U.S. FOOD & DRUG ADMINISTRATION

BIOMARKER QUALIFICATION SUBMISSION CHECKLIST

Stage 1: Initiation—Letter of Intent to Propose Biomarker Qualification

- ☐ Introduction
- ☐ Proposed context of use (COU)
- ☐ Data overview describing the proposed COU and drug development applicability
- ☐ Additional resources such as retrospective and/or prospective data
- ☐ Plans to submit qualification submission to any other regulatory agencies
- ☐ Process-related questions to FDA
- ☐ General purpose of use in drug development

Stage 2: Consultation and Advice—Briefing Document

- ☐ Introduction
  - ☐ Summary of the proposed context for intended use of the biomarker(s)
  - ☐ Strengths and limitations of the proposed biomarker(s)
  - ☐ If a composite biomarker is proposed, identify each of the component markers and the mathematical algorithm through which these composites markers are selected.
  - ☐ Objective and design of the studies supporting the use of the biomarker(s), study comparators, and sample size
  - ☐ Identification of unresolved issues and plans to resolve them, if applicable
- ☐ Context of use (COU)
  - ☐ Identification of the biomarker(s) and the species and population for which the biomarker(s) is to be qualified
  - ☐ Explicit decision-tree diagram that identifies how the biomarker(s) will be used for each COU
- ☐ Methodologies
  - ☐ Physical devices, specialized software, key operating characteristics of the measurement system, and general availability of the components
  - ☐ Information regarding analytical validation of the assay(s) used
- ☐ Results
  - ☐ Summary of existing nonclinical or clinical studies, including integrated analysis of the biomarker qualification study results as available and individual study synopses
- ☐ Critical gaps in existing knowledge and development plan for qualification to address the limitations
- ☐ Specific questions the submitter has for the Center for Drug Evaluation and Research (CDER)
- ☐ List of references and copies of a few of the key references

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Stage 3: Review—Full Qualification Package

- ☐ Overview of the qualification application
- ☐ Proposed context of use (COU)
  - □ COU statement
  - □ Disease area/organ toxicity
  - □ Targeted population
  - □ Importance of the specified biomarker(s) as a drug development tool
- ☐ Background
  - □ Background for the disease and/or organ toxicity
  - □ Supportive nonclinical and clinical studies
  - □ Additional evidence from published literature
- ☐ Methodologies
  - □ Performance characteristics and methodologies of the analytically validated biomarker assays used
  - □ Imaging modalities
  - □ Charts, graphs, plots, flowcharts, etc., as applicable
  - □ Data collection and analysis methodologies such as analysis endpoint(s), baseline data, missing data, and sensitivity analysis
  - □ Statistical Analysis Plan
  - □ Codes, such as SAS codes, used in data analyses
- ☐ Results
  - □ Raw data from clinical/nonclinical studies, protocols, testing conditions, populations tested, and outcomes
  - □ All data sources, datasets (exploratory, confirmatory, etc.), and database(s)
  - □ Report that combines results from all studies, analyses (statistical and modeling), and conclusions
- ☐ Conclusion
  - □ Summary of key findings from all studies conducted and discussion of how the key findings support the use of the proposed biomarker(s) as a drug development tool
- ☐ Appendices
  - □ Any supporting material, such as references, peer-reviewed literature, and summaries or statements from other regulatory agencies, academia, consortia, and/or medical boards that may highlight the use of the biomarker(s)