# INPLASY PROTOCOL

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**None declared.**

# Efficacy and safety of Apatinib for the treatment of advanced or recurrent cervical cancer: A single-arm meta-analysis among Chinese patients

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**Review question / Objective:** **This meta-analysis aims to evaluate the efficacy and safety of apatinib in patients with advanced or recurrent cervical cancer.**
**Condition being studied:** **Although various effective compounds for the second- and third-line treatment of advanced or recurrent cervical cancer improved the overall survival, the optimal regimen remains controversial. Previous studies revealed that apatinib had extensive antitumor activities. However, almost all studies on apatinib in recurrent cervical cancer are non-randomized controlled trials with small sample sizes, different first- line treatments and uncontrolled statistical analysis, which may result in a lack of effective metrics to evaluate the efficacy and safety of apatinib.**

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 09 July 2022 and was last updated on 09 July 2022 (registration number INPLASY202270049).

## INTRODUCTION

**Review question / Objective:** **This meta-analysis aims to evaluate the efficacy and safety of apatinib in patients with advanced or recurrent cervical cancer.**

**Condition being studied:** **Although various effective compounds for the second- and third-line treatment of advanced or recurrent cervical cancer improved the overall survival, the optimal regimen remains controversial. Previous studies revealed that apatinib had extensive antitumor activities. However, almost all studies on apatinib in recurrent cervical cancer are non-randomized controlled trials with small sample sizes, different**

first- line treatments and uncontrolled statistical analysis, which may result in a lack of effective metrics to evaluate the efficacy and safety of apatinib.

## METHODS

**Participant or population:** Advanced or recurrent cervical cancer patient.

**Intervention:** Patients were treated with apatinib, either with single-agent therapy or in combination with chemotherapy.

**Comparator:** No.

**Study designs to be included:** Single-arm study.

**Eligibility criteria:** Animal experiments, cell research, reviews, meta-analyses, duplicates, case report or letters were not in consideration; studies with patients number less than 10 were excluded.

**Information sources:** The required data from all included studies were independently extracted by two investigators, and the quality assessment of the studies was performed afterwards. The extracted characteristics were summarized as following: authors, publication year, nation, sample size, prior therapeutic regimen, median age, median follow-up and reported endpoints. Indexes for clinical and safety outcomes included ORR, DCR, OS, PFS, the incidence of any AEs and ≥grade 3 AEs. Also, two investigators independently assessed and extracted the required data from all included studies.

**Main outcome(s):** Overall response rate (ORR), Disease control rate (DCR), Progression-free survival (PFS), Overall survival (OS).

**Additional outcome(s):** Adverse events (AEs).

**Quality assessment / Risk of bias analysis:** The Newcastle–Ottawa Scale (NOS) was used to evaluate the quality of including non-controlled trials. The retrospective studies were assessed by JBI Critical Appraisal Checklist for Case Series.

**Strategy of data synthesis:** All data in this meta-analysis were analyzed with STATA 14.2 software (Stata Corp LP, College Station, TX, USA).Heterogeneity was measured using the Chi-square test and I2statistic. P < 0.1 indicated a statistically significant difference. If significant heterogeneity (P-value 50%) existed, random-effect model was performed. Otherwise, the fixed-effects model was used. Potential publication bias was accessed by Begg's and Egger's tests.

**Subgroup analysis:** No.

**Sensitivity analysis:** Sensitivity analysis was performed to analyze the stability and reliability of the pooled results.

**Country(ies) involved:** China.

**Keywords:** Apatinib, advanced/recurrent cervical cancer, tumor response, survival, adverse events.

**Contributions of each author:**

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