**Supplemental Digital Content 1.** **Database search strategy**

**Database Search strategy**

**Medline**

exp brain injuries, diffuse/ or exp brain injuries, traumatic/ or exp brain hemorrhage, Traumatic/ or exp Intracranial Hemorrhage, Traumatic/

**OR**

(Brain adj2 trauma\*).tw or “TBI”.tw

**AND**

exp Biomarkers/ or exp Phosphopyruvate Hydratase/or exp Ubiquitin-Specific Proteases/or exp Brain-Derived Neurotrophic Factor/or exp tau Proteins /or exp neurofilament proteins/or exp Spectrin/or exp Myelin Basic Protein /or exp glial fibrillary acidic protein/or exp S100 Calcium Binding Protein beta Subunit

**OR**

“Biomarkers”.tw or “NSE”.tw or “Neuron Specific Enolase”.tw or “Ubiquitin C-terminal Hydrolase-L1”.tw or “UCH-L1”.tw or “Brain-derived neurotrophic factor”.tw or “BDNF”.tw or “tau”.tw or “NF-L”.tw or “Neurofilament light”.tw or “NF-H”.tw or “Neurofilament Heavy”.tw or “αII-Spectrin breakdown products”.tw or “SBDP”.tw or “Myelin basic protein”.tw or “MBP”.tw or “GFAP”.tw or “glial fibrillary acidic protein”.tw or “S100B”.tw or “S100 calcium binding protein B”.tw

**AND**

exp intracranial hemorrhages/or exp Cerebral Hemorrhage/or exp Brain Hemorrhage, Traumatic/ or exp Brain Contusion/or exp Brain Injuries/or exp Subarachnoid Hemorrhage/ or exp Hematoma, Subdural/or exp Hematoma, Epidural, Cranial/or exp Diffuse Axonal Injury

**OR**

“Intracerebral Hemorrhage\*”.tw or “ICH”.tw or “intraparenchymal haemorrhage\*”.tw or “IPH”.tw or “Contusion\*”.tw or “intra-axial bleeding\*”.tw or “intraxial bleeding\*”.tw or “extra-axial bleeding\*”.tw or “extraaxial bleeding\*”.tw or “intraventricular haemorrhage\*”.tw or “IVH”.tw or “Subarachnoid Hemorrhage\*”.tw or “SAH”.tw or “Subdural Hemorrhage\*”.tw or “Subdural Hematoma\*”.tw or “Subdural Haematoma\*”.tw or “SDH”.tw or “Epidural Hematoma\*”.tw or “Epidural Haematoma\*”.tw or “EDH”.tw or “Extradural Hematoma\*”.tw or “Mass lesion\*”.tw or “Diffuse Axonal Injury\*”.tw or “Traumatic Axonal injury\*”.tw or “DAI”.tw or “TAI”.tw or “extracranial injury\*”.tw or “intracranial injury\*”.tw or “traumatic brain injury\*”.tw

**AND**

exp Diagnostic imaging/

**OR**

“neuroimaging”.tw or “MRI”.tw or “imaging”.tw or “Magnetic Resonance imaging”.tw or “MR”.tw or “CT”.tw or “Computed tomography”.tw or “computer assisted tomography”.tw

**Limit to (English language)**

**EMBASE**

exp traumatic brain injury/or exp diffuse brain injury/or exp brain haemorrhage

**OR**

 (Brain adj2 trauma\*).tw or “TBI”.tw

 **AND**

exp biological marker/or exp enolase/or exp deubiquitinase/or exp brain derived neurotrophic factor/or exp tau protein/or exp neurofilament protein/or exp spectrin/or exp myelin basic protein/or exp glial fibrillary acidic protein/or exp protein S 100 B

**OR**

“Biomarkers\*”.tw or “NSE”.tw or “Neuron Specific Enolase”.tw or “Ubiquitin C-terminal Hydrolase-L1”.tw or “UCH-L1”.tw or “Brain-derived neurotrophic factor”.tw or “BDNF”.tw or “tau”.tw or “NF-L”.tw or “Neurofilament light”.tw or “NF-H”.tw or “Neurofilament Heavy”.tw or “αII-Spectrin breakdown products”.tw or “SBDP”.tw or “Myelin basic protein”.tw or “MBP”.tw or “GFAP”.tw or “glial fibrillary acidic protein”.tw or “S100B”.tw or “S100 calcium binding protein B”.tw

**AND**

exp Brain haemorrhage/or exp brain contusion/or exp brain injury/or exp subarachnoid haemorrhage/or exp subdural hematoma/or exp epidural hematoma/or exp diffuse axonal injury

**OR**

“Intracerebral Hemorrhage\*”.tw or “ICH”.tw or “intraparenchymal haemorrhage\*”.tw or “IPH”.tw or “Contusion\*”.tw or “intra-axial bleeding\*”.tw or “intraxial bleeding\*”.tw or “extra-axial bleeding\*”.tw or “extraaxial bleeding\*”.tw or “intraventricular haemorrhage\*”.tw or “IVH”.tw or “Subarachnoid Hemorrhage\*”.tw or “SAH”.tw or “Subdural Hemorrhage\*”.tw or “Subdural Hematoma\*”.tw or “Subdural Haematoma\*”.tw or “SDH”.tw or “Epidural Hematoma\*”.tw or “Epidural Haematoma\*”.tw or “EDH”.tw or “Extradural Hematoma\*”.tw or “Mass lesion\*”.tw or “Diffuse Axonal Injury\*”.tw or “Traumatic Axonal injury\*”.tw or “DAI”.tw or “TAI”.tw or “extracranial injury\*”.tw or “intracranial injury\*”.tw or “traumatic brain injury\*”.tw

**AND**

exp diagnostic imaging/

**OR**

“neuroimaging”.tw or “MRI”.tw or “imaging”.tw or “Magnetic Resonance imaging”.tw or “MR”.tw or “CT”.tw or “Computed tomography”.tw or “computer assisted tomography”.tw

**Limit to (English language)**

**CINAHL**

(MH "Brain Injuries+") or (MH "Intracranial Hemorrhage+")

**OR**

(Brain N2 trauma\*) or “TBI”

**AND**

(MH "Biological Markers+") or (MH "Brain-Derived Neurotrophic Factor") or(MH "Spectrin") or (MH "Calcium Binding Proteins+")

**OR**

TX ( “Biomarkers” or “NSE” or “Neuron Specific Enolase” or “Ubiquitin C-terminal Hydrolase-L1” or “UCH-L1” or “Brain-derived neurotrophic factor” or “BDNF” or “tau” or “NF-L” or “Neurofilament light” or “NF-H” or “Neurofilament Heavy” or “αII-Spectrin breakdown products” or “SBDP” or “Myelin basic protein” or “MBP” or “GFAP” or “glial fibrillary acidic protein” or “S100B” or “S100 calcium binding protein B”)

**AND**

(MH "Intracranial Hemorrhage+") or (MH "Cerebral Hemorrhage+") or (MH "Brain Contusions+") or (MH "Brain Injuries+") or (MH "Subarachnoid Hemorrhage+") or (MH "Hematoma, Subdural+")  or (MH "Hematoma, Epidural+")

**OR**

TX (“Intracerebral Hemorrhage\*” or “ICH” or “intraparenchymal haemorrhage\*” or “IPH” or “Contusion\*” or “intra-axial bleeding\*” or “intraaxial bleeding\*” or “extra-axial bleeding\*” or “extraaxial bleeding\*” or “intraventricular haemorrhage\*” or “IVH” or “Subarachnoid Hemorrhage\*” or “SAH” or “Subdural Hemorrhage\*” or “Subdural Hematoma\*” or “Subdural Haematoma\*” or “SDH” or “Epidural Hematoma\*” or “Epidural Haematoma\*” or “EDH” or “Extradural Hematoma\*” or “Mass lesion\*” or “Diffuse Axonal Injury\*” or “Traumatic Axonal injury\*” or “DAI” or “TAI” or “extracranial injury\*” or “intracranial injury\*” or “traumatic brain injury\*”)

**AND**

(MH "Diagnostic Imaging+")

**OR**

TX (“neuroimaging” or “MRI”.tw or “imaging” or “Magnetic Resonance imaging” or “MR” or “CT” or “Computed tomography” or “computer assisted tomography”)

**Limit to (English language)**