**Table S1. Codes and definitions of cancers, procedures and comorbidities.**

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| **Cancers** | ***ICD-10 code*** |
| Any cancer | C00.x-C96.x |
| Primary liver cancer | C.22.x |
| Hepatocellular carcinoma (HCC) | C22.0 |
| Primary liver cancer excl. hepatocellular carcinoma | C22.1-C22.9 |
| Colorectal cancer | C18.x, C20.x |
| Gastrointestinal cancer excl. colorectal and primary liver cancer | C00.x-C17.x, C19.x, C21.x, C.23.x-C26.x |
| Lung cancer | C34.x |
| Respiratory tract cancer excl. lung cancer | C30.x-C33.x, C35.x-C39.x |
| Malignant melanoma | C43.x |
| Non-melanoma skin cancer | C44.x |
| Breast cancer | C50.x |
| Gynaecological cancer | C51.x-C58.x |
| Prostate cancer | C61.x |
| Urological cancer | C64.x-C68.x |
| Cancer of the central nervous system | C69.x-C72.x |
| Haematological cancer | C81.x-C96.x |

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| **Procedures** | ***SNOMED code*** | ***ICD-10 code*** |
| Liver biopsy | T56\* |  |
|  | ***NOMESCO Classification of Surgical Procedures*** | ***ICD-10 code*** |
| Liver transplant | KJJC\*, 32250\*, 47279\* | Z94.4 |
|  | ***Anatomical Therapeutic Chemical classification (ATC)*** | ***ICD-10 code*** |
| Immunosuppressive treatment | H02AB06 (Prednisolone), H02AB04 (Methylprednisolone), H02AB07 (Prednisone), A07EA06 (Budesonide), L04AX01 (Azathioprine), L04AD02 (Tacrolimus), L04AA10 (Sirolimus), L04AD01 (Cyclosporine), L04AA18 (Everolimus), L04AA06 (Mycophenolate mofetil), L01BB02 (Mercaptopurine) | B0HJ21 (Tacrolimus), B0HJ23 (Sirolimus), B0HJ20 (Cyclosporine), B0HJ24 (Everolimus), B0HJ22A (Mycophenolate mofetil) |
|  |  |  |
| **Comorbidities** | ***SNOMED code*** | ***ICD-8 code*** | ***ICD-10 code*** |
| Chronic hepatitis B or C |  |  | B18.0-18.2 |
| Chronic obstructive pulmonary disease |  | 490.x-492.x | J44.x |
| Alcohol-related diagnoses |  | 571.0, 577.1 | F10.x, K70.x, K85.2, K86.0 |
| Cirrhosis |  |  |  |
| Cirrhosis | M4950-M4953\*, M4964\*, M4966\*, M4968-M4969\* | 571.92, 571.99 | K74.6 |
| Cirrhosis complications |  | 785.39, 456.0 | I85.x, I86.4, I98.2, K76.7, R18.x |
| Primary sclerosing cholangitis |  |  | K83.0F |
| Inflammatory bowel disease |  |  | K50.x-K51.x |