

# Evaluation of the effects of simvastatin in metastatic breast cancer patients

<b>Submission date</b> 24/09/2019	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 11/10/2019	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 02/09/2020	<b>Condition category</b> Cancer	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Preclinical studies support the anticancer activity of statins, however, the existing clinical evidence is inconsistent and not definitive. The aim of this study is to assess the possible cancer chemosensitizing effect of a statin (simvastatin) in metastatic breast cancer (MBC) patients.

### Who can participate?

MBC patients undergoing a chemotherapy course of carboplatin and vinorelbine

### What does the study involve?

Patients are randomly allocated to receive a 15-day course of either simvastatin or placebo (dummy drug) at day -7 of each chemotherapy cycle. The primary endpoints are objective response rate (ORR) and toxicity, and the secondary endpoint is overall survival (OS).

### What are the possible benefits and risks of participating?

Although the beneficial effects of statins in lowering cholesterol are well established, their importance in the area of cancer therapeutics is now gaining greater recognition. At present there is ample evidence to suggest that statins could be used in breast cancer. It provides solid ground for further research on whether statins can improve the efficacy of commonly used cytotoxic agents if given in combination. Possible risks: simvastatin known toxicity.

### Where is the study run from?

Al-Baironi Hospital (Syria)

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

December 2010 to July 2017

### Who is funding the study?

Damascus University (Syria)

### Who is the main contact?

Prof. Lama Youssef  
ylama@hotmail.com

# Contact information

## Type(s)

Scientific

## Contact name

Prof Lama Youssef

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# Additional identifiers

## EudraCT/CTIS number

Nil known

## IRAS number

## ClinicalTrials.gov number

Nil known

## Secondary identifying numbers

Damascus University/15073/

# Study information

## Scientific Title

Evaluation of the effects of lipophilic statins on the responsiveness of metastatic breast cancer patients to chemotherapy regimens

## Study objectives

Preclinical studies support the anticancer activity of statins, however, the existing clinical evidence is inconsistent and not definitive. This study aimed at evaluating a postulated cancer chemosensitizing effect of a statin (simvastatin) in a cohort of metastatic breast cancer (MBC) patients.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Approved 26/11/2013, Scientific Research Ethics Committee at the Faculty of Pharmacy, Damascus University (7 Nissan Street, Mazzeh, Damascus, Syria; Tel: +963 (0)112131871), Number: 10

**Study design**

Prospective single-center randomized double-blind placebo-controlled trial

**Primary study design**

Interventional

**Secondary study design**

Randomised controlled trial

**Study setting(s)**

Hospital

**Study type(s)**

Treatment

**Participant information sheet****Health condition(s) or problem(s) studied**

Metastatic breast cancer

**Interventions**

Patients were randomly allocated to receive a 15-day course of either simvastatin (40 mg) or placebo at the day -7 of each chemotherapy cycle.

Chemotherapy regimen was conducted every 3 weeks according to the hospital protocol as follows; carboplatin (Carboplatin "Ebewe"), Area under the curve (AUC) 4, intravenously on day 1 and vinorelbine (Navelbine®) intravenously (25 mg/m<sup>2</sup>) or orally (60 mg/m<sup>2</sup>) on days 1 and 8 of each cycle. Simvastatin 40 mg or placebo administered orally once daily for 15 days starting at the day -7 of each chemotherapy cycle.

Primary endpoints were objective response rate (ORR) and toxicity, and secondary endpoint was overall survival (OS).

**Intervention Type**

Drug

**Phase**

Not Applicable

**Drug/device/biological/vaccine name(s)**

Carboplatin, vinorelbine, simvastatin

**Primary outcome measure**

1. Objective response rate (ORR) calculated based on both complete response + partial response. Patients' response classified according to the response evaluation criteria in solid tumor (RECIST) (version 1.1) as follows: complete response (CR): complete disappearance of clinical evidence of disease for a minimum of 8 weeks; partial response (PR): decreased in tumor burden  $\geq 30\%$ ; stable disease (SD): decreased by  $<30\%$  or increased by  $<20\%$ ; progressive disease (PD): increase in tumor burden by  $\geq 20\%$ ; and non-evaluable response due to specific reasons (e. g., early death or toxicity). To assess tumor progression, physical examination, tumor markers

(carcinoembryonic antigen (CEA) and cancer antigen 15–3 (CA15-3)), and radiological studies were conducted at baseline and every three cycles, and bone scan was repeated by the end of the sixth cycle

2. Treatment related-toxicity graded according to the Common Terminology Criteria for Adverse Events, version 4 at each cycle

### **Secondary outcome measures**

Overall survival defined as the time from study entry to death from any cause over the follow-up period (the follow-up lasted until death or the cutoff date of July 2017)

### **Overall study start date**

28/12/2010

### **Completion date**

01/07/2017

## **Eligibility**

### **Key inclusion criteria**

1. Female patients attending the breast cancer unit at Al-Baironi Hospital
2. Confirmed diagnosis of metastases (stage IV) prior to commencing chemotherapy course consisting of carboplatin and vinorelbine
3. Age between 20 and 75 years
4. Adequate function of major organs (including cardiac, hepatic and renal functions)
5. ECOG Performance Status score  $\leq 2$

### **Participant type(s)**

Patient

### **Age group**

Mixed

### **Sex**

Female

### **Target number of participants**

82

### **Total final enrolment**

82

### **Key exclusion criteria**

1. Pregnant patients
2. Previous treatment with statins or carboplatin and vinorelbine within 30 days of the study

### **Date of first enrolment**

11/08/2011

### **Date of final enrolment**

30/07/2012

# Locations

## Countries of recruitment

Syria

## Study participating centre

Al-Baironi Hospital

Harasta

Damascus

Syria

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# Sponsor information

## Organisation

Damascus University

## Sponsor details

Baramka

Damascus

Syria

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+963 (0)11 33923192

info@damascusuniversity.edu.sy

## Sponsor type

University/education

## Website

<http://damascusuniversity.edu.sy>

## ROR

<https://ror.org/03m098d13>

# Funder(s)

## Funder type

University/education

## Funder Name

Damascus University

# Results and Publications

## Publication and dissemination plan

Planned publication after registration is completed.

## Intention to publish date

31/12/2019

## Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are available upon request from Lama A Youssef, B.Pharm, PhD (ylama@hotmail.com).

## IPD sharing plan summary

Available on request

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	10/08/2020	02/09/2020	Yes	No