

Minimal Guidelines for the Monitoring of Early Clinical Trials (Phase I-II) in Europe Under CRC/EORTC/NCI Joint Agreement

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An agreement was reached between the Cancer Research Campaign Phase I/II Clinical Trials Subcommittee (CRC), the European Organization for Research and Treatment of Cancer, New Drug Development Office (EORTC/NDDO) and the National Cancer Institute Liaison Office (NCI Liaison Office) on minimal guidelines for monitoring early clinical trials in Europe. This agreement concerns compounds under joint development and has the approval of the Joint CRC/EORTC/NCI Steering Committee. These guidelines are in agreement with the Commission of the European Communities Guidelines of Good Clinical Practice for the trials on medicinal products in the European Community. In addition, the guidelines fulfill the US regulatory requirements which should facilitate the filing of Investigational New Drug Applications (IND) with the USA Food and Drug Administration. The intention is to increase cooperation among the parties and minimise the administrative burden. Minimal guidelines include the description of protocol content and handling, data collection procedures, reporting of adverse reactions, drug inventory and procedures for monitoring.

MINIMAL GUIDELINES

The protocol

(a) Investigators wishing to design a new protocol should adhere to the rules of protocol content set up by their group [1-6]. Minimal standard content rules are listed in Table 1. Recognised criteria of assessment such as the Common Toxicity Criteria [7] should be adopted. (b) The protocol should be approved by the Protocol Review Committee of the lead organisation and by the national/local Institutional Review Board (IRB). The composition of the IRB must be in accordance with local regulations. (c) Human subjects must be protected according to the Declaration of Helsinki. The informed consent may be written or oral according to local regulations. These regulations must be specified in the protocol. (d) Protocol amendments must go through the same review process as the entire protocol. (e) It is recommended to organise a central protocol library in each institution that will provide information about the protocol, protocol amendments, date of activation and closure of the protocols.

Data collection

Standard case report forms (CRF) that are approved by the lead organisations must be used. Minimal content is listed in Table 2.

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Table 1.

Protocol minimal content
Master protocols are usually used within each group as guidelines for preparation of the protocols. These guidelines should at least include
Protocol face sheet containing
Date of the document
Local protocol number
Title of the study
Protocol chairman (name and full address)
Name of the institution(s)
For EORTC and CRC supplied drugs, a listing of each drug and EORTC/CRC number
For NCI-supplied IND drugs, a listing of each drug and NSC number
Essential elements of a protocol
Every protocol must include the following elements
Objectives
Background and rationale
Study design (e.g. number of patients per dose level, specification of pretreatment allowed per dose level, etc)
Patient eligibility criteria
Treatment plan
Pharmaceutical information
Procedures for patient entry on study
Criteria for response and toxicity assessment
Monitoring of patients
Dose modification for toxicity
Off study criteria
Statistical considerations
Records to be kept
Adverse drug reactions procedures
Participation
Ethical considerations/informed consent
Monitoring of the study
Appendixes including
Performance status scale
Surface area computing scale
Toxicity criteria

Reporting of adverse reactions (ADR)

Rules for reporting of ADR which are specific to each country should be specified in the protocol. Investigators participating in clinical trials should adhere to these specific rules. The minimal items to be included in the ADR forms are listed in Table 3.

Drug inventory

Adequate inventory should be kept by the responsible investigator/pharmacist in each institution involved in the clinical trial. A protocol oriented drug accountability system is recommended. Records of the drug accountability should be maintained and made available for site visits. This inventory should include, at least, items listed in Table 4. Drug accountability should be performed by the drug sponsor and/or the lead organisation. For compounds that have no industrial sponsor, drug accountability will be performed by the lead organisation.

THE MONITORING

Monitoring of the centres will be performed to verify that trials may be carried out within the institution according to pre-established scientific, medical, and ethical criteria. In addition,

Table 2.

Case report forms minimal content

Grading and scales specified in the protocol should be used.

Laboratory units should be specified if other than the units mentioned on the forms

General information to be included on each form

Protocol number, patient identification, institution name

Date and signature of the investigator

Study registration form

Patient characteristics including date of birth, age, sex, body weight, height, surface area, performance status, date of diagnosis, initial diagnosis, stage of disease, histology, date of inclusion in the study

Eligibility checklist

Patient history form

Previous treatments specifying for:

surgery: dates, procedures, findings and extent of residual disease

Radiotherapy: radiation type, dates of first and last doses, sites irradiated, schedule used, total dose administered, response

Chemotherapy/hormonotherapy/immunotherapy: agent and schedule used, dates of first and last doses, total dose, response

Patient physical examination (initial and follow-up forms)

Description of any abnormality and its relevant history by site (head, neck, breasts, heart, lungs, abdomen, genitalia, integument, skeleton, neurologic, endocrine)

Performance status, weight, temperature, pulse, respiratory rate, blood pressure at the frequency required by the protocol

Extent of disease (initial measurements and follow-up measurements)

Localisation and description of the lesion, irradiation of the lesion, measurability, evaluability or non-evaluability, how the measurement is determined, measurements of the lesion(s), dates of the measurements, evaluation of response by lesion

Study drug administration form

For each drug administered: drug name, date of administration, start time, course number, dose level, actual dose administered, dose units, route of administration, duration of administration and duration units

Adverse event form

Toxicity type, grade, date of onset and date resolved, day nadir/apex, estimated relationship to the drug, action required, therapy required for patient relief, outcome of the adverse event, whether the compound was reintroduced

Course assessment form

Date start of the course, course number, evaluability of the course, overall response assessment

Concomitant medication form

Any concomitant measure/medication received detailing: agent, total daily dose, schedule, reason for use, start and end dates

Physicians notes form

Form devoted to physician comments

Off study summary

Date off study, reason off study, best response to treatment, date onset, date relapse survival information including date, vital status (alive in follow-up, lost to follow-up, death)

Cause of death, autopsy related information if available

Laboratory data

Mandatory data are date of analysis, laboratory test name, laboratory value and laboratory unit. Specific laboratory values and frequency required by the protocol should appear on the form

Initial and follow-up investigations

Mandatory data are date of investigation, investigation name (e.g. ECG, chest X-rays) and results. Specific investigations required by the protocol should appear on the form

Table 3.

Adverse reaction form (ADR)
The form should include at least
Name of the person completing the form
Institution
Date
Demographics information
Patient information including
Patient identification (ID)
Age
Sex
Date of initial diagnosis
Malignancy
Performance status at the start of the study
Sites of metastatic disease
Current non-malignant disease and current non-protocol medications
Drug information including
Drug name
Source of the drug
Type of reaction
Toxicity criteria used
Toxicity grade reported
Date of reaction
Protocol number
Dose level
Date of first course administration
Date of last drug administration
Number of courses
Documentation of the reaction
Description of the ADR including grade, date onset, date resolved, laboratory findings, physical findings, complications, outcome, investigators assessment of the relationship to the drug, action taken, therapy required.
Additional comments
Date and signature of the reporter

Table 4.

Drug inventory minimal content
Name of the institution
Protocol number
Drug name, dose form, strength
Protocol title
Responsible investigator
Date delivered
Patient identification
Dose delivered
Manufacturer and lot number
Recorder's initials

Table 5. Site visit form required content

General information on the visit
Institution visited including name and address
Principal investigator name
Date of visit
Initial or follow-up site visit
Composition of visiting team
Composition of the team visited
Procedure used to inform the center of the visit
General information on the visited centre
Flow chart of institution organisation including departments, laboratories, special units
Summary of institution funding situation
Overall patient accrual/year, major tumour types
Protocol accrual/year
Principal investigator responsibilities and curriculum vitae
Facilities
In patient units
Documentation of the presence of a Phase I/II Unit
General organisation of the unit including: number of beds, medical doctors, research nurses, data managers.
If no specific unit exists, description of procedures
Out patient unit
Description of procedures
Laboratory facilities (routine and research laboratories)
Visit of facilities
Description of main material available
Quality control procedures used
Institutional meetings
Description of organised meetings (e.g. general, ward, phase I)
Protocol handling
Description of standard protocol handling including:
—who writes protocols, who is responsible for handling
—protocol approval procedures including protocol review committees (scientific, ethical), composition of the committees, legal requirements in the country
—Institutional Review Board (IRB) or equivalent, composition, role in protocol review (scientific, ethical)
Toxicity reporting
Description of local legal requirements, procedures used for collecting and reporting minor and major expected and unexpected toxicities
Documentation of forms used
Informed consent
Description of local legal requirements
Description of the process used for oral/written consent
Essential elements of the consent form
Data management
Protocol office
Presence/absence of a central office
Role of central office, responsibilities
Information procedures about activation of new protocols/protocol changes in the institution
Data handling
Who handles the data (specifically for phase I, II, III)
Which type of flow sheets are used
Computer facilities
Quality control procedures
Pharmacy inspection
Visit of facilities
Staff composition/responsibilities
Drug dispensing procedures including:
—documentation of facilities for storage and their adequacy
—procedure used to restrict access to pharmacy and investigational supplies and protection against unauthorised prescription/use
—drug inventory and accountability: existence and availability of records, filing systems
—maintenance of protocol specific supplies
—procedures for notification of study closure and return of unused supplies
Phase I/II program
Documentation of previous, ongoing and planned phase I/II trials, patient accrual
Description of treatment organisation including responsible persons for drug administration, follow-up organisation
Pharmacokinetic studies: description of procedures

individual studies will follow the current European and local recommendations for the performance of clinical trials with new anticancer agents [1–6, 8].

General site visit

The purpose of the general site visit is to review the overall quality of study conduct, compliance with local regulations and

Table 6. Data to be audited

Data	No. of patients (%)
Patient's ID number and initials	100
Informed consent	100
Responding patients	100
Toxic deaths, major ADR	100
Remaining data	10%*

* This percentage might be increased for trials including fewer than 10 patients, or whenever considered necessary by the audit team.

Table 7. Data audit form minimal content

General information

Institution visited including name and address
Principal investigator name
Date of visit
Composition of visiting team
Composition of the team visited
Procedure used to inform the centre of the visit
Protocol(s) audited

Protocol handling

List of patient included in the study
List of patient charts required for audit
Compliance with protocol phase I/II procedures for:
—escalation and de-escalation of dosage
—drug administration
—drug accountability
—toxicity reporting

Source verification

For selected charts one separate audit form should be used to document source verification, it should include:
Documentation of informed consent
Eligibility criteria verification
Drug administration according to planned schedule
Response evaluation according to protocol requirements

Initial and follow-up evaluation according to protocol requirements including history and physical examination, laboratory data, additional investigations.

data handling procedures. The following instructions will be considered: (a) investigators interested in initiating a clinical trial with a drug jointly developed must have their facilities evaluated. (b) The site visit team will include at least one representative from each group (CRC, EORTC/NDDO, NCI). (c) Investigators and centres will be notified in advance of the date of the visit, its intent and the composition of the team. (d) Site visits should be planned before the initiation of phase I trials and every 2 years thereafter (or more often, according to the specific group rules). (e) Minimal content of the site visit form is listed in Table 5. (f) A written report detailing the status of the centre and eventually the proposals will be prepared by the team.

Data audits

Data audits will be performed to document the reliability of the data and to ensure proper reporting. The following instructions will be considered: (a) the audit team will be composed of representatives of the group depending upon its specific interests (CRC/NCI, EORTC, NDDO/NCI). (b) Investigators must be notified in advance about the date of the visit, its intent and the composition of the team. (c) Data audits should be done as early as possible after the initiation of Phase I trials and at the end of the trials (or more often according to the specific group rules). Data to be audited are listed in Table 6. (d) Minimal content of the audit form is listed in Table 7. (e) A written report detailing the status of the audit and eventual proposals will be prepared by the auditing team.

1. Investigator's Handbook. A manual for participants in clinical trials of investigational agents sponsored by the Division of Cancer Treatment, National Cancer Institute, November 1986.
2. Schwartzmann G, Wanders J, Koier IJ, *et al.* EORTC New Drug Development Office coordinating and monitoring program for Phase I and II trials with new anticancer agents. *Eur J Cancer* 1991, 27, 1162–1168.
3. CRC master protocols for Phase I trials and Phase II trials. Unpublished.
4. Operation manual for control of production, preclinical toxicology and Phase I trials of anti-tumor antibodies and drug antibody conjugates. Cancer Research Campaign. *Br J Cancer* 1986, 54, 557–568.
5. Operational manual for control of selection, production, preclinical toxicology and Phase I trial of endocrine agent for patients with cancer. Cancer Research Campaign. *Br J Cancer* 1989, 60, 265–269.
6. EORTC guidelines for Phase I trials with single agents in adults. *Eur J Cancer Clin Oncol* 1985, 21, 1005–1009.
7. NCI Common Toxicity Criteria, National Cancer Institute, Division of Cancer Treatment, 1988.
8. Commission of the European Communities. Good Clinical Practice for trials on medicinal products in the European Community, III/3976/88-EN (final version 01/07/91), Commission of the European Communities, Brussels.