**Shap ranked Gallstone features:**

**Assessment of interesting NOT mean not interesting and not worse pursuing**

NOT ['Urate' 'Treatment/medication code | Array 0\_\_allopurinol'

NOT 'Home area population density - urban or rural\_Scotland - Large Urban Area'

{known) '(BMI) Body mass index (p21001)' 'Weight (p21002)'

NOT 'Non-cancer illness code, self-reported | Array 1\_\_gout'

NOT 'missing\_Z51.5 - Palliative care'

NOT 'Number of treatments/medications taken'

(known) 'Alcohol intake frequency.\_Daily or almost daily'

NOT 'Vascular/heart problems diagnosed by doctor\_None of the above' 'age'

NOT 'Water intake' 'Sex' 'Number of self-reported non-cancer illnesses'

NOT 'Treatment/medication code | Array 0\_\_none']

(allopurinol is a drug for gallstones)

**Shap ranked Oesophagus cancer features:**

**Assessment of interesting NOT mean not interesting and not worse pursuing**

NOT ['Mental health conditions ever diagnosed by a professional\_\_of'

NOT 'Mental health conditions ever diagnosed by a professional\_\_group'

NOT 'Mental health conditions ever diagnosed by a professional\_\_none of'

NOT 'Mental health conditions ever diagnosed by a professional\_\_of group'

NOT 'had\_disease\_past'

Maybe'missing\_Ulcer of esophagus'

NOT'Urea'

NOT'Coffee intake'

NOT 'Total bilirubin'

Interesting '3-Hydroxybutyrate' see paper : The genetically predicted causal associations between circulating 3-hydroxybutyrate levels and malignant neoplasms: A pan-cancer Mendelian randomization study

NOT 'Genetic ethnic grouping\_None'

Maybe 'Tea intake' '(non-UK origin) Country of Birth\_\_none' 'SHBG'

'Method of diagnosis when first had COVID-19\_None']