

CERTAIN-LI analysis protocol

Study Title:	The title of the protocol should include study design, indication and, where applicable, dosage, dosage form, and comparative agent(s).
Institution Name	
Application date	
Investigator Contact Information: – Full address – Phone No. – Fax No. – e-mail address	

1. Objectives & Hypotheses	1.1 List the objectives. The objectives must clearly define and specifically state what the study is intended to accomplish, for example one primary efficacy objective. One to two secondary objectives may be stated. They should be in the order of priority. The higher priority secondary objectives should have corresponding secondary hypotheses associated with them. Not all secondary objectives need to have a corresponding secondary hypothesis. 1.1.1 List the clinical hypotheses. The primary efficacy and safety hypotheses should correspond directly with the primary objectives of the study. All hypotheses should be in the order of priority. If the study is estimation study, no hypotheses is needed.
2. Background & Rationale, Significance of Selected Topic & Preliminary Data	A brief presentation should be made of the reasons for conducting the clinical study based on current knowledge of the product and /or disease state so that the study is presented in the proper perspective. Include the rationale for conducting the study and selecting the dose(s). Selected literature references critical to the study design, dosage selection, or rationale for the study should be cited, as appropriate.
3. Study Design	This section is a concise overview of the study design stating the type of experimental design (observational or interventional; randomized block, crossover, etc.); whether the study is controlled (treatments other than the test product and/or placebo); whether the study is open or blinded/masked (single blind or double blind); the number of study centers (single or multicenter). The total number of patients included in the study and how they will be assigned to treatment groups must be indicated. When appropriate, state if the patients will be stratified. The procedures must be clear and concise. A description of the specific patient population to be studied should be stated. Both inclusion and exclusion criteria should be listed and should be consistent with the current product label. If the study is intended to be observational then the protocol needs to state this and the expectations are different since most observational studies are database studies, retrospective, aggregate studies as opposed to open label studies for efficacy and safety.
4. Study Flowchart	A study flow chart is highly recommended. It should display all clinical and laboratory measurements and the time periods (e.g., hours, days, weeks) at which data are to be collected.
5. Study Procedures	This section is a detailed explanation of the experimental design. The use of subheadings, lists, tables, or outlines are recommended. Describe the initial screening period(s), baseline period(s), treatments to be compared, study configuration (parallel, crossover, etc.), duration of the treatment period(s), control group(s), follow-up procedures, and length of time specified for washout intervals and safety follow-up. In protocols that specify a screening or washout period, indicate that once a patient signs a consent form, a unique number (screening or baseline number) should be assigned for identification purposes. It should be noted that that under no circumstances should a patient be assigned more than one allocation number
6. Study Duration	Estimate the length of time (e.g., number of days, weeks, months) required to recruit patients and complete the study.

7. Statistical Analysis and Sample Size Justification	State who will be responsible for analyzing the study data (Investigator, contract CRO, etc.). When appropriate state how the blind will be maintained during the study, as appropriate, and when the data will be unblinded. For the purpose of the final analysis, the official clinical database will not be unblinded until medical/scientific review has been completed, protocol violators have been identified (if appropriate), and data has been declared complete. <u>Variables/Time Points of Interest</u> All variables (primary and secondary) that are listed in the study hypotheses, and the time points at which they will be analyzed, need to be described in detail. Efficacy variables discussed in this section should have been included as part of an objective or hypothesis section. These variables and the time points at which they are to be analyzed should be consistent with the primary and secondary hypotheses, i.e., primary variables and time points should relate to the primary hypotheses. <u>Statistical Methods</u> All planned primary analyses and key secondary analyses should be discussed in this section. If other secondary and tertiary analyses are planned, then a statement should be included in this section as to what these analyses are. Describe in detail the statistical methods that will be used for the primary hypotheses or estimation. State the statistical tests which will be used (e.g., ANOVA, Kaplan-Meier) along with other important considerations (e.g., factors in ANOVA, pre-specification of covariates, strata for Mantel-Haenszel, use of historical controls). <u>Multiplicity</u> If appropriate, describe the multiplicity approach to support the statistical conclusions of the trial. <u>Power/Sample Size:</u> In studies with hypotheses, minimally, for the primary endpoint of the study, a power statement needs to be included to show the detectable difference relative to the primary hypothesis. For example, the following level of detail is expected: Based upon a sample size of n=40 patients per group, this study has 80% power to detect a 5.4 mmHg difference between groups in systolic blood pressure; this calculation is based on a between subject standard deviation of change of 9 mmHg for systolic BP (reference for where this variability statement originated). In estimation studies, the precision of the primary/secondary estimations needs to be given with the sample size of the trial.
8. References	All literature references cited in the protocol should be listed accordingly in the reference section.