

Role	Use Case / Requirement	Notes
Anatomic_Structure_Has_Location		present in baseline 04.12g
Anatomic_Structure_Is_Physical_Part_Of		present in baseline 04.12g
Biological_Process_Has_Associated_Location		present in baseline 04.12g
Biological_Process_Has_Initiator_Chemical_or_Drug		Added 2004MARCH08; present in baseline 04.12g
Biological_Process_Has_Initiator_Process		Added 2004MARCH08; present in baseline 04.12g
Biological_Process_Has_Result_Anatomy		Added 2004MARCH08; present in baseline 04.12g
Biological_Process_Has_Result_Biological_Process		Added 2004MARCH08; present in baseline 04.12g
Biological_Process_Has_Result_Chemical_or_Drug		Added 2004MARCH08; present in baseline 04.12g
Biological_Process_Is_Part_Of_Process		present in baseline 04.12g
Chemical_Or_Drug_Affects_Abnormal_Cell	12/1	present in baseline 04.12g
Chemical_or_Drug_Affects_Cell_Type_Or_Tissue		Modified (CD_ = Chemical_or_Drug_) 2004MARCH08; present in baseline 04.12g
Chemical_or_Drug_Affects_Gene_Product	4/6 4/8 5/7 12/1	Partially satisfies 5/7. Transitive w/ Gene_Product_Is_Pathway_Element. Modified (CD_ = Chemical_or_Drug_) 2004MARCH08 . present in baseline 04.12g
Chemical_or_Drug_FDA_Approved_for_Disease		present in baseline 04.12g
Chemical_or_Drug_Has_Accepted_Therapeutic_Use_For		Modified (CD_ = Chemical_or_Drug_) 2004MARCH08; present in baseline 04.12g
Chemical_or_Drug_Has_Mechanism_Of_Action	12/1	Modified (CD_ = Chemical_or_Drug_) 2004MARCH08; present in baseline 04.12g
Chemical_or_Drug_Has_Physiologic_Effect		Modified (CD_ = Chemical_or_Drug_) 2004MARCH08; present in baseline 04.12g
Chemical_or_Drug_Has_Study_Therapeutic_Use_For		Modified (CD_ = Chemical_or_Drug_) 2004MARCH08; present in baseline 04.12g
Chemical_or_Drug_Has_Target_Protein		Superseded by CD_Affects_Gene_Product. Approved in CR 93 (9/2/03) (Change baseline unknown. Not present in baseline 04.12g)
Chemical_or_Drug_Is_Metabolized_By_Enzyme		Modified (CD_ = Chemical_or_Drug_) 2004MARCH08; present in baseline 04.12g
Chemical_or_Drug_Plays_Role_in_Biological_Process		Approved in CR 93 (9/2/03) Now superseded by CD_Affects_Gene_Product. Present in 04.12g
Chemical_or_Drug_Used_In_Technique	8/5	Modified (CD_ = Chemical_or_Drug_) 2004MARCH08. Not present in baseline 04.12g
Chemotherapy_Regimen_Has_Component		Modified 2004MARCH08; Present in baseline 04.12g
Conceptual_Part_Of		present in baseline 04.12g
Disease_Excludes_Abnormal_Cell		present in baseline 04.12g
Disease_Excludes_Cytogenetic_Abnormality		present in baseline 04.12g
Disease_Excludes_Finding		present in baseline 04.12g
Disease_Excludes_Metastatic_Anatomic_Site		present in baseline 04.12g
Disease_Excludes_Molecular_Abnormality		present in baseline 04.12g

Disease_Excludes_Normal_Cell_Origin		present in baseline 04.12g
Disease_Excludes_Normal_Tissue_Origin		present in baseline 04.12g
Disease_Excludes_Primary_Anatomic_Site		present in baseline 04.12g
Disease_Has_Abnormal_Cell		present in baseline 04.12g
Disease_Has_Associated_Anatomic_Site		present in baseline 04.12g
Disease_Has_Associated_Anatomy		replaced by Disease_Has_Associated_Anatomic_Site. See CR 125, approved 3/25/04; not present in baseline 04.12g
Disease_Has_Associated_Disease		present in baseline 04.12g
Disease_Has_Cytogenetic_Abnormality		present in baseline 04.12g
Disease_Has_Finding		present in baseline 04.12g
Disease_Has_Metastatic_Anatomic_Site		present in baseline 04.12g
Disease_Has_Modifier		Removed per CR 125, approved 3/25/04; grade/stage is now preferred usage. Not present in baseline 04.12g
Disease_Has_Molecular_Abnormality	11/1	present in baseline 04.12g
Disease_Has_Normal_Cell_Origin		present in baseline 04.12g
Disease_Has_Normal_Tissue_Origin		present in baseline 04.12g
Disease_Has_Primary_Anatomic_Site		present in baseline 04.12g
Disease_Is_Grade		present in baseline 04.12g
Disease_Is_Stage		present in baseline 04.12g
Disease_May_Have_Abnormal_Cell		present in baseline 04.12g
Disease_May_Have_Associated_Disease		present in baseline 04.12g
Disease_May_Have_Cytogenetic_Abnormality		present in baseline 04.12g
Disease_May_Have_Finding		present in baseline 04.12g
Disease_May_Have_Molecular_Abnormality	11/1	present in baseline 04.12g
Disease_May_Have_Normal_Cell_Origin		present in baseline 04.12g
Disease_May_Have_Normal_Tissue_Origin		present in baseline 04.12g
Disease_Metastatic_to_Site		Removed per CR 125, approved 3/25/04; Disease has Metastatic Anatomic Site is now preferred usage. Not present in baseline 04.12g
EO_Anatomic_Structure_is_Physical_Part_of	9/1	present in baseline 04.12g
EO_Anatomy_Found_In_Organism	9/2 9/4	DROPPED !!! Not in baseline 04.12g.
EO_Derived_by_Technique		Added 2004MARCH08; present in baseline 04.12g
EO_Develops_Disease		Added 2004MARCH08; present in baseline 04.12g
EO_Disease_Has_Associated_Cell_Type	9/3	present in baseline 04.12g
EO_Disease_Has_Associated_EO_Anatomy	9/3	present in baseline 04.12g
EO_Disease_Has_Property_or_Attribute	9/5	present in baseline 04.12g
EO_Disease_Maps_to_Human_Disease	9/2	present in baseline 04.12g
EO_Disease_Metastatic_to_EO_Anatomy		Added 2004MARCH08; present in baseline 04.12g
EO_Exhibits_Gene_Anomaly	5/8	Partially satisfies 5/8 DROPPED !!! Not in baseline 04.12g
EO_Models_Human_Disease		Added 2004MARCH08; present in baseline 04.12g
Gene_Anomaly_has_Disease-Related_Function	1/1 2/2 3/2 3/4	subsumes Gene_Assoc_w_Disease relationship; not present in baseline 04.12g
Gene_Associated_With_Disease	1/1 2/2 3/2 3/4	Present in baseline 04.12g.
Gene_Expressed_In_Tissue		Superceded by Gene_Product_Expressed_In_Tissue per CR 93 (9/2/03); not present in baseline 04.12g
Gene_Found_In_Organism	2/1 3/1 4/3 6/2	present in baseline 04.12g
Gene_Has_Abnormality	1/2* 2/3* 2/5 3/5* 4/4	

Gene_Has_Physical_Location		present in baseline 04.12g
Gene_Has_Clone	5/9	Gene clone concepts to be Gene_Kind NOT IN DTD 2004MARCH08; not present in baseline 04.12g.
Gene_Has_Expression_Measurement	7/2	Partially satisfies 7/2 NOT IN DTD 2004MARCH08; not present in baseline 04.12g
Gene_Has_Function	1/1 2/1 3/1 4/1 5/1 5/3	Normal function. Defined w/ GO tags. Not present in baseline 04.12g
Gene_In_Chromosomal_Location		Present in baseline 04.12g.
Gene_is_Biomarker_of	1/1 2/2 3/2 3/4	Present in baseline 04.12g.
Gene_Is_Biomarker_Type		Present in baseline 04.12g.
Gene_Is_Element_in_Pathway	5/3 5/2 5/5	Present in baseline 04.12g.
Gene_Plays_Role_in_Process	1/1 2/1 3/1 4/1 5/1 5/3 (?)	Created pursuant to CR 93; replaces Gene_Has_Function; present in 04.12g
Gene_Product_Anomaly_Affects_Pathway	4/9 5/7	Partially satisfies 5/7. Does not indicate effect on specific genes in pathway, just pathway as a whole NOT IN DTD 2004MARCH08; not present in baseline 04.12g
Gene_Product_Anomaly_Related_to_Gene_Anomaly	1/3 2/4 2/5 4/5	NOT IN DTD 2004MARCH08; not present in baseline 04.12g
Gene_Product_Encoded_By_Gene	1/3	Present in baseline 04.12g.
Gene_Product_Expressed_in_Tissue		Present in baseline 04.12g.
Gene_Product_Has_Abnormality		Present in baseline 04.12g.
Gene_Product_Has_Associated_Anatomy		Present in baseline 04.12g.
Gene_Product_Has_Biochemical_Function	4/2 5/2	Present in baseline 04.12g.
Gene_Product_Has_Chemical_Classification		Present in baseline 04.12g.
Gene_Product_Has_Malfunction_Type	1/3 11/1	Present in baseline 04.12g.
Gene_Product_Has_Organism_Source		Present in baseline 04.12g.
Gene_Product_Has_Structural_Domain_or_Motif	4/2	Present in baseline 04.12g.
Gene_Product_is_Biomarker_of	3/3	Present in baseline 04.12g.
Gene_Product_is_Biomarker_Type		Present in baseline 04.12g.
Gene_Product_Is_Element_in_Pathway	2/4 2/5 4/6 11/1	Present in 04.12g. Use Biocarta pathway names in pathway kind. Present in baseline 04.12g.
Gene_Product_Is_Physical_Part_Of		Present in baseline 04.12g.
Gene_Product_Malfunction_Associated_With_Disease	1/3 3/3 11/1	Present in baseline 04.12g.
Gene_Product_Plays_Role_in_Biological_Process	5/3	UC/R appears to requires 2nd role also, Gene_Has_Function. Present in baseline 04.12g.
Technique_Has_Associated_Condition		Present in baseline 04.12g
Technique_Has_Purpose		Present in baseline 04.12g
Technique_Has_Sample_or_Specimen_Anatomy		Present in baseline 04.12g
Technique_Has_Sample_or_Specimen_Chemical_or_Drug	8/5	Present in baseline 04.12g
Technique_Has_Target_Anatomy		Present in baseline 04.12g
Technique_Has_Target_Chemical_or_Drug		Present in baseline 04.12g
Technique_Has_Target_Disease		Present in baseline 04.12g
Technique_Has_Target_Organism		Present in baseline 04.12g
Technique_Has_Target_Protein		Per CR 93 (approved September 2003), all refs to "Protein" should now refer to "Gene Product". Present as shown in baseline 04.12g.
Technique_Is_Used_In_Technique		Present in baseline 04.12g

Technique_Uses_Equipment		Present in baseline 04.12g
Modality_Has_Associated_Attribute	8/5 10/5	Not present in baseline 04.12g
Modality_Has_Associated_Equipment	8/4 10/5	Not present in baseline 04.12g
NOTES AND OTHER ISSUES:		
		~ Requires qualification of role: citation or other authority
* Molecular_Anomaly_Kind	1/2	Not present in baseline 04.12g