Appendix：Informed Consent Form
Protocol ID: 2024-SR-587

Title: MRI and CT in Gastroesophageal Junction or Upper Gastric Adenocarcinoma

Sponsor: The First Affiliated Hospital with Nanjing Medical University

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Informed Consent Form

Dear Sir/Madam：

We invite you to participate in the project "**MRI and CT in Gastroesophageal Junction or Upper Gastric Adenocarcinoma**" approved by the Department of Radiology of the First Affiliated Hospital of Nanjing Medical University. This study is led by Dr. Yu-dong Zhang, Director of the Department of Radiology, and will be conducted at the aforementioned institution. The study anticipates the voluntary participation of approximately 100 subjects. Ethical approval for this research has been granted by the Ethics Committee of the First Affiliated Hospital of Nanjing Medical University (Jiangsu Province People's Hospital), Ethical review No. : 2024-SR-587.

Why was this study conducted? (Brief Introduction of Research Background and Objectives)

Despite a continuous decline in the incidence of gastric cancer in recent years, the morbidity and mortality rates associated with the gastroesophageal junction and upper gastric cancers remain elevated. Consequently, it is imperative to develop more refined and individualized precision strategies for screening, diagnosis, surgical intervention, and comprehensive treatment. Due to the unique anatomical location, considerable debate exists regarding the critical aspects of its surgical management in clinical practice. Accurate preoperative Siewert classification, along with precise assessment of the extent of esophageal involvement, is crucial for determining the appropriate surgical approach and achieving negative resection margins. Multiparametric MRI offers significant anatomical benefits due to its high soft tissue resolution, and its functional imaging capabilities present promising applications. With advancements in abdominal imaging technology, novel techniques such as high-order diffusion imaging and compressed sensing technology have facilitated high-resolution MRI of the stomach during free breathing, which is now implemented in clinical practice. Prior research has demonstrated that individualized gastric MRI scanning consistently yields superior image quality, and MRI provides greater accuracy than CT in preoperative staging assessments. Nonetheless, the comparative clinical utility of MRI and CT in patients with adenocarcinoma of the esophagogastric junction (AEG) remains to be elucidated.

Which individuals are eligible or ineligible to participate in the study? (Specify the inclusion and exclusion criteria).

Inclusion Criteria:

1) patients with gastric cancer confirmed by preoperative gastroscopic biopsy;

2) underwent standardized mpMRI and CT examination;

3) patients with complete postoperative pathological data and pathological results of gastroesophageal Junction or upper gastric adenocarcinoma;

Exclusion Criteria:

1) combined with other tumors;

2) Clinical and imaging data were missing or could not meet the research needs;

3) the location of lesions could not be determined;

If you want to participate in the study, you will need:

1) Standard gastric CT and multi-parametric MRI scan were performed in our hospital (the First Affiliated Hospital of Nanjing Medical University)

2) Provide relevant clinical data, such as patient age, laboratory examination, and endoscopic biopsy results

3) If surgery is performed, the date of surgery and relevant information of surgical pathology should be provided

4) Postoperative complication rate and 5-year follow-up after surgery (at intervals of 3-6 months for the first 2 years and 6-12 months for the next 3 years)

There are no additional precautions for participating in this study. Please refer to the informed consent form for details of magnetic resonance examination

What are the benefits of participating in this study?

Participation in this study, which involves the utilization of CT and MRI scans of the esophagogastric junction to tailor treatment, may or may not result in an improvement in your condition.

What are the risks of participating in this study?

The potential risks associated with the examination are comprehensively outlined in the informed consent form for CT and MRI procedures. No risks or harm were encountered by the participants throughout the duration of this study.

Are there any fees for participating in the study?

The expenses associated with diagnostic examinations or surgical procedures for the treatment of the disease were borne by the participants themselves, and no supplementary fees were incurred for involvement in the study.

Is personal information confidential?

Your medical records will be securely maintained at the hospital, and authorized investigators, research authorities, and ethics committees will be granted access to these records. Your personal identity will remain confidential and will not be revealed in any public dissemination of the study's findings. Every effort will be made to safeguard the privacy of your personal medical data in accordance with legal requirements.

What treatments are available if you do not participate in this study?

If you do not participate in the study, or if you drop out, there are many alternative treatments, such as upper gastrointestinal radiography.

Do I have to participate in the study?

Participation in this study is entirely voluntary, and you have the right to decline involvement or withdraw at any point without any impact on your medical care. Should you choose to withdraw, please inform your physician. You may be requested to undergo certain tests, which are intended to safeguard your health.

If you have questions related to personal rights and interests, please contact the Ethics Committee of our hospital at 025-68306360.

Statement of Subjects: I have reviewed the aforementioned introduction to this study and am fully cognizant of the potential risks and benefits associated with participation. I hereby volunteer to partake in this study and will receive a signed and dated copy of this informed consent form for my records.

Agree☐ disagree☐

Signature of subjects：_____ Date：__ __ __ __

Phone number：_____

Investigator Statement: I affirm that the study's particulars, especially the potential risks and benefits associated with participation, have been thoroughly communicated to the participant. Consequently, the participant has voluntarily provided informed consent to partake in the study. This informed consent form has been prepared in duplicate, ensuring that each participant retains a signed copy.

Signature of investigator：_____ Date：__ __ __ __

Phone number_____