Supplementary Table S1 The comprehensive detailed information of all AEs at the PTs level identified by EBGM algorithms (asterisk indicated entries that can be found on the topotecan label).

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| Preferred Terms | SOC | Case Number | EBGM (EBGM05) |
| Heterochromia iridis | Eye disorders | 7 | 1755.75 (699.72) |
| Choroidal dystrophy | Eye disorders | 9 | 1220.21 (575.02) |
| Iris atrophy | Eye disorders | 15 | 703.24 (406.69) |
| Enophthalmos | Eye disorders | 8 | 668.86 (317.3) |
| Retinal degeneration | Eye disorders | 15 | 470.29 (275.84) |
| Alveolar soft part sarcoma | Neoplasms benign, malignant and unspecified (incl cysts and polyps) | 4 | 647.28 (226.27) |
| Brain stem glioma | Neoplasms benign, malignant and unspecified (incl cysts and polyps) | 5 | 358.32 (144.12) |
| Febrile bone marrow aplasia | General disorders and administration site conditions | 30 | 178.31 (123.51) |
| Proteus test positive | Investigations | 4 | 295.08 (107.35) |
| Arteriosclerotic retinopathy | Vascular disorders | 3 | 307.13 (95.44) |
| Iris adhesions | Eye disorders | 7 | 164.86 (77.51) |
| Lenticular opacities | Eye disorders | 6 | 162.7 (72.04) |
| Nephroblastoma | Renal and urinary disorders | 3 | 211.96 (66.64) |
| Cerebral cyst | Neoplasms benign, malignant and unspecified (incl cysts and polyps) | 8 | 114.01 (56.48) |
| Ocular toxicity | Eye disorders | 7 | 100.62 (47.54) |
| Small cell lung cancer | Respiratory, thoracic and mediastinal disorders | 12 | 80.05 (45.17) |
| Vitreous haemorrhage | Eye disorders | 18 | 72.01 (45.12) |
| Chorioretinal disorder | Eye disorders | 3 | 128.63 (40.84) |
| Cataract subcapsular | Eye disorders | 5 | 97.6 (40.23) |
| Myelosuppression\* | Blood and lymphatic system disorders\* | 8 | 69.92 (34.74) |
| Acute febrile neutrophilic dermatosis | Skin and subcutaneous tissue disorders | 12 | 60.74 (34.32) |
| Neutrophil count decreased | Investigations | 103 | 38.92 (31.88) |
| Intracranial tumour haemorrhage | Nervous system disorders | 3 | 95.86 (30.55) |
| Scleritis | Immune system disorders | 7 | 64.43 (30.53) |
| Neuroblastoma | Endocrine disorders | 3 | 94.65 (30.17) |
| Monocyte count decreased | Investigations | 5 | 70.06 (28.95) |
| Red blood cell count decreased | Investigations | 62 | 33.36 (25.88) |
| Acute interstitial pneumonitis | Respiratory, thoracic and mediastinal disorders | 3 | 79.63 (25.43) |
| Haematotoxicity | Blood and lymphatic system disorders | 23 | 36.31 (24.03) |
| Subileus\* | Gastrointestinal disorders\* | 7 | 50.24 (23.83) |
| Protein total decreased | Investigations | 10 | 40.88 (21.91) |
| Malignant ascites | Neoplasms benign, malignant and unspecified (incl cysts and polyps) | 3 | 53.37 (17.09) |
| Conjunctival oedema | Eye disorders | 4 | 43.34 (16.18) |
| White blood cells urine positive | Investigations | 4 | 42.97 (16.04) |
| Ileus\* | Gastrointestinal disorders\* | 22 | 24.22 (15.89) |
| Dyspnoea\* | Respiratory, thoracic and mediastinal disorders\* | 3 | 48.55 (15.56) |
| Retinal ischaemia | Eye disorders | 3 | 47.03 (15.07) |
| Thrombocytosis | Blood and lymphatic system disorders | 3 | 42.75 (13.71) |
| White blood cell count decreased | Investigations | 127 | 16 (13.36) |
| Autonomic neuropathy | Nervous system disorders | 3 | 40.67 (13.05) |
| Platelet transfusion | Surgical and medical procedures | 3 | 38.79 (12.44) |
| Febrile neutropenia\* | General disorders and administration site conditions\* | 63 | 15.74 (12.24) |
| Blood phosphorus increased | Investigations | 5 | 29.51 (12.24) |
| Platelet count decreased | Investigations | 113 | 14.58 (12.06) |
| Ovarian cancer metastatic | Reproductive system and breast disorders | 3 | 37.16 (11.92) |
| Neutropenic sepsis\* | Blood and lymphatic system disorders\* | 12 | 20.52 (11.62) |
| Anaemia\* | Blood and lymphatic system disorders\* | 187 | 13.4 (11.52) |
| Hospice care | Surgical and medical procedures | 13 | 19.67 (11.39) |
| Blood chloride decreased | Investigations | 5 | 25.88 (10.74) |
| Disease progression | General disorders and administration site conditions | 123 | 12.87 (10.72) |
| Ocular vascular disorder | Eye disorders | 3 | 32.86 (10.55) |
| Thrombocytopenia\* | Blood and lymphatic system disorders | 101 | 12.34 (10.09) |
| Retinopathy | Vascular disorders | 7 | 20.16 (9.58) |
| Carbohydrate antigen 125 increased | Investigations | 6 | 21.29 (9.53) |
| Hydronephrosis | Renal and urinary disorders | 10 | 17.69 (9.49) |
| Pancytopenia\* | Blood and lymphatic system disorders | 50 | 12.42 (9.38) |
| Metastases to central nervous system | Neoplasms benign, malignant and unspecified (incl cysts and polyps) | 15 | 15.55 (9.35) |
| Blood culture positive | Investigations | 6 | 20.73 (9.29) |
| Conjunctival hyperaemia | Eye disorders | 6 | 20.16 (9.03) |
| VIth nerve paralysis | Nervous system disorders | 3 | 27.61 (8.87) |
| Large intestine perforation | Injury, poisoning and procedural complications | 9 | 16.68 (8.65) |
| Hypoproteinaemia | Hepatobiliary disorders | 3 | 26.78 (8.6) |
| Pulmonary toxicity | Respiratory, thoracic and mediastinal disorders | 8 | 16.02 (7.99) |
| Neutropenia\* | Blood and lymphatic system disorders | 86 | 9.56 (7.7) |
| Conjunctival haemorrhage | Eye disorders | 6 | 15.92 (7.13) |
| Red blood cell transfusion | Surgical and medical procedures | 3 | 22.16 (7.12) |
| Blood test abnormal | Investigations | 12 | 12.41 (7.03) |
| Hypomagnesaemia | Metabolism and nutrition disorders | 12 | 12.16 (6.89) |
| Pulmonary haemorrhage | Vascular disorders | 9 | 13.16 (6.83) |
| Pyelonephritis | Renal and urinary disorders | 8 | 13.58 (6.78) |
| Leukopenia\* | Blood and lymphatic system disorders\* | 34 | 9.23 (6.57) |
| Radiation pneumonitis | Respiratory, thoracic and mediastinal disorders | 3 | 20.25 (6.51) |
| Metastases to meninges | Neoplasms benign, malignant and unspecified (incl cysts and polyps) | 3 | 20.04 (6.44) |
| Venous thrombosis | Vascular disorders | 5 | 14.91 (6.19) |
| Mucosal inflammation | General disorders and administration site conditions | 18 | 9.79 (6.15) |
| Blood urea increased | Investigations | 14 | 10.4 (6.14) |
| Renal tubular disorder | Renal and urinary disorders | 4 | 16.38 (6.13) |
| Rash vesicular\* | Skin and subcutaneous tissue disorders\* | 5 | 14.65 (6.08) |
| Protein urine present | Investigations | 5 | 14.39 (5.98) |
| Malignant neoplasm progression | Neoplasms benign, malignant and unspecified (incl cysts and polyps) | 57 | 7.66 (5.89) |
| Aspergillus infection | Infections and infestations | 3 | 17.94 (5.77) |
| Posterior reversible encephalopathy syndrome | Nervous system disorders | 8 | 10.68 (5.33) |
| Neoplasm progression | Neoplasms benign, malignant and unspecified (incl cysts and polyps) | 24 | 7.88 (5.27) |
| Performance status decreased | General disorders and administration site conditions | 5 | 12.42 (5.16) |
| Blood lactic acid increased | Investigations | 5 | 12.19 (5.06) |
| Ascites | Cardiac disorders | 18 | 8.04 (5.05) |
| Haemoglobin decreased | Investigations | 50 | 6.66 (5.03) |
| Cardiac dysfunction\* | Cardiac disorders\* | 3 | 15.56 (5.01) |
| Cerebellar syndrome | Nervous system disorders | 3 | 15.51 (4.99) |
| Escherichia infection | Infections and infestations | 6 | 11.07 (4.96) |
| Hyperammonaemia | Hepatobiliary disorders | 5 | 11.82 (4.91) |
| Lymphopenia | Blood and lymphatic system disorders | 9 | 9.1 (4.72) |
| Pleural effusion\* | Respiratory, thoracic and mediastinal disorders\* | 29 | 6.16 (4.27) |
| Interstitial lung disease\* | Immune system disorders\* | 22 | 6.46 (4.24) |
| General physical health deterioration | General disorders and administration site conditions | 43 | 5.74 (4.24) |
| Dehydration | Metabolism and nutrition disorders | 54 | 5.56 (4.24) |
| Toxicity to various agents | Injury, poisoning and procedural complications | 13 | 6.88 (3.98) |
| Septic shock | Vascular disorders | 18 | 6.3 (3.96) |
| Blood lactate dehydrogenase increased | Investigations | 9 | 7.59 (3.94) |
| Orthopnoea | Respiratory, thoracic and mediastinal disorders | 3 | 12.18 (3.92) |
| Bone marrow disorder | Blood and lymphatic system disorders | 3 | 11.73 (3.77) |
| Decreased appetite\* | Metabolism and nutrition disorders\* | 82 | 4.68 (3.75) |
| Blood albumin decreased | Investigations | 5 | 8.98 (3.73) |
| Deafness neurosensory | Nervous system disorders | 3 | 11.55 (3.72) |
| Papule\* | Skin and subcutaneous tissue disorders\* | 4 | 9.84 (3.69) |
| Hyponatraemia | Metabolism and nutrition disorders | 24 | 5.49 (3.67) |
| Optic ischaemic neuropathy | Eye disorders | 3 | 11.29 (3.63) |
| Hypoxia | Respiratory, thoracic and mediastinal disorders | 15 | 6.01 (3.62) |
| Full blood count decreased\* | Investigations\* | 9 | 6.88 (3.57) |
| Hypotonia | Nervous system disorders | 7 | 7.33 (3.49) |
| Haematocrit decreased | Investigations | 10 | 6.4 (3.43) |
| Bone marrow failure | Blood and lymphatic system disorders | 12 | 6 (3.4) |
| Haemodialysis | Surgical and medical procedures | 7 | 7.14 (3.4) |
| Blood sodium decreased | Investigations | 9 | 6.34 (3.29) |
| Ovarian cancer | Reproductive system and breast disorders | 7 | 6.9 (3.29) |
| Failure to thrive | Pregnancy, puerperium and perinatal conditions | 4 | 8.63 (3.23) |
| Periorbital oedema | Immune system disorders | 4 | 8.47 (3.17) |
| Hepatic lesion\* | Hepatobiliary disorders\* | 3 | 9.84 (3.17) |
| Cholestasis | Hepatobiliary disorders | 8 | 6.33 (3.16) |
| Gastrointestinal toxicity | Gastrointestinal disorders | 3 | 9.68 (3.12) |
| Metastases to bone | Musculoskeletal and connective tissue disorders | 7 | 6.42 (3.05) |
| Atelectasis | Respiratory, thoracic and mediastinal disorders | 5 | 7.26 (3.02) |
| Recurrent cancer | Neoplasms benign, malignant and unspecified (incl cysts and polyps) | 3 | 9.19 (2.96) |
| Pyrexia\* | General disorders and administration site conditions | 89 | 3.53 (2.85) |
| Blood magnesium decreased | Investigations | 4 | 7.57 (2.84) |
| Ileus paralytic | Gastrointestinal disorders | 3 | 8.79 (2.83) |
| Acute respiratory distress syndrome | Immune system disorders | 8 | 5.58 (2.79) |
| Platelet count increased | Investigations | 6 | 6.15 (2.76) |
| Sepsis\* | Infections and infestations\* | 32 | 3.86 (2.72) |
| Oesophageal pain\* | Gastrointestinal disorders | 3 | 8.39 (2.7) |
| Aspartate aminotransferase increased | Investigations | 18 | 4.17 (2.62) |
| Blood creatine increased | Investigations | 3 | 8.13 (2.62) |
| Tachypnoea | Respiratory, thoracic and mediastinal disorders | 6 | 5.83 (2.61) |
| Blood bilirubin increased\* | Investigations\* | 11 | 4.72 (2.61) |
| Acute myeloid leukaemia | Blood and lymphatic system disorders | 7 | 5.43 (2.58) |
| Gastrointestinal perforation | Gastrointestinal disorders | 3 | 8.02 (2.58) |
| Diplopia | Nervous system disorders | 10 | 4.75 (2.55) |
| Metastatic neoplasm | Neoplasms benign, malignant and unspecified (incl cysts and polyps) | 3 | 7.89 (2.54) |
| Respiratory failure\* | Metabolism and nutrition disorders\* | 23 | 3.83 (2.54) |
| Vomiting\* | Gastrointestinal disorders\* | 115 | 3.04 (2.52) |
| Small intestinal obstruction\* | Gastrointestinal disorders\* | 5 | 6 (2.49) |
| Death\* | General disorders and administration site conditions | 247 | 2.77 (2.43) |
| Eyelid oedema | Immune system disorders | 6 | 5.38 (2.41) |
| Agranulocytosis | Blood and lymphatic system disorders | 6 | 5.22 (2.34) |
| Mental status changes | Psychiatric disorders | 11 | 4.18 (2.31) |
| Conjunctivitis | Eye disorders | 6 | 5.14 (2.31) |
| Blood creatinine increased | Investigations | 19 | 3.61 (2.3) |
| Product use in unapproved indication | Injury, poisoning and procedural complications | 47 | 3.06 (2.29) |
| C-reactive protein increased | Investigations | 9 | 4.4 (2.29) |
| Multiple organ dysfunction syndrome | General disorders and administration site conditions | 9 | 4.35 (2.26) |
| Nausea\* | Gastrointestinal disorders\* | 169 | 2.6 (2.22) |
| Hypokalaemia | Metabolism and nutrition disorders | 12 | 3.74 (2.12) |
| Alanine aminotransferase increased | Investigations | 17 | 3.36 (2.08) |
| Haematuria | Renal and urinary disorders | 11 | 3.7 (2.04) |
| Abdominal pain\* | Gastrointestinal disorders | 47 | 2.71 (2.03) |