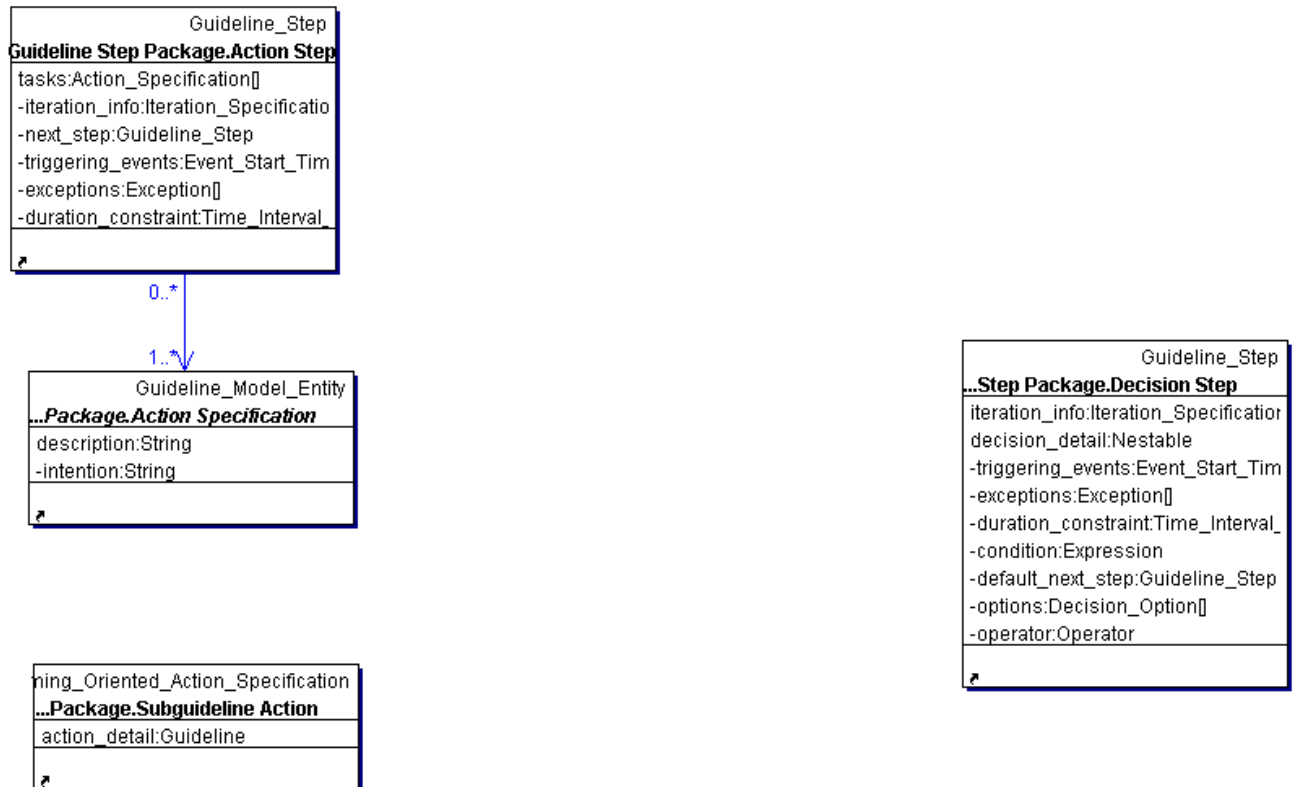


## Package Nesting

### Class Diagram



#### Nesting

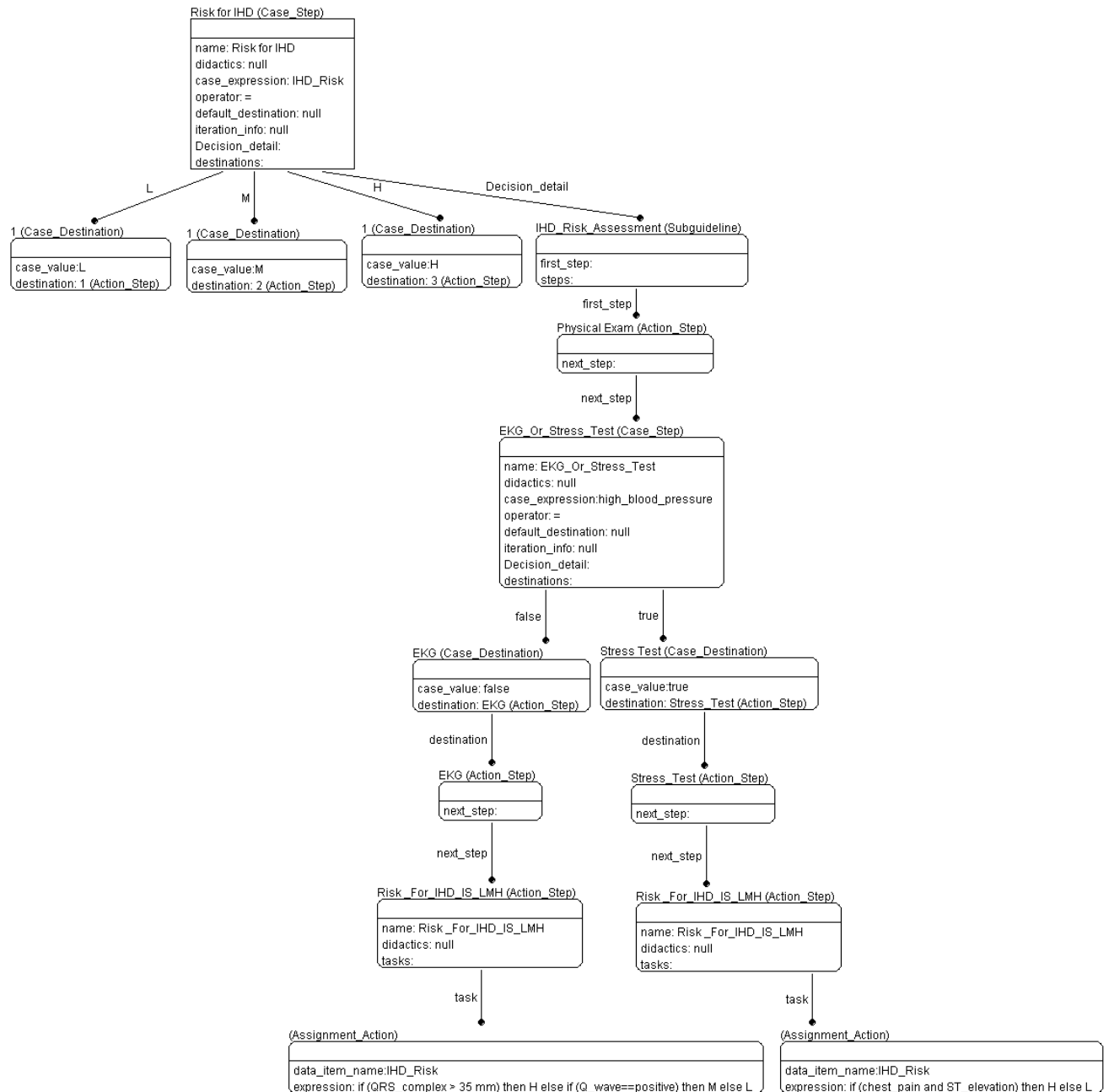
Nesting of guideline steps is supported in the following manner:

Action Steps are nested by including a Subguideline\_Action type of task in the step. The Subguideline\_Action task has a subguideline attribute that contains the nested subguideline.

Decision Steps are nested by specifying a subguideline in the decision\_detail attribute of the step. This subguideline is executed before the decision criterion for that step is evaluated. The subguideline would modify or create new variables and assign them values. The use of these variables in the decision criteria makes the decision nested.

A nested action or decision can potentially contain any kind of step including other actions, decisions, and other nested steps. Nesting is very useful for managing the complexity of guidelines. Nesting enables looking at a guideline from a top-level view and then zooming into/out of some of its parts. Nesting is also useful in representing a guideline in the context of other guidelines. Since nesting allows grouping of parts of a guideline into a single unit, this is a mechanism that can allow model extensibility and reuse of part of a guideline (defining macros), or adaptation of a guideline to a specific institution by replacing specifications for parts of a guideline (i.e., replacing a goal with a procedure). By use of nesting, steps will be defined as containing other steps. As such, the guideline will be iteratively refined from a coarse level to a fine level of detail.

#### Example:



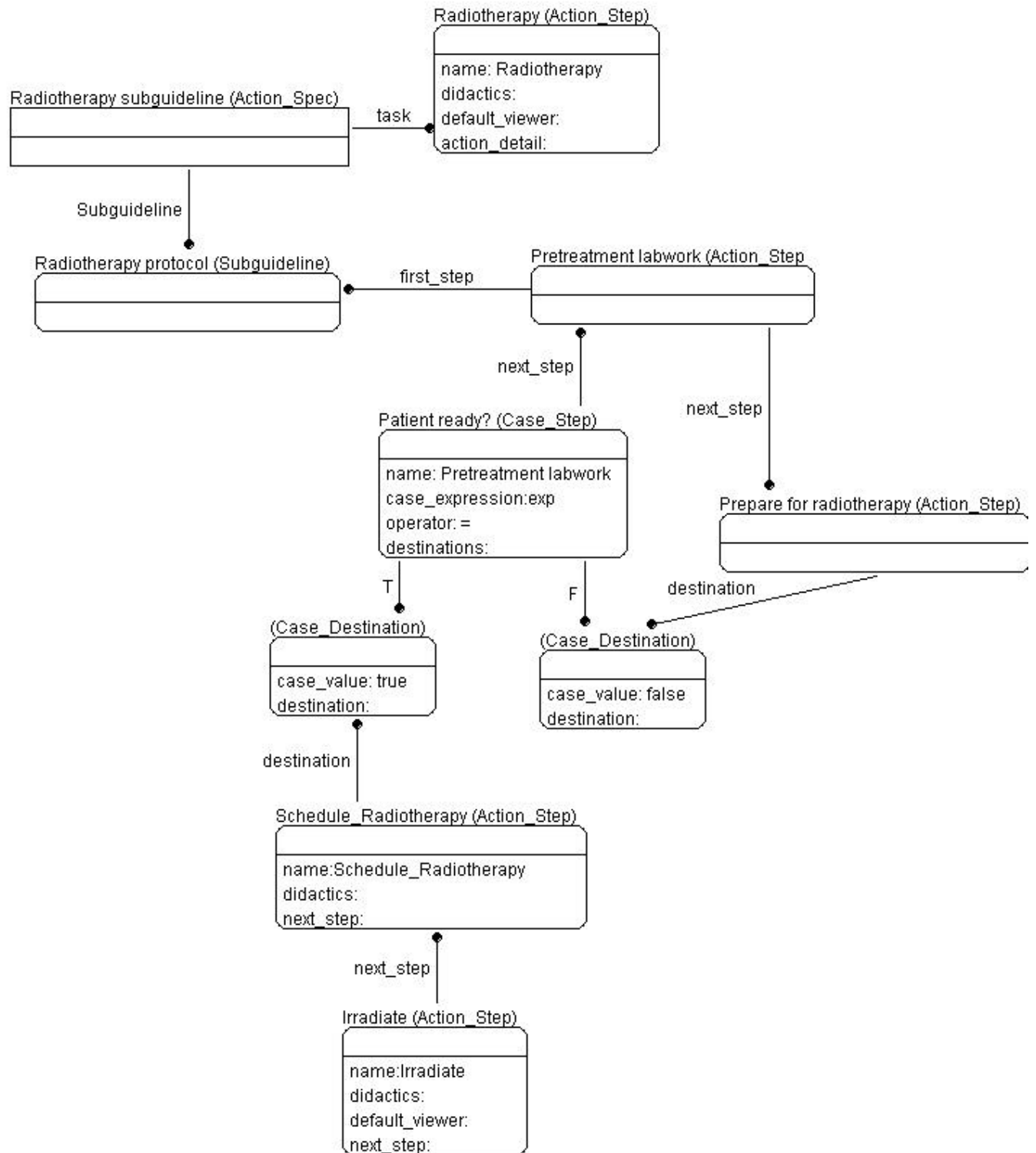
This is an example of a nested Decision Step. The decision in Case\_Step "Risk for IHD" is nested in the subguideline "IHD risk assessment".

This hypothetical subguideline determines risk for ischemic heart disease from physical exam, EKG, and stress testing. The leaf steps of this subguideline assign the risk value to a new data item named IHD\_Risk using the Assignment\_Action.

The data item risk\_for\_ihd that is created by the subguideline is used by the main case step in its case expression. The value is used by the case destinations to select the next step of the outer guideline.

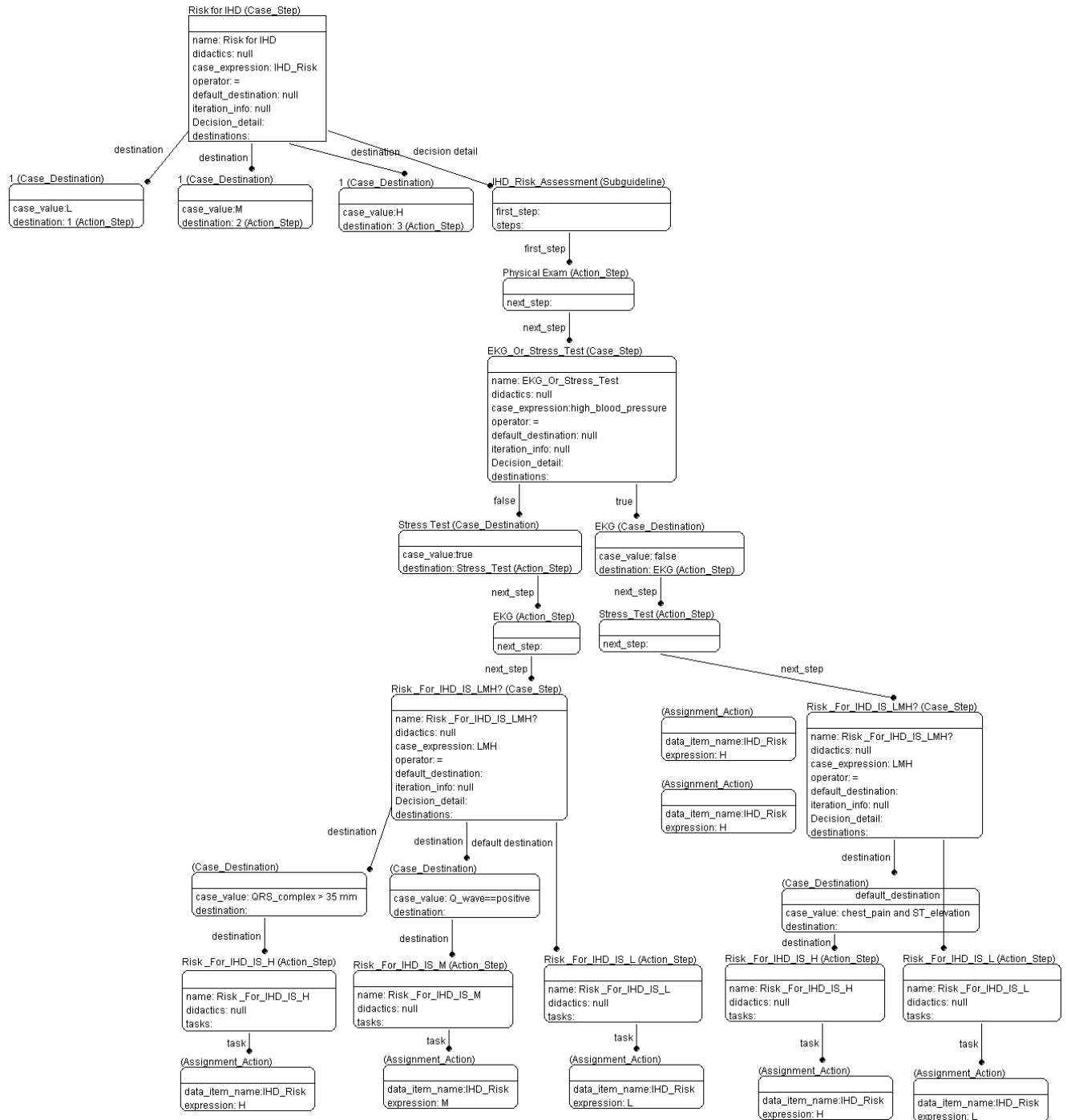
This is an example of nesting an action step, for complexity management purposes.

**Example:**



This is an example of nesting an action step, for complexity management purposes.

**Example:**



This is an example of a nested Decision Step. The decision in Case\_Step "Risk for IHD" is nested in the subguideline "IHD risk assessment".

This hypothetical subguideline determines risk for ischemic heart disease from physical exam, EKG, and stress testing. The leaf steps of this subguideline assign the risk value to a new data item named IHD\_Risk using the Assignment\_Action.

The data item risk\_for\_ihd that is created by the subguideline is used by the main case step in its case expression. The value is used by the case destinations to select the next step of the outer guideline.

This is an example of nesting an action step, for complexity management purposes.

Example:

