



**Workflow Trigger:** Site has identified a need for a dataset

**Algorithm Subject Matter Expert (ASME)**

1. ASME defines the inclusion criteria and exclusion criteria for the data set
2. ASME defines the validation rules to be used by the Data Contributor in data preparation. These rules could be different levels of specificity, some generic and some detailed

**Data Contributor (DC)**

3. DC creates the cohort in Distributed Registry (DR). This cohort will be based on a selected project.
4. DC prepares data to meet defined data set rules in DR
  - a. Clinical data
  - b. Imaging data
5. DC annotates in ground truth in DR
6. DC runs the validation checks in DR. Dependent upon the results, the DC may go through the process again until validation is met.
7. Patient ID and Accession # are de-identified in DR
8. DC creates the index metadata.
9. Study Index is created and DC uploads study index to DART

**Central Analyst (CA)**

10. CA accesses indexed data for in DART
11. CA builds a cohort and filters to a set of studies in DART.
12. CA runs the necessary actions on these studies in DART, such as Vendor Model, NLP.
13. CA runs the validation checks in DART.
14. Connect AI Lab receives the validation checks and sends validation feedback to DART.
- DECISION: CA reviews validation feedback. CA may determine that the validation feedback did not address the research question in Step 11. CA can conduct multi-pass analysis, going back to Steps 11, 12 and/or 13. CA can also communicate, (outside of the system) with the DC and start with a new cohort.
15. When the validation feedback meets the CA's criteria, the CA initiates the model evaluation in DART.
16. Model evaluation request is received and executed by remote Connect AI Lab service
17. Connect AI Lab shares the evaluation results with DART.
18. CA can view and evaluate these results in DART

**ASSUMPTIONS**

- Communications between the Central Analyst and Data Contributor are outside of the system
- Validation feedback and Initiation model are asynchronous communications, and not in real-time