

Element number	1	2	3	4	5	6	7	8	9 - facet 1	9 - facet 2	9 - facet 3	9 - facet 4	9	10 - facet 1	10 - facet 2	10
Facet Value 1=asserted, 0=--asserted	chest pain	High blood pressure	head ache	depression	blurred vision	ocular migraine	joint pain	rash	underweight BMI <18.5	Normal weight BMI 18.5 - 24.9	overweight BMI 25 - 29.9	obese BMI > 30	Weight	Male	Female	Gender
Patient 1 Encounter 1	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	Normal	FALSE	TRUE	Female
Patient 1 Encounter 2	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	Normal	FALSE	TRUE	Female
Patient 1 Encounter 3	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	Overweight	FALSE	TRUE	Female
COMBINE Patient 1 Encounters 1-3	FALSE	FALSE	FALSE	Indeterminate	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	Indeterminate	FALSE	TRUE	Female
Patient 2 Encounter 1	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	Overweight	FALSE	TRUE	Female
Patient 2 Encounter 2	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	Overweight	FALSE	TRUE	Female
COMBINE Patient 2 Encounters 1-2	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	Indeterminate	FALSE	FALSE	TRUE	FALSE	Overweight	FALSE	TRUE	Female
Patient 3 Encounter 1	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	Overweight	TRUE	FALSE	Male
Patient 3 Encounter 2	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	Overweight	TRUE	FALSE	Male
Patient 3 Encounter 3	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	Overweight	TRUE	FALSE	Male
COMBINE Patient 3 Encounters 1-3	FALSE	TRUE	FALSE	Indeterminate		FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	Overweight	TRUE	FALSE	Male
Patient 4 Encounter 1	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	Overweight	TRUE	FALSE	Male
Patient 4 Encounter 2	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	Overweight	TRUE	FALSE	Male
COMBINE Patient 4 Encounters 1-2	Indeterminate	FALSE	FALSE	FALSE	FALSE	Indeterminate	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	Overweight	TRUE	FALSE	Male
COMBINE COHORT patients {1,2,3,4}	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	FALSE	TRUE	TRUE	FALSE	Indeterminate	TRUE	TRUE	Indeterminate
FACTOR truth-value split - using sex to create filter definitions to select cases to aggregate to create FOL models for male and female																
factor profile - male (--female)	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	TRUE	TRUE	TRUE	TRUE	Indeterminate	TRUE	FALSE	Male
factor profile - female (--male)	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	TRUE	TRUE	TRUE	TRUE	Indeterminate	FALSE	TRUE	Female
COMBINE profile for patients selected by male factor profile - patients {3,4}	Indeterminate	Indeterminate	FALSE	Indeterminate	Indeterminate	Indeterminate	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	Overweight	TRUE	FALSE	Male
COMBINE profile for patients selected by female factor profile - patients {1,2}	FALSE	FALSE	Indeterminate	Indeterminate	FALSE	FALSE	Indeterminate	Indeterminate	FALSE	TRUE	TRUE	FALSE	Indeterminate	FALSE	TRUE	Female
FACTOR truth-value split - using weight categories to create filter definitions to select cases to aggregate to create FOL models for weight facets																
factor profile - underweight	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	TRUE	FALSE	FALSE	FALSE	Underweight	TRUE	TRUE	Indeterminate
factor profile - normal weight	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	FALSE	TRUE	FALSE	FALSE	Normal weight	TRUE	TRUE	Indeterminate
factor profile - overweight	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	FALSE	FALSE	TRUE	FALSE	Overweight	TRUE	TRUE	Indeterminate
factor profile - obese	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	FALSE	FALSE	FALSE	TRUE	Obese	TRUE	TRUE	Indeterminate

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COMBINE profile for patients selected by underweight	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	FALSE	FALSE	FALSE	FALSE	Unknown	FALSE	FALSE	Unknown
COMBINE profile for patients selected by normal weight	FALSE	FALSE	FALSE	Indeterminate	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	Indeterminate	FALSE	TRUE	Female
COMBINE profile for patients selected by overweight	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	FALSE	FALSE	TRUE	FALSE	Overweight	TRUE	TRUE	Indeterminate
COMBINE profile for patients selected by obese	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	FALSE	FALSE	FALSE	FALSE	Unknown	FALSE	FALSE	Unknown
COMBINE profile for patient encounters selected by underweight	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	FALSE	FALSE	FALSE	FALSE	Unknown	FALSE	FALSE	Unknown
COMBINE profile for patient encounters selected by normal weight	FALSE	FALSE		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	Normal weight	FALSE	TRUE	Female
COMBINE profile for patient encounters selected by overweight	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	FALSE	FALSE	TRUE	FALSE	Overweight	TRUE	TRUE	Indeterminate
COMBINE profile for patient encounters selected by obese	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	FALSE	FALSE	FALSE	FALSE	Unknown	FALSE	FALSE	Unknown
COMPARE pateint vs pateint encounters for weights																
underweight	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
normal weight	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE
overweight	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
obese	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
CONTRAST patient vs patient encounters for weights																
underweight	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
normal weight	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE
overweight	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
obese	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
IDENTITY VECTOR																
COMPARE(patient1, patient1)	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
DIFFERENCE VECTOR																
CONTRAST(patient1, patient1)	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
DISCRIMINANT VECTORS																
Inclusionary Discriminant Vector																
COMPARE(COMBINE(case-list, Identity vector)																
COMPARE(COMBINE(P1 E1, P1 E2, P1 E3, Identity vector)	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	undefined for non-Boolean elements	FALSE	TRUE	undefined for non-Boolean elements
Exclusionary Discriminant Vector																
COMPARE(COMBINE(case-list,difference vector)																
COMPARE(COMBINE(P1 E1, P1 E2, P1 E3, Difference vector)	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	undefined for non-Boolean elements	TRUE	FALSE	undefined for non-Boolean elements

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Hierarchial Subsumption Test case(X) is subsumed by COMBINE(case-list) IFFCOMBINE(case-list, case(X) = COMBINE(case-list)																
FAILED SUBSUMPTION TEST IF COMBINE(case-list(1), case-list(2)) = COMBINE(case-list(1)) THEN COMBINE(case-list(2)) is subsumed by COMBINE(case-list(1))	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
FAILED SUBSUMPTION TEST IF COMBINE(case-list(2), case-list(1)) = COMBINE(case-list(2)) THEN COMBINE(case-list(1)) is subsumed by COMBINE(case-list(2))	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
COMBINE(case-list(1)) is patient 1 E1,2,3	FALSE	FALSE	FALSE	Indeterminate	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	Indeterminate	FALSE	TRUE	Female
COMBINE(case-list(2)) is patient 2 E1,2 COMBINE(case-list(1), case-list(2)) is profile of female patients	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	Indeterminate	FALSE	FALSE	TRUE	FALSE	Overweight	FALSE	TRUE	Female
COMBINE(case-list(1), case-list(2)) is profile of female patients	FALSE	FALSE	Indeterminate	Indeterminate	FALSE	FALSE	Indeterminate	Indeterminate	FALSE	TRUE	TRUE	FALSE	Indeterminate	FALSE	TRUE	Female
FAILED SUBSUMPTION TEST IF COMBINE(case-list(1), case-list(2)) = COMBINE(case-list(1)) THEN COMBINE(case-list(2)) is subsumed by COMBINE(case-list(1))	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE
PASSED SUBSUMPTION TEST IF COMBINE(case-list(2), case-list(1)) = COMBINE(case-list(2)) THEN COMBINE(case-list(1)) is subsumed by COMBINE(case-list(2))	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
COMBINE(case-list(1)) is patient 1 E1,2,3	FALSE	FALSE	FALSE	Indeterminate	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	Indeterminate	FALSE	TRUE	Female
COMBINE(case-list(2)) is COHORT COMBINE(case-list(1), case-list(2)) is COHORT	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	FALSE	TRUE	TRUE	FALSE	Indeterminate	TRUE	Indeterminate
COMBINE(case-list(1), case-list(2)) is COHORT	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	FALSE	TRUE	TRUE	FALSE	Indeterminate	TRUE	Indeterminate
TESTING FEATURE VECTORS FOR EQUIVALENCE																
DOD = Degree of difference DOS = Degree of similarity																
Tests are for a=patient 1, b=patient 2 for 16 elements COMPARE(a,b)	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
False count	6															
True count	10															
Equality Tests DOD(COMPARE(a,b)) = 0.00 DOS(COMPARE(a,b)) = 1.00	0.375 0.625															
Inequality Tests DOD(COMPARE(a,b)) > 0.00 DOS(COMPARE(a,b)) < 1.00	0.375 0.625															