ACTA 2.0: A Modular Architecture for Multi-Layer Argumentative Analysis of Clinical Trials

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ACTA 2.0

API

Highlights

Search on PubMed: PubMed is a free search engine accessing primarily the MEDLINE database of references and abstracts on life sciences and biomedical topics.

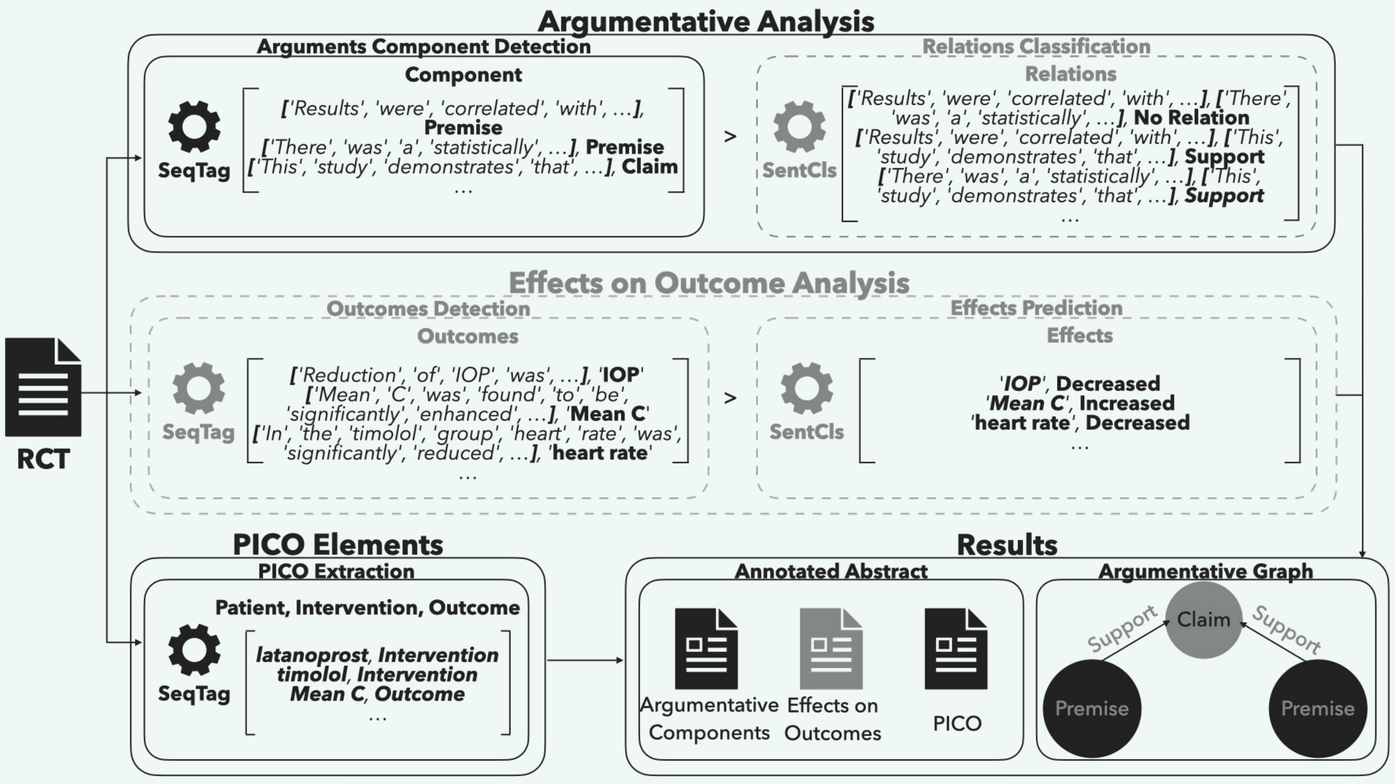
Enhanced Argumentative Analysis: ACTA 2.0 integrates a new relation classification module, where now it indicates their argumentative function as either *attack* or *support*.

PICO elements: We automatically detect PICO (**P**atient, **I**ntervention, **C**omparison, **O**utcome) elements in the text of the clinical trial.

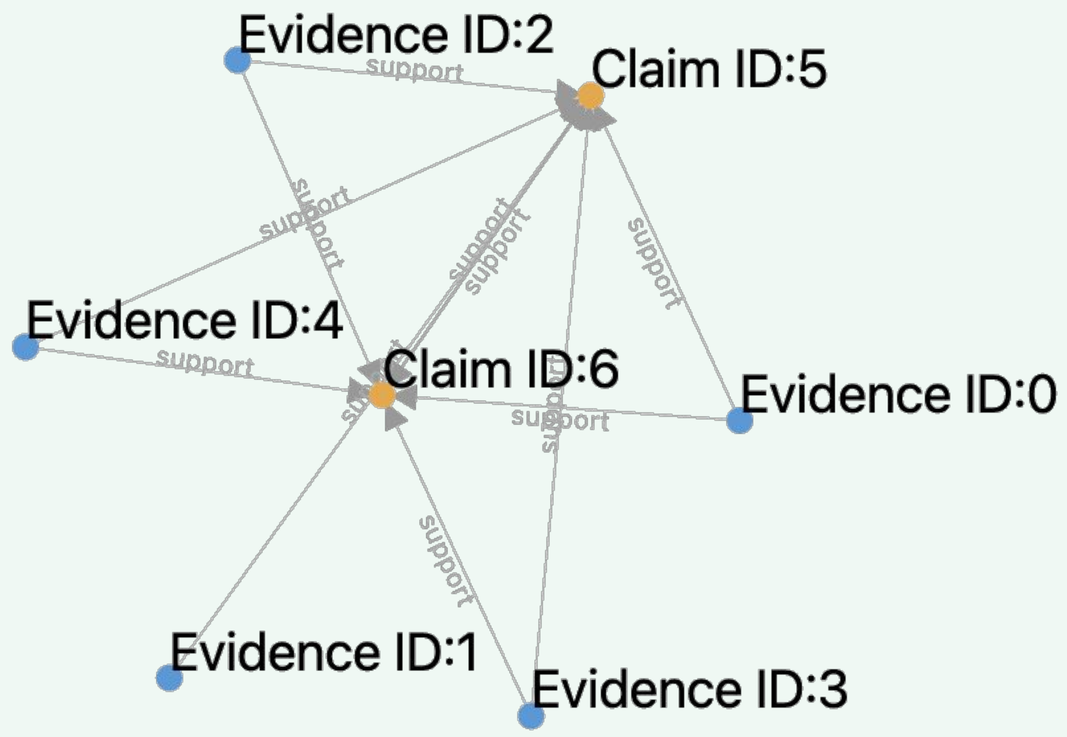
Effects on Outcomes: ACTA 2.0 implements a new module to analyse the reported effects an intervention has on the outcomes (**O** of PIC**O**) in the clinical trial abstract.

ACTA 2.0 Public API: Each of the processing steps are now independent executable units, which can be called separately via our publicly available REST API.

Argument Mining Pipeline



Argument graph generated



Effect on Outcome Analysis

PMID	**20733132**
Title:	Phase III trial of carboplatin plus paclitaxel with or without gemcitabine in first-line treatment of epithelial ovarian cancer.
Authors:	du Bois A, Herrstedt J, Hardy-Bessard AC, Müller HH, Harter P, Kristensen G, Joly F, Huober J, Avall-Lundqvist E, Weber B, Kurzeder C, Jelic S, Pujade-Lauraine E, Burges A, Pfisterer J, Gropp M, Staehle A, Wimberger P, Jackisch C, Sehouli J
Abstract:	one attempt to improve long - term survival in patients with advanced ovarian cancer was thought to be the addition of more non - cross - resistant drugs to platinum - paclitaxel combination regimens . Gemcitabine was among the candidates for a third drug. We performed a prospective, randomized, phase III, intergroup trial to compare carboplatin plus paclitaxel (TC; area under the curve [AUC] 5 and 175 mg/m(2), respectively) with the same combination and additional gemcitabine 800 mg/m(2) on days 1 and 8 (TCG) in previously untreated patients with advanced epithelial ovarian cancer. TC was administered intravenously (IV) on day 1 every 21 days for a planned minimum of six courses. Gemcitabine was administered by IV on days 1 and 8 of each cycle in the TCG arm. Between 2002 and 2004, 1,742 patients were randomly assigned; 882 and 860 patients received TC and TCG, respectively. grades 3 to 4 hematologic toxicity and fatigue occurred more frequently in the tcg arm . accordingly , quality - of - life analysis during chemotherapy showed a disadvantage in the tcg arm . although objective response was slightly higher in the tcg arm , this did not translate into improved progression - free survival (pfs) or overall survival (os) . median pfs was 17 . 8 months for the tcg arm and 19 . 3 months for the tc arm (hazard ratio [hr] , 1 . 18 ; 95 % ci , 1 . 06 to 1 . 32 ; p = . 0044) . median os was 49 . 5 for the tcg arm and 51 . 5 months for the tc arm (hr , 1 . 05 ; 95 % ci , 0 . 91 to 1 . 20 ; p = . 5106) . the addition of gemcitabine to carboplatin plus paclitaxel increased treatment burden , reduced pfs time , and did not improve os in patients with advanced epithelial ovarian cancer . Therefore, we recommend no additional clinical use of TCG in this population.
Colors code:	Increased · Decreased · Improved · No difference · No occurrence
Highlight	Argumentative Components · PICO Elements · Effects on Outcomes · Reset text