.

primary outcomes (R0-resection, negative lymph node, local recurrence, distant metastasis, grade ?3 postoperative morbidity and mortality)

Measures of effect

Please specify the effect measure(s) for you main outcome(s) e.g. relative risks, odds ratios, risk difference, and/or 'number needed to treat.

OR/RR

25. * Additional outcome(s).

List the pre-specified additional outcomes of the review, with a similar level of detail to that required for main outcomes. Where there are no additional outcomes please state 'None' or 'Not applicable' as appropriate to the review

1-, 2- and 3- year disease-free survival (DFS) and overall survival (OS) were the secondary outcomes.

Measures of effect

Please specify the effect measure(s) for you additional outcome(s) e.g. relative risks, odds ratios, risk difference, and/or 'number needed to treat.

OR/RR

26. * Data extraction (selection and coding).

Describe how studies will be selected for inclusion. State what data will be extracted or obtained. State how this will be done and recorded.

According to the the modified Jadad scale guidelines, two reviewers collected the relevant data independently. The third reviewers resolved the disagreement between the previous two reviewers.

27. * Risk of bias (quality) assessment.

State which characteristics of the studies will be assessed and/or any formal risk of bias/quality assessment tools that will be used.

By using RevMan 5.0 and stata11.0 software software, we used R0 resection data to detect publication bias.

28. * Strategy for data synthesis.

Describe the methods you plan to use to synthesise data. This **must not be generic text** but should be **specific to your review** and describe how the proposed approach will be applied to your data. If meta-analysis is planned, describe the models to be used, methods to explore statistical heterogeneity, and software package to be used.

We used the Stata 11.0 and RevMan 5.0 software to compare the two groups with dichotomous data, and it was evaluated by relative risks (ORs or RRs) with 95% confidence intervals. Random effects models and fixed effects model were used to analyse the data with huge heterogeneity (I^2?50%) and for little heterogeneity ($I^2$50%). Funnel plots was used to assess the publication bias.

29. * Analysis of subgroups or subsets.

State any planned investigation of 'subgroups'. Be clear and specific about which type of study or participant will be included in each group or covariate investigated. State the planned analytic approach.

No subgroup

30. * Type and method of review.

Select the type of review, review method and health area from the lists below.

Type of review

Cost effectiveness
No

Diagnostic

No

Epidemiologic
No

Individual patient data (IPD) meta-analysis
No

Intervention
Yes

Living systematic review
No

Meta-analysis
No

Methodology
No

Narrative synthesis
No

Network meta-analysis
No

Pre-clinical
No

Prevention
No

Prognostic
No

Prospective meta-analysis (PMA)
No

Review of reviews
No

Service delivery
No

Synthesis of qualitative studies
No

Systematic review
Yes

Other
No

Health area of the review

Alcohol/substance misuse/abuse
No

Blood and immune system
No

Cancer
Yes

Cardiovascular
No

Care of the elderly
No

Child health
No

Complementary therapies
No

COVID-19
No

Crime and justice
No

Dental
No

Digestive system
No

Ear, nose and throat
No

Education
No

Endocrine and metabolic disorders
No

Eye disorders
No

General interest
No

Genetics
No

Health inequalities/health equity
No

Infections and infestations
No

International development
No

Mental health and behavioural conditions
No

Musculoskeletal
No

Neurological
No

Nursing
No

Obstetrics and gynaecology

No

Oral health
No

Palliative care
No

Perioperative care
No

Physiotherapy
No

Pregnancy and childbirth
No

Public health (including social determinants of health)
No

Rehabilitation
No

Respiratory disorders
No

Service delivery
No

Skin disorders
No

Social care
No

Surgery
No

Tropical Medicine
No

Urological
No

Wounds, injuries and accidents
No

Violence and abuse
No

31. Language.

Select each language individually to add it to the list below, use the bin icon to remove any added in error.
English

There is not an English language summary

32. * Country.

Select the country in which the review is being carried out. For multi-national collaborations select all the countries involved.

China

33. Other registration details.

Name any other organisation where the systematic review title or protocol is registered (e.g. Campbell, or The Joanna Briggs Institute) together with any unique identification number assigned by them. If extracted data will be stored and made available through a repository such as the Systematic Review Data Repository (SRDR), details and a link should be included here. If none, leave blank.

34. Reference and/or URL for published protocol.

If the protocol for this review is published provide details (authors, title and journal details, preferably in Vancouver format)

No

Add web link to the published protocol.

No

Or, upload your published protocol here in pdf format. Note that the upload will be publicly accessible.

No I do not make this file publicly available until the review is complete

Please note that the information required in the PROSPERO registration form must be completed in full even if access to a protocol is given.

35. Dissemination plans.

Do you intend to publish the review on completion?

No

Give brief details of plans for communicating review findings.?

No

36. Keywords.

Give words or phrases that best describe the review. Separate keywords with a semicolon or new line. Keywords help PROSPERO users find your review (keywords do not appear in the public record but are included in searches). Be as specific and precise as possible. Avoid acronyms and abbreviations unless these are in wide use.

Neoadjuvant chemoradiation, pancreatic cancer, upfront surgery, meta-analysis

37. Details of any existing review of the same topic by the same authors.

If you are registering an update of an existing review give details of the earlier versions and include a full bibliographic reference, if available.

No

38. * Current review status.

Update review status when the review is completed and when it is published.New registrations must be ongoing so this field is not editable for initial submission.
Please provide anticipated publication date

Review_Ongoing

39. Any additional information.

Provide any other information relevant to the registration of this review.

No

40. Details of final report/publication(s) or preprints if available.

Leave empty until publication details are available OR you have a link to a preprint (NOTE: this field is not editable for initial submission). List authors, title and journal details preferably in Vancouver format.

Give the link to the published review or preprint.