Processing Conjuncts with `--conj`

Conjunction processing was introduced in MetaMap16V2; previous MetaMap versions do not include this functionality.

MetaMap was originally developed to process articles in the biomedical literature, and by default chunks its input into phrases (noun phrases, prepositional phrases, etc.), each of which is analyzed separately. MetaMap by default will declare a new phrase when it encounters a conjunction; consequently the text

renal and pancreatic cancer

will be chunked into three phrases

[*renal*] [*and*] [*pancreatic cancer*]

and MetaMap will not identify any *renal cancer* concept (e.g., C0740457 and C1378703).

To overcome this limitation, use the `--conj` option, which will recombine smaller phrases separated by a conjunction. Because the recombined phrases are longer, MetaMap's processing will be slower, but recall should increase.

For example, our canonical conjunction text,

hereditary recurrent and metastatic ovarian or renal or pancreatic carcinoma

which is by default chunked into

[*hereditary recurrent*] [*and*] [*metastatic ovarian*] [*or*] [*renal*] [*or*] [*pancreatic carcinoma*]

will be analyzed as a single phrase, allowing MetaMap to map the text to the following concepts (inter alia), shown as Human-Readable Output with the MetaMap concept scores:

```
894    C2931038:Hereditary Pancreatic Carcinoma (Pancreatic carcinoma, familial) [neop]
892    C1333992:Hereditary Ovarian Carcinoma [neop]
892    C2608055:Hereditary Renal carcinoma (Hereditary Renal Cell Carcinoma) [neop]
883    C0854777:Recurrent Pancreatic Carcinoma (recurrent pancreatic cancer) [neop]
881    C0278679:recurrent Renal carcinoma (Renal cell carcinoma recurrent) [neop]
881    C0278689:Recurrent Ovarian Carcinoma (recurrent ovarian epithelial cancer) [neop]
861    C0278688:ovarian carcinoma, metastatic (Stage IV Ovarian Carcinoma) [neop]
861    C1167725:Metastatic Pancreatic Carcinoma (Stage IV Pancreatic Cancer) [neop]
858    C0919989:metastatic renal carcinoma [neop]
```