

Competency Questions and DL queries and results for the Hypertension Ontology

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Competency question	Query	Query result	Status
What are all of the elevated BP measures in the data set?	'elevated blood pressure measurement datum'	<p>Basil's elevated systolic BP measurement datum</p> <p>Clara first elevated systolic BP measurement datum</p> <p>Clara second elevated systolic BP measurement datum</p> <p>Desmond's first elevated systolic BP measurement datum</p> <p>Desmond's second elevated systolic BP measurement datum</p> <p>Ernest's diastolic BP measurement datum</p> <p>Ernest's systolic BP measurement datum</p>	Validated for adult systolic and diastolic BPs
Which data items in the data set are about elevated BP phenotypes?	'is about' some 'elevated blood pressure phenotype'	<p>Amy's diagnosis</p> <p>Basil's elevated systolic BP measurement datum</p> <p>Clara's first elevated systolic BP measurement datum</p> <p>Clara's second elevated systolic BP measurement datum</p> <p>Desmond's first diastolic BP measurement datum</p>	Validated for adult systolic and diastolic BPs and diagnoses of hypertension

		Desmond's second diastolic BP measurement datum Ernest's diastolic BP measurement datum Ernest's elevated systolic BP	
What are all of BP values in the data set ≥ 126.0 mm Hg?	'blood pressure measurement datum' and 'has measurement value' some <code>xsd:double[\geq "126.0"^^xsd:double]</code>	Basil's elevated systolic BP measurement datum Clara's first elevated systolic BP measurement datum Ernest's systolic BP measurement datum	Validated
What are all of the health care encounters with elevated BP values?	'health care encounter' and <code>has_specified_output</code> some 'elevated systolic blood pressure measurement datum'	Basil's first health care encounter Clara's first health care encounter Clara's second health care encounter Ernest's only health care encounter	Validated for adults, systolic and diastolic BP
Who are the patients with elevated BP values at 2 more health care encounters?	'Homo sapiens' and 'bearer of' some ('blood pressure' and <code>inverse('is about') min 2 ('elevated blood pressure measurement datum' and <code>is_specified_output_of</code> some 'health care encounter'))</code>)	Clara Desmond	Validated for adults, systolic and diastolic BP

Who has a hypertensive phenotype?	'has phenotype' some Hypertension	Clara Desmond	
Who has a phenotype that gives rise to hypertension? (Note: for hypertension, this is equivalent to the same query above, but for cases where multiple phenotypes may give rise to a common disease, this distinction is more useful.)	'has phenotype' some ('feature gives rise to disease' some hypertension)	Clara Desmond	
Which patients have been diagnosed with hypertension?	organism and inverse('is about') some 'diagnosis of hypertension'	Amy	Validated for adults, systolic and diastolic BP
Who has either a diagnosis of hypertension or a hypertensive phenotype?	(organism and inverse('is about') some 'diagnosis of hypertension') or ('has phenotype' some Hypertension)	Amy Clara Desmond	Validated for adults, systolic and diastolic BP