

# Minimally-invasive versus open surgery for gastric cancer - cross-sectional analysis

<b>Submission date</b> 21/08/2023	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 29/08/2023	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 14/02/2024	<b>Condition category</b> Cancer	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

Background and study aims

Since gastric (stomach) cancer is one of the most common cancers worldwide, this study aimed to assess the outcomes of the two most common types of surgery among gastric cancer patients: open surgery versus minimally invasive (laparoscopic, robotic) surgery.

Who can participate?

Patients aged 18 years and over with gastric cancer who underwent curative-intent treatment between 2013-2019

What does the study involve?

The study involves the assessment of the optimal method of surgery (open versus minimally invasive) in gastric cancer patients using data collected from the National Cancer Database (NCDB).

What are the possible benefits and risks of participating?

This is an observational study, however, the results of this retrospective data suggest a need for further prospective trials comparing open versus minimally-invasive surgery for gastric cancer.

Where is the study run from?

Medical University of Lublin (Poland)

When is the study starting and how long is it expected to run for?

January 2013 to December 2019

Who is funding the study?

Medical University of Lublin (Poland)

Who is the main contact?

Karol Rawicz-Pruszyński, krpruszynski@gmail.com

## Contact information

**Type(s)**

Scientific

**Contact name**

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## Additional identifiers

**Clinical Trials Information System (CTIS)**

Nil known

**ClinicalTrials.gov (NCT)**

Nil known

**Protocol serial number**

Nil known

## Study information

**Scientific Title**

Improved NCCN guideline compliance and textbook oncological outcomes among patients undergoing minimally invasive surgery for locally advanced gastric cancer – cross-sectional analysis of national cancer database

**Study objectives**

To investigate the rates of National Comprehensive Cancer Network (NCCN) guideline adherence and textbook oncological outcome (TOO) among patients undergoing minimally invasive versus open surgery for gastric cancer

**Ethics approval required**

Ethics approval not required

**Ethics approval(s)**

The study was determined to be exempt by the Institutional Review Board of the Ohio State University. The NCDB, a joint quality improvement initiative of the American College of Surgeons Commission on Cancer and the American Cancer Society, is one of the largest cancer registries in the world, comprising over 70% of newly diagnosed cancer cases nationwide. Current NCDB

data is available up to 2019 for Higher Education Authorities in the US, including Ohio State University. Since the current study did not change or interfere with available data, there was no need for additional ethics board approval.

## **Study design**

Observational cross-sectional study

## **Primary study design**

Observational

## **Study type(s)**

Treatment

## **Health condition(s) or problem(s) studied**

Gastric cancer

## **Interventions**

In this cross-sectional study patients with stage II/III gastric cancer (cT2-T4N0-3M0) who underwent curative-intent treatment between 2013-2019 were evaluated from National Cancer Database (NCDB). Multivariable analysis was performed to assess the association between surgical approach, NCCN guideline adherence, TOO, and overall survival (OS).

## **Intervention Type**

Procedure/Surgery

## **Primary outcome(s)**

1. National Comprehensive Cancer Network (NCCN) guideline adherence, defined as receipt of stage-specific curative intent treatment (yes/no). For systemic treatment, patients were classified as receiving guideline-adherent care if any perioperative adjunctive therapy (single- or multiagent) was administered (yes/no). For surgical treatment, patients were classified as receiving guideline-adherent care if the primary surgical procedure included evaluation of at least 15 lymph nodes (yes/no),

2. Textbook oncological outcome (TOO) The TOO definition consisted of chemotherapy receipt, (yes/no) adequate gastric resection to achieve negative resection margins (R0) (yes/no), examination of at least 15 lymph nodes (yes/no), followed by no prolonged length of hospital stay (yes/no), no 30-day mortality (yes/no), and no 30-day readmission (yes/no)

Data collected from the National Cancer Database (NCDB) for patients with stage II/III gastric cancer (cT2-T4N0-3M0) who underwent curative-intent treatment between 2013-2019

## **Key secondary outcome(s)**

Overall survival, collected from the National Cancer Database (NCDB) for patients with stage II /III gastric cancer (cT2-T4N0-3M0) who underwent curative-intent treatment between 2013-2019

## **Completion date**

31/12/2019

## **Eligibility**

### **Key inclusion criteria**

Patients with stage II/III LAGC (cT2-T4N0-3M0) who underwent curative-intent treatment between 2013 and 2019 evaluated from the National Cancer Database (NCDB)

**Participant type(s)**

Population

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Upper age limit**

90 years

**Sex**

All

**Total final enrolment**

13885

**Key exclusion criteria**

1. Did not undergo resection
2. Metastatic (cM1) or early (cT1) GC
3. Underwent palliative care
4. Did not receive or died before planned multimodal treatment
5. Had missing information

**Date of first enrolment**

01/01/2013

**Date of final enrolment**

31/12/2019

**Locations**

**Countries of recruitment**

United States of America

**Study participating centre**

The Ohio State University, Wexner Medical Center

395 W. 12th Ave.

Suite 670

Columbus  
United States of America  
43201

## Sponsor information

### Organisation

Medical University of Lublin

### ROR

<https://ror.org/016f61126>

## Funder(s)

### Funder type

University/education

### Funder Name

Uniwersytet Medyczny w Lublinie

### Alternative Name(s)

Medical University of Lublin, UML, MUL

### Funding Body Type

Government organisation

### Funding Body Subtype

Local government

### Location

Poland

## Results and Publications

### Individual participant data (IPD) sharing plan

The datasets analysed during the current study will be published as a supplement to the results publication

### IPD sharing plan summary

Published as a supplement to the results publication

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>		31/01/2024	14/02/2024	Yes	No