**Cystic Fibrosis Transmembrane Conductance Regulator Modulators Reduce Hospitalizations for Acute Pancreatitis in Patients with Cystic Fibrosis**

**Supplementary Table 1:** Study definitions and corresponding International Classification of Diseases version 9 (ICD-9) and ICD-10 codes, Current Procedural Terminology (CPT) codes

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| --- | --- | --- | --- | --- |
| Study term | ICD-9 | ICD-10 | CPT | Medication definitions |
| Pancreas enzyme |  |  |  | generic: pancrelipase  brand names: Creon, Pertyze, Zenpep, Pancreaze, Sollpura (Liprotamase), Ultresa |
| CFTR modulators |  |  |  | ivacaftor (Kalydeco), ivacaftor with lumacaftor (Orkambi), ivacaftor with tezacaftor (Symdeko) |
| Cystic fibrosis | 277.0\* | E84.\* |  |  |
| History of pancreas resection surgery | V88.11 | Z90.410 |  |  |
| History of pancreas transplant | V42.83 | Z94.83 |  |  |
| Alcohol abuse | 265.2, 291.1 - 291.3, 291.5 - 291.9, 303.0, 303.9, 305.0, 357.5, 425.5, 535.3, 571.0 - 571.3, 980.x, V11.3 | F10, E52, G62.1, I42.6, K29.2, K70.0, K70.3, K70.9, T51.x, Z50.2, Z71.4, Z72.1 |  |  |
| *Etiology of acute pancreatitis (AP)* |  |  |  |  |
| Gallstone AP | 577.0 PLUS 574.\* | K85.1, K85.10, K85.11, K85.12 |  |  |
| Alcoholic AP | 577.0 PLUS 291.\*, 303.\*, 305.0\*, 760.71, 980.0, 357.5, 425.5, 535.30, 535.51, 571.0, 571.1, 571.2, 571.3 | K85.2, K85.20, K85.21, K85.22 |  |  |
| AP not otherwise characterized | 577.0 (and no codes for alcohol or gallstones) | K85.9\*, K85, K85.0\*, K85.3\*, K85.8\* |  |  |

Acute pancreatitis (AP); Cystic fibrosis transmembrane conductance regulator (CFTR)

**Supplementary Table 2a**: Observed rate ratio for time on CFTR modulator versus time not on CFTR modulator using various definitions for the washout period. This table includes all subjects with CF (n=10,417).

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| --- | --- | --- |
| Model  (washout period) | Pancreas Sufficient Cystic Fibrosis (PS-CF) | Pancreas Insufficient Cystic Fibrosis (PI-CF) |
| 10 days | 0.32 (0.10, 1.08), p=0.07 | 0.36 (0.15, 0.87), p=0.02 |
| 30 days | 0.32 (0.10, 1.09), p=0.07 | 0.37 (0.15, 0.88), p=0.02 |
| 90 days | 0.32 (0.10, 1.09), p=0.07 | 0.37 (0.15, 0.88), p=0.02 |

**Supplementary Table 2b:** Observed rate ratio for time on CFTR modulator versus time not on CFTR modulator using various definitions of the washout period. This table only incudes subjects with some CFTR modulator use during the study period (n=1,795).

|  |  |  |
| --- | --- | --- |
| Model  (washout period) | Pancreas Sufficient Cystic Fibrosis (PS-CF) | Pancreas Insufficient Cystic Fibrosis (PI-CF) |
| 10 days | 0.35 (0.12, 0.98), p=0.05 | 0.51 (0.17, 1.55), p=0.24 |
| 30 days | 0.35 (0.12, 0.99), p=0.05 | 0.51 (0.17, 1.56), p=0.24 |
| 90 days | 0.35 (0.12, 0.99), p=0.05 | 0.51 (0.17, 1.56), p=0.24 |