

Trial record **1 of 1** for: BO18255[Previous Study](#) | [Return to List](#) | [Next Study](#)**ToGA Study - A Study of Herceptin (Trastuzumab) in Combination With Chemotherapy Compared With Chemotherapy Alone in Patients With HER2-Positive Advanced Gastric Cancer****This study has been completed.****Sponsor:**

Hoffmann-La Roche

Collaborator:

Chugai Pharmaceutical

Information provided by (Responsible Party):

Hoffmann-La Roche

ClinicalTrials.gov Identifier:

NCT01041404

First received: December 29, 2009

Last updated: October 31, 2014

Last verified: October 2014

[History of Changes](#)[Full Text View](#)[Tabular View](#)[Study Results](#)[Disclaimer](#)[How to Read a Study Record](#)**▶ Purpose**

This parallel, randomized, open-label, multi-centre study will evaluate the effect on overall survival of trastuzumab (Herceptin) in combination with a chemotherapy compared to the chemotherapy alone in patients with HER2-positive advanced gastric cancer. Trastuzumab (Herceptin) will be administered as intravenous infusion of 6 mg/kg (loading dose 8 mg/kg) every 3 weeks. The chemotherapy consists of a combination of 6 cycles of fluorouracil (800 mg/m²/day intravenous infusion every 3 weeks) and cisplatin (80 mg/m² intravenous infusion every 3 weeks), or capecitabine (Xeloda, 1000 mg/m² po twice daily for 14 days every 3 weeks) and cisplatin (80 mg/m² intravenous infusion every 3 weeks). Treatment with trastuzumab (Herceptin) will continue until disease progression. The target sample size is 300-600 patients.

Condition	Intervention	Phase
Gastric Cancer	Drug: Trastuzumab Drug: Fluorouracil Drug: Cisplatin Drug: Capecitabine	Phase 3

Study Type: Interventional

Study Design: Allocation: Randomized

Endpoint Classification: Safety/Efficacy Study

Intervention Model: Parallel Assignment

Masking: Open Label

Primary Purpose: Treatment

Official Title: A Randomized, Open-label Study of the Effect of First-line Herceptin in Combination With a Fluoropyrimidine and Cisplatin Versus Chemotherapy Alone on Overall Survival in Patients With HER2-positive Advanced Gastric Cancer

Resource links provided by NLM:

[MedlinePlus](#) related topics: [Cancer](#) [Stomach Cancer](#)

[Drug Information](#) available for: [Fluorouracil](#) [Cisplatin](#) [Capecitabine](#) [Trastuzumab](#)

[Genetic and Rare Diseases Information Center](#) resources: [Stomach Cancer](#)

[U.S. FDA Resources](#)

Further study details as provided by Hoffmann-La Roche:

Primary Outcome Measures:

- Overall Survival (OS) - Percentage of Participants With an Event [Time Frame: Baseline (BL), Days 1, 8, 15, 22, 43, 64, 85, 106, 127, and every 21 days until the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]
OS was defined as the time from the date of randomization to the date of death due to any cause. Participants were censored at the last date of tumor measurement, the last date in the study drug log, or the date of last follow-up.

- Overall Survival - Time to Event [Time Frame: BL, Days 1, 8, 15, 22, 43, 64, 85, 106, 127, and every 21 days until the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

The median time, in months, from the date of randomization to the date of an OS event. Participants were censored at the last date tumor measurement, the last date in the study drug log, or the date of last follow-up.

Secondary Outcome Measures:

- Progression-Free Survival (PFS) - Percentage of Participants With an Event [Time Frame: BL, Days 43, 85, and 127, and every 21 days thereafter until disease progression or the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

PFS was defined as the time from the date of randomization to the date of the first documentation of progressive disease (PD) or date of death, whichever occurs first. For target lesions (TL), PD was defined as at least a 20 percent (%) increase in the sum of the longest diameter (SLD) of TLs, taking as a reference the smallest SLD recorded since the treatment started, or the appearance of one or more lesions. For non-target lesions (NTL), PD was defined as an unequivocal progression of existing NTLs. Participants were censored at the last date of tumor measurement, the last date in the study drug log, or the date of last follow-up.

- Progression-Free Survival - Time to Event [Time Frame: BL, Days 43, 85, and 127, and every 21 days thereafter until disease progression or the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

The median time, in months, from the date of randomization to the date of a PFS event. Participants were censored at the last date of tumor measurement, the last date in the study drug log, or the date of last follow-up.

- Time to Progression (TTP) - Percentage of Participants With an Event [Time Frame: BL, Days 43, 85, and 127, and every 21 days thereafter until disease progression or the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

TTP was defined as the time from the date of randomization and the date of the first occurrence of PD. Participants were censored at the last date of tumor assessment, the last date in the study drug log, or the last date of follow-up.

- Time to Progression - Time to Event [Time Frame: BL, Days 43, 85, and 127, and every 21 days thereafter until disease progression or the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

The median time, in months, from the date of randomized to the date of a TTP event. Participants were censored at the last date of tumor assessment, the last date in the study drug log, or the last date of follow-up.

- Percentage of Participants With Confirmed Complete Response (CR) or Partial Response (PR) Determined by Response Evaluation Criteria in Solid Tumors (RECIST) [Time Frame: BL, Days 43, 85, and 127, and every 21 days thereafter until disease progression or the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

For TLs, a CR was defined as the disappearance of all TLs and a PR was defined as at least a 30% decrease in the SLD of the TLs, taking as a reference the baseline SLD. For NTLs, a CR was defined as the disappearance of all NTLs and normalization of tumor marker levels.

- Duration of Response - Percentage of Participants With an Event [Time Frame: BL, Days 43, 85, and 127, and every 21 days thereafter until disease progression or the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

Duration of response was defined for responders as the time from the date on which the CR or PR was first recorded to the date on which PD is first noted. Participants were censored on the date of death, the date of last tumor measurement, the last date in study drug log, or the date of last follow-up.

- Duration of Response [Time Frame: BL, Days 43, 85, and 127, and every 21 days thereafter until disease progression or the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

The median time, in months, of the duration of response. Participants were censored at the date of death, the date of last tumor measurement, the last date in study drug log, or the date of last follow-up.

- Percentage of Participants With Clinical Benefit [Time Frame: BL, Days 43, 85, and 127, and every 21 days thereafter until disease progression or the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

Clinical benefit was defined as stable disease (SD), CR, or PR for 6 weeks or longer as determined by RECIST. For TLs, SD was defined as neither sufficient shrinkage to qualify for PR, nor sufficient increase to qualify for PD, taking as a reference the smallest SLD recorded since treatment had started. For NTLs, SD was defined as a persistence of one or more NTLs and/or maintenance of tumor marker levels above the normal limits.

- European Organisation For the Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire-Core 30 (QLQ C-30) Questionnaire Scores [Time Frame: BL, Days 1, 22, 43, 64, 85, 106, 127, and every 21 days until disease progression of the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

EORTC QLQ-C30: included functional scales (physical, role, cognitive, emotional, and social), global health status, symptom scales (fatigue, pain, nausea/vomiting) and single items (dyspnoea, appetite loss, insomnia, constipation/diarrhea and financial difficulties). Most questions used 4 point scale (1 'Not at all' to 4 'Very much'; 2 questions used 7-point scale (1 'very poor' to 7 'Excellent'). Scores averaged, transformed to 0-100 scale; higher score equals (=) better level of functioning or greater degree of symptoms.

- EORTC Quality of Life Questionnaire-Stomach Cancer Specific (QLQ STO22) Questionnaire Scores [Time Frame: BL, Days 1, 22, 43, 64, 85, 106, 127, and every 21 days until disease progression of the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

The QLQ-STO22 is a gastric cancer quality of life questionnaire. There are 22 questions concerning disease, treatment related symptoms, side effects, dysphagia, nutritional aspects, and questions about the emotional problems of gastric cancer (dysphagia, pain, reflux, eating restrictions, anxiety, dry mouth, body image, and hair loss). The questions are grouped into five scales and 4 single items which are related to the symptoms of the disease. Most questions used 4-point scale (1 'Not at all' to 4 'Very much'; 1 question was a yes or no answer). A linear transformation was used to standardize all scores and single-items to a scale of 0 to 100; higher score=better level of functioning or greater degree of symptoms.

- Pain Intensity Scores as Assessed By Visual Analog Scale (VAS) [Time Frame: BL, Days 1, 22, 43, 64, 85, 106, 127, and every 21 days until disease progression of the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

The participant assessed their pain on a 0 to 100 millimeter (mm) horizontal VAS. The left-hand extreme of the line equals 0 mm, and is described as "no pain" and the right-hand extreme equals 100 mm as "unbearable pain". A negative change indicated improvement.

- Percentage of Participants With a Change in Analgesic Medication During the Study [Time Frame: BL, Days 1, 22, 43, 64, 85, 106, 127, and every 21 days until disease progression of the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

Analgesic medications were recorded throughout the study until disease progression.

- Body Weight (Kilograms [kg]) at BL [Time Frame: BL] [Designated as safety issue: No]
- Percentage of Participants With Change From Baseline in Body Weight by Percentage Change in Weight [Time Frame: BL, Days 1, 22, 43, 64, 85, 106, 127, and every 21 days until disease progression of the end of study, 1 year after the cut-off date for the 2nd interim efficacy analysis] [Designated as safety issue: No]

Change in body weight was categorized as an increase of greater than (>)5 percent (%), no change (plus or minus [±]5%), decrease of >5-10%, or a decrease of >10% from BL to the end of study. Time windows were applied in order to assign visits to weight measurements, and the lowest post-screening value recorded was used for the analysis. The percentage change in weight from screening was summarized over time.

- Steady State Trastuzumab Area Under the Concentration (AUC) [Time Frame: Predose and end of infusion on Days 1, 8, 15, and 64, and predose on Days 22 and 106] [Designated as safety issue: No]

Individual steady state predicted exposure, as assessed by median AUC (measured as mg multiplied by [*] day per liter [L]) calculated for all treated participants using the nominal dosage schedule administered as an IV infusion. Individual steady state AUC was calculated using all available PK samples from all timepoints.

- Trastuzumab Minimum Serum Concentration (Cmin) [Time Frame: Predose and end of infusion on Days 1, 8, 15, and 64, and predose on Days 22 and 106] [Designated as safety issue: No]

Median Cmin (measured as milligrams per liter [mg/L]) calculated for all treated participants using the nominal dosage schedule administered as an IV infusion.

- Trastuzumab Maximum Serum Concentration (Cmax) [Time Frame: Predose and end of infusion on Days 1, 8, 15, and 64, and predose on Days 22 and 106] [Designated as safety issue: No]

Median Cmax (measured as mg/L) calculated for all treated participants using the nominal dosage schedule administered as an IV infusion.

Enrollment: 584
 Study Start Date: September 2005
 Study Completion Date: June 2010
 Primary Completion Date: June 2010 (Final data collection date for primary outcome measure)

Arms	Assigned Interventions
<p>Experimental: Trastuzumab, Fluoropyrimidine, Cisplatin</p> <p>Participants received an initial loading dose of 8 milligrams per kilogram (mg/kg) trastuzumab i.v. on Day 1 of cycle, followed by 6 mg/kg i.v. every 3 weeks until disease progression; 800 mg/m² fluorouracil i.v. on Days 1 through 5 of cycle every 3 weeks for 6 cycles; 80 mg/m² cisplatin i.v. on Day 1 of cycle every 3 weeks for 6 cycles; and 1000 mg/m² capecitabine p.o. twice daily on Days 1 through 15 of cycle every 3 weeks for 6 cycles.</p>	<p>Drug: Trastuzumab</p> <p>Initial loading dose 8 mg/kg i.v. infusion on Day 1 of cycle, followed by 6 mg/kg i.v. infusion every 3 weeks until disease progression</p> <p>Other Name: Herceptin</p> <p>Drug: Fluorouracil</p> <p>800 mg/m² i.v. infusion on Days 1 through 5 of cycle every 3 weeks for 6 cycles</p> <p>Other Name: 5-FU</p> <p>Drug: Cisplatin</p> <p>80 mg/m² i.v. infusion on Day 1 of cycle every 3 weeks for 6 cycles</p> <p>Drug: Capecitabine</p> <p>1000 mg/m² p.o. twice daily on Days 1 through 15 of cycle every 3 weeks for 6 cycles</p> <p>Other Name: Xeloda</p>
<p>Active Comparator: Fluoropyrimidine, Cisplatin</p>	<p>Drug: Fluorouracil</p>

Participants received 800 milligrams per square meter (mg/m²) fluorouracil intravenous (i.v.) on Days 1 through 5 of cycle every 3 weeks for 6 cycles; 80 mg/m² cisplatin i.v. on Day 1 of cycle every 3 weeks for 6 cycles; and 1000 mg/m² capecitabine orally (p.o.) twice daily on Days 1 through 15 of cycle every 3 weeks for 6 cycles.

800 mg/m² i.v. infusion on Days 1 through 5 of cycle every 3 weeks for 6 cycles

Other Name: 5-FU

Drug: Cisplatin

80 mg/m² i.v. infusion on Day 1 of cycle every 3 weeks for 6 cycles

Drug: Capecitabine

1000 mg/m² p.o. twice daily on Days 1 through 15 of cycle every 3 weeks for 6 cycles

Other Name: Xeloda

► Eligibility

Ages Eligible for Study: 18 Years and older (Adult, Senior)

Genders Eligible for Study: Both

Accepts Healthy Volunteers: No

Criteria

Inclusion Criteria:

- Adult patients >=18 years of age
- Inoperable locally advanced, recurrent, and/or metastatic cancer of the stomach or gastro-esophageal junction
- Adenocarcinoma
- HER2-positive tumors

Exclusion Criteria:

- Previous chemotherapy for advanced/metastatic disease
- Lack of physical integrity of the upper gastrointestinal tract, or malabsorption syndrome
- History of cardiac disease
- Dyspnoea at rest, due to complications of advanced malignancy or other disease, or patients who require supportive oxygen therapy

► Contacts and Locations

Choosing to participate in a study is an important personal decision. Talk with your doctor and family members or friends about deciding to join a study. To learn more about this study, you or your doctor may contact the study research staff using the Contacts provided below. For general information, see [Learn About Clinical Studies](#).

Please refer to this study by its ClinicalTrials.gov identifier: NCT01041404

[+ Show 142 Study Locations](#)

Sponsors and Collaborators

Hoffmann-La Roche

Chugai Pharmaceutical

Investigators

Study Director: Clinical Trials Hoffmann-La Roche

► More Information

Publications automatically indexed to this study by ClinicalTrials.gov Identifier (NCT Number):

[Van Cutsem E, Bang YJ, Feng-Yi F, Xu JM, Lee KW, Jiao SC, Chong JL, López-Sánchez RI, Price T, Gladkov O, Stoss O, Hill J, Ng V, Lehle M, Thomas M, Kiermaier A, Rüschoff J. HER2 screening data from ToGA: targeting HER2 in gastric and gastroesophageal junction cancer. *Gastric Cancer*. 2015 Jul;18\(3\):476-84. doi: 10.1007/s10120-014-0402-y. Epub 2014 Jul 20.](#)

[Satoh T, Bang YJ, Gotovkin EA, Hamamoto Y, Kang YK, Moiseyenko VM, Ohtsu A, Van Cutsem E, Al-Sakaff N, Urspruch A, Hill J, Weber HA, Chung HC; ToGA Trial Investigators. Quality of life in the trastuzumab for gastric cancer trial. *Oncologist*. 2014 Jul;19\(7\):712-9. doi: 10.1634/theoncologist.2014-0058. Epub 2014 Jun 20.](#)

[Satoh T, Omuro Y, Sasaki Y, Hamamoto Y, Boku N, Tamura T, Ohtsu A. Pharmacokinetic analysis of capecitabine and cisplatin in combination with trastuzumab in Japanese patients with advanced HER2-positive gastric cancer. *Cancer Chemother Pharmacol*. 2012 Apr;69\(4\):949-55. doi: 10.1007/s00280-011-1783-9. Epub 2011 Nov 25.](#)

[Bang YJ, Van Cutsem E, Feyereislova A, Chung HC, Shen L, Sawaki A, Lordick F, Ohtsu A, Omuro Y, Satoh T, Aprile G, Kulikov E, Hill J, Lehle M, Rüschoff J, Kang YK; ToGA Trial Investigators. Trastuzumab in combination with chemotherapy versus chemotherapy alone for treatment of HER2-positive advanced gastric or gastro-oesophageal junction cancer \(ToGA\): a phase 3, open-label, randomised controlled trial. *Lancet*. 2010 Aug 28;376\(9742\):687-97. doi: 10.1016/S0140-6736\(10\)61121-X. Epub 2010 Aug 19. Erratum in: *Lancet*. 2010 Oct 16;376\(9749\):1302.](#)

Responsible Party: Hoffmann-La Roche
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Study First Received: December 29, 2009
Results First Received: July 22, 2014
Last Updated: October 31, 2014
Health Authority: Australia: National Health and Medical Research Council

Additional relevant MeSH terms:

Stomach Neoplasms	Cisplatin
Gastrointestinal Neoplasms	Trastuzumab
Digestive System Neoplasms	Antimetabolites, Antineoplastic
Neoplasms by Site	Antimetabolites
Neoplasms	Molecular Mechanisms of Pharmacological Action
Digestive System Diseases	Antineoplastic Agents
Gastrointestinal Diseases	Immunosuppressive Agents
Stomach Diseases	Immunologic Factors
Capecitabine	Physiological Effects of Drugs
Fluorouracil	

ClinicalTrials.gov processed this record on October 20, 2016