

Journal Title: *BioDrugs*

Article Title: Adverse events in hemodialysis patients treated with originator or biosimilar epoetins alfa: an observational prospective multicenter study

Authors: Giovanna Stoppa, Carmen D'Amore, Anita Conforti, Giuseppe Traversa, Mauro Venegoni, Maurizio Tagliatela, Roberto Leone, on behalf of the ESAVIEW Study Group

Corresponding Author:

Roberto Leone

Pharmacology Unit, Department of Diagnostics and Public Health, University of Verona, Verona, Italy; e-mail: roberto.leone@univr.it

Online Resource 1. List of MedDRA Preferred Term (PT) codes used to define comorbidities at baseline.

PT code	Comorbidities	Group
10044644	Trifascicular block	Arrythmia
10040741	Sinus bradycardia	Arrythmia
10047818	Wandering pacemaker	Arrythmia
10047302	Ventricular tachycardia	Arrythmia
10047294	Ventricular flutter	Arrythmia
10047290	Ventricular fibrillation	Arrythmia
10047289	Ventricular extrasystoles	Arrythmia
10049003	Accelerated idioventricular rhythm	Arrythmia
10047281	Ventricular arrhythmia	Arrythmia
10049447	Tachyarrhythmia	Arrythmia
10044066	Torsade de pointes	Arrythmia
10043079	Tachycardia paroxysmal	Arrythmia
10043074	Tachycardia foetal	Arrythmia
10043071	Tachycardia	Arrythmia
10042604	Supraventricular tachycardia	Arrythmia
10042602	Supraventricular extrasystoles	Arrythmia
10063080	Postural orthostatic tachycardia syndrome	Arrythmia
10047284	Ventricular asystole	Arrythmia

PT code	Comorbidities	Group
10057393	Bifascicular block	Arrythmia
10061592	Cardiac fibrillation	Arrythmia
10061158	Foetal heart rate disorder	Arrythmia
10059027	Brugada syndrome	Arrythmia
10058184	Ventricular parasystole	Arrythmia
10058177	Hyperkinetic heart syndrome	Arrythmia
10058156	Reperfusion arrhythmia	Arrythmia
10047997	Withdrawal arrhythmia	Arrythmia
10058151	Pulseless electrical activity	Arrythmia
10040739	Sinus arrhythmia	Arrythmia
10056471	Bradycardia neonatal	Arrythmia
10054015	Agonal rhythm	Arrythmia
10052840	Cardiac flutter	Arrythmia
10050106	Paroxysmal arrhythmia	Arrythmia
10049775	Neonatal tachycardia	Arrythmia
10049765	Bradyarrhythmia	Arrythmia
10049761	Ventricular pre-excitation	Arrythmia
10058155	Heart alternation	Arrythmia
10003668	Atrial tachycardia	Arrythmia
10040752	Sinus tachycardia	Arrythmia
10006578	Bundle branch block	Arrythmia
10006094	Bradycardia foetal	Arrythmia
10006093	Bradycardia	Arrythmia
10003677	Atrioventricular block second degree	Arrythmia
10003674	Atrioventricular block first degree	Arrythmia
10006580	Bundle branch block left	Arrythmia
10003671	Atrioventricular block	Arrythmia
10006582	Bundle branch block right	Arrythmia

PT code	Comorbidities	Group
10003662	Atrial flutter	Arrythmia
10003658	Atrial fibrillation	Arrythmia
10003130	Arrhythmia supraventricular	Arrythmia
10003124	Arrhythmia neonatal	Arrythmia
10003119	Arrhythmia	Arrythmia
10002611	Anomalous atrioventricular excitation	Arrythmia
10001115	Adams-Stokes syndrome	Arrythmia
10003673	Atrioventricular block complete	Arrythmia
10016847	Foetal arrhythmia	Arrythmia
10040738	Sinus arrest	Arrythmia
10040736	Sinoatrial block	Arrythmia
10039111	Rhythm idioventricular	Arrythmia
10033929	Parasystole	Arrythmia
10033557	Palpitations	Arrythmia
10029470	Nodal rhythm	Arrythmia
10006579	Bundle branch block bilateral	Arrythmia
10024803	Long QT syndrome	Arrythmia
10048015	Wolff-Parkinson-White syndrome	Arrythmia
10015856	Extrasystoles	Arrythmia
10012118	Defect conduction intraventricular	Arrythmia
10010276	Conduction disorder	Arrythmia
10007618	Cardio-respiratory arrest neonatal	Arrythmia
10007617	Cardio-respiratory arrest	Arrythmia
10007516	Cardiac arrest neonatal	Arrythmia
10007515	Cardiac arrest	Arrythmia
10029458	Nodal arrhythmia	Arrythmia
10071666	Atrial parasystole	Arrythmia
10067207	Rebound tachycardia	Arrythmia

PT code	Comorbidities	Group
10067618	Accessory cardiac pathway	Arrythmia
10068180	Atrioventricular conduction time shortened	Arrythmia
10068627	Chronotropic incompetence	Arrythmia
10069571	Atrioventricular dissociation	Arrythmia
10065342	Supraventricular tachyarrhythmia	Arrythmia
10065341	Ventricular tachyarrhythmia	Arrythmia
10071710	Lenegre's disease	Arrythmia
10064191	Atrial conduction time prolongation	Arrythmia
10074636	Foetal heart rate deceleration abnormality	Arrythmia
10074638	Baseline foetal heart rate variability disorder	Arrythmia
10074640	Junctional ectopic tachycardia	Arrythmia
10074641	Nonreassuring foetal heart rate pattern	Arrythmia
10074642	Foetal heart rate acceleration abnormality	Arrythmia
10074643	Sinusoidal foetal heart rate pattern	Arrythmia
10024899	Low cardiac output syndrome	Heart failure
10050510	Ventricular hypokinesia	Heart failure
10034498	Pericarditis uraemic	Heart failure
10051093	Cardiopulmonary failure	Heart failure
10034484	Pericarditis	Heart failure
10051448	Hepatojugular reflux	Heart failure
10034474	Pericardial effusion	Heart failure
10051730	Pericardial cyst	Heart failure
10013002	Dilatation atrial	Heart failure
10052337	Diastolic dysfunction	Heart failure
10070909	Metabolic cardiomyopathy	Heart failure
10071436	Systolic dysfunction	Heart failure
10056370	Congestive cardiomyopathy	Heart failure
10024119	Left ventricular failure	Heart failure

PT code	Comorbidities	Group
10018723	Grey syndrome neonatal	Heart failure
10069140	Myocardial depression	Heart failure
10013012	Dilatation ventricular	Heart failure
10027727	Mitral valve incompetence	Heart failure
10049759	Pericardial rub	Heart failure
10048377	Cardiomyopathy acute	Heart failure
10063083	Chronic left ventricular failure	Heart failure
10047295	Ventricular hypertrophy	Heart failure
10063082	Acute right ventricular failure	Heart failure
10063081	Acute left ventricular failure	Heart failure
10068230	Cardiorenal syndrome	Heart failure
10066286	Stress cardiomyopathy	Heart failure
10038748	Restrictive cardiomyopathy	Heart failure
10049694	Left ventricular dysfunction	Heart failure
10039163	Right ventricular failure	Heart failure
10063084	Chronic right ventricular failure	Heart failure
10049773	Left ventricular hypertrophy	Heart failure
10049780	Neonatal cardiac failure	Heart failure
10049813	Non-obstructive cardiomyopathy	Heart failure
10049874	Cardio-respiratory distress	Heart failure
10050111	Cardiomyopathy neonatal	Heart failure
10001029	Acute pulmonary oedema	Heart failure
10023508	Kyphoscoliotic heart disease	Heart failure
10049633	Shoshin beriberi	Heart failure
10007559	Cardiac failure congestive	Heart failure
10059361	Pleuropericarditis	Heart failure
10010969	Cor pulmonale acute	Heart failure
10059056	Ventricular dysfunction	Heart failure

PT code	Comorbidities	Group
10010970	Cor pulmonale chronic	Heart failure
10007637	Cardiomyopathy alcoholic	Heart failure
10007636	Cardiomyopathy	Heart failure
10007632	Cardiomegaly	Heart failure
10007625	Cardiogenic shock	Heart failure
10060953	Ventricular failure	Heart failure
10007572	Cardiac hypertrophy	Heart failure
10012647	Diabetic cardiomyopathy	Heart failure
10007560	Cardiac failure high output	Heart failure
10010968	Cor pulmonale	Heart failure
10061024	Cardiac disorder	Heart failure
10074269	Tachycardia induced cardiomyopathy	Heart failure
10007558	Cardiac failure chronic	Heart failure
10007556	Cardiac failure acute	Heart failure
10007554	Cardiac failure	Heart failure
10007522	Cardiac asthma	Heart failure
10007509	Cardiac amyloidosis	Heart failure
10075043	Thyrotoxic cardiomyopathy	Heart failure
10011837	Cytotoxic cardiomyopathy	Heart failure
10000358	Accelerated hypertension	Hypertension
10074301	Right ventricular hypertension	Hypertension
10038562	Renovascular hypertension	Hypertension
10020823	Hypertensive heart disease	Hypertension
10067598	Neurogenic hypertension	Hypertension
10049781	Hypertension neonatal	Hypertension
10049079	Labile hypertension	Hypertension
10042957	Systolic hypertension	Hypertension
10065508	Orthostatic hypertension	Hypertension

PT code	Comorbidities	Group
10048007	Withdrawal hypertension	Hypertension
10065918	Prehypertension	Hypertension
10039834	Secondary hypertension	Hypertension
10025600	Malignant hypertension	Hypertension
10020801	Hypertensive cardiomegaly	Hypertension
10020802	Hypertensive crisis	Hypertension
10059238	Hypertensive angiopathy	Hypertension
10058179	Hypertensive emergency	Hypertension
10020772	Hypertension	Hypertension
10058222	Hypertensive cardiomyopathy	Hypertension
10025603	Malignant hypertensive heart disease	Hypertension
10015488	Essential hypertension	Hypertension
10026924	Maternal hypertension affecting foetus	Hypertension
10012758	Diastolic hypertension	Hypertension
10057615	Endocrine hypertension	Hypertension
10011105	Coronary ostial stenosis	Coronary heart disease
10011089	Coronary artery stenosis	Coronary heart disease
10013428	Dissecting coronary artery aneurysm	Coronary heart disease
10002388	Angina unstable	Coronary heart disease
10068534	Coronary no-reflow phenomenon	Coronary heart disease
10003211	Arteriosclerosis coronary artery	Coronary heart disease
10048631	Coronary artery dissection	Coronary heart disease
10011091	Coronary artery thrombosis	Coronary heart disease
10003225	Arteriospasm coronary	Coronary heart disease
10072685	Microvascular coronary artery disease	Coronary heart disease
10036759	Prinzmetal angina	Coronary heart disease
10003232	Arteritis coronary	Coronary heart disease
10069167	Kounis syndrome	Coronary heart disease

PT code	Comorbidities	Group
10002383	Angina pectoris	Coronary heart disease
10011086	Coronary artery occlusion	Coronary heart disease
10011084	Coronary artery embolism	Coronary heart disease
10072186	Myocardial stunning	Coronary heart disease
10011078	Coronary artery disease	Coronary heart disease
10028596	Myocardial infarction	Coronary heart disease
10011071	Coronary artery aneurysm	Coronary heart disease
10028600	Myocardial ischaemia	Coronary heart disease
10033697	Papillary muscle infarction	Coronary heart disease
10000891	Acute myocardial infarction	Coronary heart disease
10048858	Ischaemic cardiomyopathy	Coronary heart disease
10051624	Myocardial reperfusion injury	Coronary heart disease
10065420	Coronary artery dilatation	Coronary heart disease
10052895	Coronary artery insufficiency	Coronary heart disease
10064994	Subclavian coronary steal syndrome	Coronary heart disease
10051592	Acute coronary syndrome	Coronary heart disease
10049768	Silent myocardial infarction	Coronary heart disease
10059611	Coronary artery perforation	Coronary heart disease
10058144	Postinfarction angina	Coronary heart disease
10061216	Infarction	Coronary heart disease
10058145	Subendocardial ischaemia	Coronary heart disease
10055803	Haemorrhage coronary artery	Coronary heart disease
10063900	Steal syndrome	Vascular disease
10012978	Diffuse vasculitis	Vascular disease
10057521	Peripheral artery aneurysm	Vascular disease
10011703	Cyanosis	Vascular disease
10057520	Peripheral artery dissection	Vascular disease
10064601	Iliac artery occlusion	Vascular disease

PT code	Comorbidities	Group
10015867	Extravasation blood	Vascular disease
10059245	Angiopathy	Vascular disease
10059385	Extremity necrosis	Vascular disease
10011474	Cryoglobulinaemia	Vascular disease
10055798	Haemorrhage	Vascular disease
10052076	Haemodynamic instability	Vascular disease
10025282	Lymphoedema	Vascular disease
10054044	Diabetic microangiopathy	Vascular disease
10054208	Aortic calcification	Vascular disease
10022562	Intermittent claudication	Vascular disease
10048671	Venous stenosis	Vascular disease
10021097	Hypotension	Vascular disease
10057453	Aortic dilatation	Vascular disease
10018852	Haematoma	Vascular disease
10071573	Susac's syndrome	Vascular disease
10016427	Femoral artery aneurysm	Vascular disease
10056717	Varicophlebitis	Vascular disease
10009192	Circulatory collapse	Vascular disease
10014522	Embolism venous	Vascular disease
10021138	Hypovolaemic shock	Vascular disease
10002482	Angiosclerosis	Vascular disease
10060963	Arterial disorder	Vascular disease
10062174	Venous aneurysm	Vascular disease
10002910	Aortic thrombosis	Vascular disease
10002906	Aortic stenosis	Vascular disease
10002895	Aortic dissection	Vascular disease
10002886	Aortic aneurysm rupture	Vascular disease
10003178	Arterial thrombosis	Vascular disease

PT code	Comorbidities	Group
10062198	Microangiopathy	Vascular disease
10003210	Arteriosclerosis	Vascular disease
10062585	Peripheral arterial occlusive disease	Vascular disease
10062599	Arterial occlusive disease	Vascular disease
10002331	Aneurysm arteriovenous	Vascular disease
10002329	Aneurysm	Vascular disease
10075049	Peripheral venous disease	Vascular disease
10062610	Ischaemic limb pain	Vascular disease
10002882	Aortic aneurysm	Vascular disease
10061255	Ischaemia	Vascular disease
10060964	Arterial haemorrhage	Vascular disease
10060965	Arterial stenosis	Vascular disease
10063547	Diabetic macroangiopathy	Vascular disease
10061169	Embolism	Vascular disease
10072563	Peripheral artery stenosis	Vascular disease
10072564	Peripheral artery thrombosis	Vascular disease
10061815	Diabetic vascular disorder	Vascular disease
10072579	Granulomatosis with polyangiitis	Vascular disease
10052019	Femoral artery occlusion	Vascular disease
10004213	Behcet's syndrome	Vascular disease
10003880	Axillary vein thrombosis	Vascular disease
10061340	Peripheral embolism	Vascular disease
10061408	Venous thrombosis limb	Vascular disease
10063344	Microscopic polyangiitis	Vascular disease
10061636	Angiodysplasia	Vascular disease
10007513	Cardiac aneurysm	Vascular disease
10047115	Vasculitis	Vascular disease
10047249	Venous thrombosis	Vascular disease

PT code	Comorbidities	Group
10065558	Aortic arteriosclerosis	Vascular disease
10049446	Subclavian vein thrombosis	Vascular disease
10034879	Phlebitis	Vascular disease
10047124	Vasculitis necrotising	Vascular disease
10036155	Poor peripheral circulation	Vascular disease
10042334	Subclavian artery thrombosis	Vascular disease
10050180	Subclavian artery stenosis	Vascular disease
10037912	Raynaud's phenomenon	Vascular disease
10034636	Peripheral vascular disorder	Vascular disease
10046996	Varicose vein	Vascular disease
10043570	Thrombophlebitis	Vascular disease
10042331	Subclavian artery aneurysm	Vascular disease
10043595	Thrombophlebitis superficial	Vascular disease
10043607	Thrombosis	Vascular disease
10069695	Subclavian artery occlusion	Vascular disease
10049771	Shock haemorrhagic	Vascular disease
10049927	Dry gangrene	Vascular disease
10051055	Deep vein thrombosis	Vascular disease
10051753	Vascular calcification	Vascular disease
10034567	Peripheral circulatory failure	Vascular disease
10048591	Post thrombotic syndrome	Vascular disease
10048974	Cardiac pseudoaneurysm	Vascular disease
10048380	Aneurysm ruptured	Vascular disease
10034576	Peripheral ischaemia	Vascular disease
10031127	Orthostatic hypotension	Vascular disease
10047141	Vasodilatation	Vascular disease
10059613	Stroke in evolution	Cerebrovascular disease
10007686	Carotid artery aneurysm	Cerebrovascular disease

PT code	Comorbidities	Group
10073230	Brain stem haematoma	Cerebrovascular disease
10044390	Transient ischaemic attack	Cerebrovascular disease
10049440	Spinal artery embolism	Cerebrovascular disease
10043647	Thrombotic stroke	Cerebrovascular disease
10007684	Carotid arterial embolus	Cerebrovascular disease
10042365	Subdural haemorrhage neonatal	Cerebrovascular disease
10060839	Embolic cerebral infarction	Cerebrovascular disease
10072043	Central nervous system haemorrhage	Cerebrovascular disease
10060840	Ischaemic cerebral infarction	Cerebrovascular disease
10069020	Basal ganglia infarction	Cerebrovascular disease
10068644	Brain stem stroke	Cerebrovascular disease
10065559	Cerebral arteriosclerosis	Cerebrovascular disease
10061038	Cerebellar haematoma	Cerebrovascular disease
10068621	Cerebellar ischaemia	Cerebrovascular disease
10059491	Intracranial haematoma	Cerebrovascular disease
10067744	Capsular warning syndrome	Cerebrovascular disease
10063093	Basilar artery thrombosis	Cerebrovascular disease
10048963	Basilar artery occlusion	Cerebrovascular disease
10075394	Cerebral aneurysm perforation	Cerebrovascular disease
10067057	Basal ganglia haemorrhage	Cerebrovascular disease
10048964	Carotid artery occlusion	Cerebrovascular disease
10067116	Carotid arteriosclerosis	Cerebrovascular disease
10047330	Vertebral artery stenosis	Cerebrovascular disease
10048965	Vertebral artery occlusion	Cerebrovascular disease
10067277	Cerebral microhaemorrhage	Cerebrovascular disease
10067347	Thrombotic cerebral infarction	Cerebrovascular disease
10049236	Spinal epidural haemorrhage	Cerebrovascular disease
10074717	Precerebral artery thrombosis	Cerebrovascular disease

PT code	Comorbidities	Group
10073563	Spinal subdural haemorrhage	Cerebrovascular disease
10061744	Carotid artery disease	Cerebrovascular disease
10047119	Vasculitis cerebral	Cerebrovascular disease
10061256	Ischaemic stroke	Cerebrovascular disease
10008088	Cerebral artery embolism	Cerebrovascular disease
10073945	Perinatal stroke	Cerebrovascular disease
10007687	Carotid artery stenosis	Cerebrovascular disease
10004163	Basilar artery stenosis	Cerebrovascular disease
10073565	Intracranial artery dissection	Cerebrovascular disease
10073564	Spinal subarachnoid haemorrhage	Cerebrovascular disease
10006145	Brain stem haemorrhage	Cerebrovascular disease
10006147	Brain stem infarction	Cerebrovascular disease
10048992	Spinal cord haemorrhage	Cerebrovascular disease
10051078	Lacunar infarction	Cerebrovascular disease
10050164	Spinal subdural haematoma	Cerebrovascular disease
10039330	Ruptured cerebral aneurysm	Cerebrovascular disease
10007688	Carotid artery thrombosis	Cerebrovascular disease
10042316	Subarachnoid haemorrhage	Cerebrovascular disease
10008030	Cerebellar haemorrhage	Cerebrovascular disease
10036511	Precerebral artery occlusion	Cerebrovascular disease
10056237	Migrainous infarction	Cerebrovascular disease
10018985	Haemorrhage intracranial	Cerebrovascular disease
10019005	Haemorrhagic cerebral infarction	Cerebrovascular disease
10019016	Haemorrhagic stroke	Cerebrovascular disease
10057777	Vertebral artery thrombosis	Cerebrovascular disease
10054749	Charcot-Bouchard microaneurysms	Cerebrovascular disease
10071043	Basal ganglia stroke	Cerebrovascular disease
10051328	Carotid aneurysm rupture	Cerebrovascular disease

PT code	Comorbidities	Group
10022758	Intracranial aneurysm	Cerebrovascular disease
10022840	Intraventricular haemorrhage	Cerebrovascular disease
10022841	Intraventricular haemorrhage neonatal	Cerebrovascular disease
10023237	Jugular vein thrombosis	Cerebrovascular disease
10071205	Brain stem microhaemorrhage	Cerebrovascular disease
10053942	Cerebral haematoma	Cerebrovascular disease
10053633	Cerebellar artery occlusion	Cerebrovascular disease
10071206	Cerebellar microhaemorrhage	Cerebrovascular disease
10071316	Spinal artery thrombosis	Cerebrovascular disease
10071355	Internal carotid artery kinking	Cerebrovascular disease
10055677	Haemorrhagic transformation stroke	Cerebrovascular disease
10063648	Cerebral artery stenosis	Cerebrovascular disease
10008120	Cerebral ischaemia	Cerebrovascular disease
10008132	Cerebral thrombosis	Cerebrovascular disease
10008118	Cerebral infarction	Cerebrovascular disease
10008112	Cerebral haemorrhage neonatal	Cerebrovascular disease
10008111	Cerebral haemorrhage	Cerebrovascular disease
10050403	Carotid artery dissection	Cerebrovascular disease
10050162	Spinal epidural haematoma	Cerebrovascular disease
10008092	Cerebral artery thrombosis	Cerebrovascular disease
10008190	Cerebrovascular accident	Cerebrovascular disease
10008196	Cerebrovascular disorder	Cerebrovascular disease
10008119	Cerebral infarction foetal	Cerebrovascular disease
10042317	Subarachnoid haemorrhage neonatal	Cerebrovascular disease
10008138	Cerebral venous thrombosis	Cerebrovascular disease
10008089	Cerebral artery occlusion	Cerebrovascular disease
10008034	Cerebellar infarction	Cerebrovascular disease
10014498	Embolic stroke	Cerebrovascular disease

PT code	Comorbidities	Group
10058940	Putamen haemorrhage	Cerebrovascular disease
10058939	Thalamus haemorrhage	Cerebrovascular disease
10058842	Cerebrovascular insufficiency	Cerebrovascular disease
10008023	Cerebellar artery thrombosis	Cerebrovascular disease
10063661	Vascular encephalopathy	Cerebrovascular disease
10064961	Thalamic infarction	Cerebrovascular disease
10050157	Cerebral haemorrhage foetal	Cerebrovascular disease
10071716	Vertebral artery dissection	Cerebrovascular disease
10027733	Mitral valve stenosis	Valvular heart disease
10051538	Mitral valve sclerosis	Valvular heart disease
10027730	Mitral valve prolapse	Valvular heart disease
10002912	Aortic valve disease mixed	Valvular heart disease
10002915	Aortic valve incompetence	Valvular heart disease
10002917	Aortic valve sclerosis	Valvular heart disease
10066862	Tricuspid valve prolapse	Valvular heart disease
10061082	Cardiac valve sclerosis	Valvular heart disease
10061589	Aortic valve disease	Valvular heart disease
10061532	Mitral valve disease	Valvular heart disease
10050559	Aortic valve calcification	Valvular heart disease
10061406	Cardiac valve disease	Valvular heart disease
10057466	Tricuspid valve calcification	Valvular heart disease
10044640	Tricuspid valve incompetence	Valvular heart disease
10002918	Aortic valve stenosis	Valvular heart disease

Online Resource 2. List of MedDRA Preferred Term (PT) codes used to define safety outcomes.

PT code	Adverse event	Group
10008190	Cerebrovascular accident	Cerebral accident
10044390	Transient ischaemic attack	Cerebral accident
10061256	Ischaemicstroke	Cerebral accident
10014498	Embolicstroke	Cerebral accident
10008120	Cerebralischaemia	Cerebral accident
10008111	Cerebralhaemorrhage	Cerebral accident
10063661	Vascularencephalopathy	Cerebral accident
10067967	Brain injury	Cerebral accident
10070976	Craniocerebralinjury	Cerebral accident
10068621	Cerebellarischaemia	Cerebral accident
10047119	Vasculitiscerebral	Cerebral accident
10003662	Atrialflutter	Arrhythmia
10003671	Atrioventricularblock	Arrhythmia
10003674	Atrioventricularblock first degree	Arrhythmia
10003658	Atrialfibrillation	Arrhythmia
10003677	Atrioventricularblockseconddegree	Arrhythmia
10049447	Tachyarrhythmia	Arrhythmia
10042602	Supraventricularextrasystoles	Arrhythmia
10057281	Medicaldevicecomplication	Vascular complications of the fistula
10063829	Device malfunction	Vascular complications of the fistula
10051099	Catheter site haemorrhage	Vascular complications of the fistula
10058562	Arteriovenous fistula occlusion	Vascular complications of the fistula
10003192	Arteriovenous fistula thrombosis	Vascular complications of the fistula
10055123	Arteriovenous fistula site haemorrhage	Vascular complications of the fistula

PT code	Adverse event	Group
10055122	Arteriovenous fistula site complication	Vascular complications of the fistula
10064775	Arteriovenousgraftaneurysm	Vascular complications of the fistula
10066916	Arteriovenous fistula aneurysm	Vascular complications of the fistula
10055150	Arteriovenous fistula site haematoma	Vascular complications of the fistula
10075211	Myocardialnecrosis marker increased	Coronary disease
10028596	Myocardialinfarction	Coronary disease
10051592	Acute coronarysyndrome	Coronary disease
10002388	Angina unstable	Coronary disease
10028600	Myocardialischaemia	Coronary disease
10011086	Coronaryarteryocclusion	Coronary disease
10011078	Coronaryarterydisease	Coronary disease
10002383	Angina pectoris	Coronary disease
10000891	Acute myocardialinfarction	Coronary disease
10027514	Metrorrhagia	Bleeding
10027295	Menometrorrhagia	Bleeding
10018829	Haemarthrosis	Bleeding
10027141	Melaena	Bleeding
10018852	Haematoma	Bleeding
10018964	Haemoptysis	Bleeding
10052293	Haemorrhagicanaemia	Bleeding
10017955	Gastrointestinalhaemorrhage	Bleeding
10049771	Shock haemorrhagic	Bleeding
10018867	Haematuria	Bleeding
10014009	Earhaemorrhage	Bleeding
10017788	Gastrichaemorrhage	Bleeding
10055798	Haemorrhage	Bleeding

PT code	Adverse event	Group
10038081	Rectalulcerhaemorrhage	Bleeding
10038063	Rectalhaemorrhage	Bleeding
10015867	Extravasationblood	Bleeding
10038867	Retinalhaemorrhage	Bleeding
10059175	Intestinalhaemorrhage	Bleeding
10017929	Gastrointestinalangiodyplasiahaemorrhagic	Bleeding
10015090	Epistaxis	Bleeding
10011793	Cystitishaemorrhagic	Bleeding
10060964	Arterialhaemorrhage	Bleeding
10010719	Conjunctivalhaemorrhage	Bleeding
10061387	Traumaticintracranialhaemorrhage	Bleeding
10031253	Osteomyelitis acute	OtherInfections
10031252	Osteomyelitis	OtherInfections
10031064	Orchitis	OtherInfections
10031149	Osteitis	OtherInfections
10030963	Oralcandidiasis	OtherInfections
10027082	Mediastinitis	OtherInfections
10024641	Listeriosis	OtherInfections
10021789	Infection	OtherInfections
10019974	Herpes zoster	OtherInfections
10017533	Fungalinfection	OtherInfections
10015145	Erysipelas	OtherInfections
10011831	Cytomegalovirusinfection	OtherInfections
10011781	Cystitis	OtherInfections
10007882	Cellulitis	OtherInfections
10004142	Bartholinitis	OtherInfections
10003256	Arthritisgonococcal	OtherInfections
10017711	Gangrene	OtherInfections

PT code	Adverse event	Group
10061126	Escherichia infection	OtherInfections
10054138	Stenotrophomonasinfection	OtherInfections
10051910	Enterobacterinfection	OtherInfections
10054236	Clostridium difficile infection	OtherInfections
10059442	Woundinfectionstaphylococcal	OtherInfections
10060803	Diabeticfootinfection	OtherInfections
10060945	Bacterialinfection	OtherInfections
10047461	Viralinfection	OtherInfections
10053555	Arthritisbacterial	OtherInfections
10061124	Enterococcalinfection	OtherInfections
10058080	Staphylococcalinfection	OtherInfections
10061259	Klebsiellainfection	OtherInfections
10061324	Oralfungalinfection	OtherInfections
10042868	Synovitis	OtherInfections
10061470	Proteusinfection	OtherInfections
10061471	Pseudomonasinfection	OtherInfections
10064250	Staphylococcalosteomyelitis	OtherInfections
10064687	Device relatedinfection	OtherInfections
10070963	Infectiveglossitis	OtherInfections
10074171	Aspergillusinfection	OtherInfections
10046571	Urinarytractinfection	OtherInfections
10057688	Catheter site discharge	Localizedinfections
10056520	Catheter site infection	Localizedinfections
10055124	Arteriovenous fistula site infection	Localizedinfections
10072136	Catheter site abscess	Localizedinfections
10024774	Localisedinfection	Localizedinfections
10001029	Acute pulmonaryoedema	Heartfailure
10037423	Pulmonaryoedema	Heartfailure
10007625	Cardiogenic shock	Heartfailure

PT code	Adverse event	Group
10007559	Cardiacfailure congestive	Heartfailure
10007554	Cardiacfailure	Heartfailure
10048671	Venousstenosis	Peripheral ischemia
10034576	Peripheralischaemia	Peripheral ischemia
10062585	Peripheralarterial occlusive disease	Peripheral ischemia
10049927	Dry gangrene	Peripheral ischemia
10022562	Intermittentclaudication	Peripheral ischemia
10009033	Chronicobstructivepulmonarydisease	Respiratory infections
10044314	Tracheobronchitis	Respiratory infections
10035699	Pneumonia escherichia	Respiratory infections
10006451	Bronchitis	Respiratory infections
10035742	Pneumonitis	Respiratory infections
10073755	Pneumocystisjirovecii pneumonia	Respiratory infections
10035664	Pneumonia	Respiratory infections
10044755	Tuberculosis	Respiratory infections
10046306	Upperrespiratorytractinfection	Respiratory infections
10060946	Pneumonia bacterial	Respiratory infections
10061229	Lunginfection	Respiratory infections
10058879	Serratiasepsis	Sepsis
10053166	Candida sepsis	Sepsis
10054160	Klebsiellasepsis	Sepsis
10056430	Staphylococalsepsis	Sepsis
10069802	Device relatedsepsis	Sepsis
10040070	Septic shock	Sepsis
10058877	Pseudomonalsepsis	Sepsis
10048709	Urosepsis	Sepsis
10040047	Sepsis	Sepsis
10015296	Escherichia sepsis	Sepsis

PT code	Adverse event	Group
10053840	Bacterialesepsis	Sepsis
10048988	Renalarteryocclusion	Thrombosis
10043607	Thrombosis	Thrombosis
10038831	Retinalarterythrombosis	Thrombosis
10061408	Venousthrombosislimb	Thrombosis
10072564	Peripheralarterythrombosis	Thrombosis
10003178	Arterialthrombosis	Thrombosis
10051055	Deepveinthrombosis	Thrombosis
10034879	Phlebitis	Thrombosis