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# Efficacy and safety of XM01 compared to placebo and Epoetin beta in patients with solid tumours receiving platinum-containing chemotherapy

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| **Submission date**<br>26/01/2010 | **Recruitment status**<br>No longer recruiting | [_] Prospectively registered<br>[_] Protocol |
| **Registration date**<br>19/02/2010 | **Overall study status**<br>Completed | [_] Statistical analysis plan<br>[_] Results |
| **Last Edited**<br>19/02/2010 | **Condition category**<br>Cancer | [_] Individual participant data<br>[_] Record updated in last year |

**Plain English summary of protocol**
Not provided at time of registration

## Contact information

**Type(s)**
Scientific

**Contact name**
Prof Hristo Ganchev

**Contact details**
MHAT "Sv. Marina",
1st Pulmonology Clinic with Oncology Sector,
1 Hristo Smirnenski Str.
Varna
Bulgaria
9010

## Additional identifiers

**EudraCT/CTIS number**

**IRAS number**

**ClinicalTrials.gov number**

**Secondary identifying numbers**

# Study information

### Scientific Title
Efficacy and safety of XM01 compared to placebo and Epoetin beta in patients with solid tumours receiving platinum-containing chemotherapy: A phase III, double blind, randomised, active- and placebo-controlled trial.

### Study objectives
To show efficacy and safety of XM01 over 12 weeks of treatment compared to placebo and Epoetin beta in patients with solid tumours who are anaemic (Hb ≤ 11 g/dL) due to platinum-containing chemotherapy

### Ethics approval required
Old ethics approval format

### Ethics approval(s)
At each study centre, the protocol (dated 01 April 2005) and informed consent form for this study were reviewed and approved by Independent Ethic Committees before inclusion of patients. Amendments to the protocol were reviewed and approved in the same manner before being implemented.

### Study design
12 week multinational multicentre randomised placebo- and active- controlled double blind parallel group phase III study.

### Primary study design
Interventional

### Secondary study design
Randomised controlled trial

### Study setting(s)
Hospital

### Study type(s)
Treatment

### Participant information sheet
Not available in web format, please use the contact details below to request a patient information sheet

### Health condition(s) or problem(s) studied
Solid tumours; chemotherapy-associated anaemia

### Interventions
Participants will be randomly allocated to the following two arms:
1. Epoetin beta (NeoRecormon®):
Starting dose subcutanously 150 IU/kgBW thrice weekly, adjustment up to 300 IU/ kgBW thrice

weekly
2. XM01-21:
Starting dose subcutanously 20000 IU once weekly and twice weekly placebo injections, adjustment up to 40000 and to a maximum of 60000 IU once weekly and twice weekly placebo injections
3. Placebo: subcutanously thrice weekly
A follow up phase of 5 years has been foreseen for each treatment arm; the follow up is still ongoing

## Intervention Type
Drug

## Phase
Phase III

## Drug/device/biological/vaccine name(s)
XM01; Epoetin beta (NeoRecormon®)

## Primary outcome measure
Number of patients with a complete haemoglobin response defined as the increase in haemoglobin of ≥ 2 g/dL from baseline without the benefit of a transfusion within the previous four weeks.
Haemaematology parameters were measured weekly throughout the 12 week treatment phase; transfusions were documented weekly

## Secondary outcome measures
1. Number of patients having a partial haemoglobin response (defined as increase of ≥ 1g/dL from baseline and no need for transfusion within the last four weeks)
2. Number of patients having a complete haemoglobin response with the initial dose (weekly starting dose for XM01: 20000 IU; for Epoetin beta: 450 IU/kgBW) and no need for transfusion within the last four weeks
3. Number of patients having partial haemoglobin response with the initial dose and no need for transfusion within the last four weeks
4. Number of patients receiving transfusions
5. Number of blood units transfused
6. Time course of haemoglobin, haematocrit and reticulocytes
Haemaematology parameters were measured weekly throughout the 12 week treatment phase; transfusions were documented weekly
7. Quality of Life assessed by Functional Assessment of Cancer Therapy - Anaemia (FACT-An) (includes FACT-G [General] and FACT-F [Fatigue]). Measurement at baseline, after 6 weeks and at the end of study (12 weeks)
8. Dose of XM01 or Epoetin beta at the time of complete/ partial haemoglobin response. The weekly dose was documented at the time when the patient achieved a partial or complete response

## Overall study start date
10/10/2005

## Completion date
23/07/2007

# Eligibility

### Key inclusion criteria
1. Signed and dated written informed consent
2. Adult (age≥18 years) patients of any ethnic origin
3. Male or female; if female, the patient must meet one of the following criteria:
3.1. postmenopausal for at least one year
3.2. surgical sterilisation or hysterectomy at least 3 months before the start of the study
3.3. absolute sexual abstinence throughout the participation in the study
3.4. women with childbearing potential must use double contraception consisting of hormonal treatment (birth control pill, injection or implant, IUD) plus condom or diaphragm. In women with childbearing potential a pregnancy test (HCG in urine) should be performed in the trial centre at inclusion and every 4 weeks during the treatment period and 4 weeks after the last administration of study medication.
4. Anaemia caused by platinum-based chemotherapeutic treatment defined by a documented haemoglobin concentration of ≤11g/dL after the last chemotherapy prior to inclusion
5. Histologically or cytologically proven diagnosis of a solid tumour
6. At least one previous platinum-based chemotherapy cycle as treatment of the current malignancy during the last 4 weeks
7. At least two additional platinum-based chemotherapy cycles or two months of platinum-based chemotherapy planned
8. Eastern Co-operative Oncology Group (ECOG) performance status 0, 1, 2 or 3
9. The patient must be able to understand and follow instructions and must be able to participate in the study for the entire period

### Participant type(s)
Patient

### Age group
Adult

### Lower age limit
18 Years

### Sex
Both

### Target number of participants
216 planned (72 per treatment group); 223 enrolled

### Key exclusion criteria
1. Pregnancy or breast feeding
2. Any other primary haematologic disorder that would cause anaemia (e.g. sickle cell anaemia)
3. Anaemia of unknown origin
4. Acute or chronic bleeding
5. Any erythropoietin given during the last 4 weeks or ongoing treatment with other erythropoietins
6. Patients who have been treated with Epoetins with a longer half life time (e.g. novel erythropoiesis stimulating protein [NESP], continuous erythropoietin receptor activator [CERA]) within the last 6 months

7. Known presence of antibodies to Epoetin
8. More than two red blood cell transfusions within 4 weeks before inclusion or any red blood cell transfusions within the last 2 weeks
9. Malignancy of the head or neck
10. Life expectancy less than 3 months
11. Candidate for bone marrow or stem cell transplantation
12. Chemotherapy during the last 7 days before study start
13. Radiotherapy or surgery during the last 14 days before inclusion or planned during the conduct of the study
14. Clinically significant concomitant diseases or condition unrelated to the underlying malignancy or chemotherapy
15. Systemic infection or inflammatory disease
16. Known hypersensitivity (drug intolerance or allergy) to erythropoietin, mammalian cell products or excipients of the formulation
17. History of myocardial infarction, cerebrovascular incident, percutaneous transluminal coronary angioplasty or coronary artery bypass graft within the six months prior to enrolment
18. Uncontrolled severe hypertension or hypertension defined as systolic blood pressure >180 mmHg and/or diastolic blood pressure >110 mmHg
19. Congestive heart failure according to New York Heart Association (NYHA) class III or IV
20. Thrombocytosis or thrombocytopenia (platelet count <50 x 109/L or >550 x 109/L)
21. Iron deficiency (Serum ferritin ≤100 µg/L or TSAT ≤ 20%), defined as follows: No serum ferritin > 100µg/L and TSAT > 20% within the last five weeks before randomisation (For clarification: A patient showing for serum ferritin and for Transferrin Saturation [TSAT] at least one value above these limits during the last five weeks before randomisation can be randomised)
22. Known untreated vitamin B12 or folic acid deficiency, defined by the respective laboratory value at baseline plus clinical symptoms of the deficiency
23. Known positive test for human immunodeficiency virus (HIV), Hepatitis B or Hepatitis C
24. Epilepsia, severe endogenous depression or schizophrenia
25. Known impairment of hepatic function
26. Known impairment of renal function
27. History or suspicion of unreliability, poor co-operation or non-compliance with medical treatment
28. History of, or known current problems with drug or alcohol abuse
29. Any other condition that, in the investigators judgement, might increase the risk to the patient or decrease the chance of obtaining satisfactory data needed to achieve the objective(s) of the study
30. Abnormal baseline findings considered by the investigator to indicate conditions that might affect study endpoints
31. Participation in a study with investigational drugs within 30 days prior to enrolment or during this study
32. Prior inclusion in the same study

### Date of first enrolment
10/10/2005

### Date of final enrolment
23/07/2007

# Locations

### Countries of recruitment

Argentina

Belarus

Brazil

Bulgaria

Croatia

India

Moldova

Romania

Russian Federation

Ukraine

**Study participating centre**
**MHAT "Sv. Marina",**
Varna
Bulgaria
9010

# Sponsor information

**Organisation**
BioGeneriX AG (Germany)

**Sponsor details**
High-Tech-Park Neckarau
Janderstraße 3
Mannheim
Germany
68199

**Sponsor type**
Industry

**Website**
http://www.biogenerix.com

**ROR**
https://ror.org/03xa4xh46

# Funder(s)

**Funder type**
Industry

**Funder Name**
BioGeneriX AG (Germany)

# Results and Publications

**Publication and dissemination plan**
Not provided at time of registration

**Intention to publish date**

**Individual participant data (IPD) sharing plan**

**IPD sharing plan summary**
Not provided at time of registration