Here is the same recommended structure for presenting the SOA, explicitly identifying the corresponding USDM entities and attributes for each header column and row.

### Recommended SoA Structure with USDM Entity Mapping

The key is that the visual representation of a table (with rows and columns) is translated into a structured, hierarchical set of objects in the USDM JSON.

#### Header Rows (Timeline Columns) -> Mapped to Epoch, Encounter, and Timing Entities

The columns of the SoA table, which represent the study timeline, are modeled using three core USDM entities:

| Header Row (Conceptual) | USDM Entity | USDM Attribute(s) | Purpose in USDM |
| --- | --- | --- | --- |
| **1. Study Period / Epoch** | StudyEpoch | id, label, description | The highest-level container for a phase of the study (e.g., Screening, Treatment). |
| **2. Visit Name / Timepoint** | Encounter | id, label, description | Represents a specific visit or timepoint within an Epoch (e.g., Day 1, Week 4). |
| **3. Visit Window** | Timing | windowLabel, windowLower, windowUpper | Defines the permissible time window for an encounter (e.g., "±2 Days"). This is linked to an Encounter's timing definition. |

#### Header Columns (Procedure Rows) -> Mapped to Activity and ActivityGroup Entities

The rows of the SoA table, which list the procedures, are modeled using the Activity entity, with hierarchy managed through parent-child relationships.

| Header Column (Conceptual) | USDM Entity / Structure | USDM Attribute(s) | Purpose in USDM |
| --- | --- | --- | --- |
| **1. Category / System** | Activity (as a parent) | id, label, childIds | A parent Activity object acts as the category header. Its childIds array lists all the specific procedures that fall under it. This creates the hierarchy. |
| **2. Activity / Procedure** | Activity (as a child) | id, label, description | Represents the specific, individual procedure to be performed (e.g., "12-lead ECG"). |

### Revised Example with USDM Entities

Here is the same example table, now annotated with the specific USDM entities to show how the visual structure maps to the data model.

| **Activity (parent)** | **Activity (child)** | **StudyEpoch -> Encounter -> Timing** |
| --- | --- | --- |
| **Category / System** | **Activity / Procedure** | **Epoch: Screening**  **Encounter: Visit 1**  **Timing: Days -42 to -9** |
| **Eligibility & Administration** | Informed Consent | X |
|  | Inclusion/Exclusion Criteria Check | X |
|  | ALXN1840 15 mg/day Administration |  |
| **Safety Assessments** | Physical Examination | X |
|  | Vital Signs Measurements | X |
|  | 12-lead ECG (triplicate) | X |

The "X" marks in the table are represented in USDM by creating an **activityTimepoints** object that links a specific activityId to a specific plannedTimepointId (which corresponds to an Encounter). This is the critical link that places a procedure at a specific point on the timeline.