

```
* PRE-PROCESSING ;
DATA: studybase
idnr sex birthdate entry exit
  1  1  1980.0  2000.0  2008.0
```

```
proc sort data=cancer out=c;
  by idnr disease cancerdate ;
```

```
data c; set c; by idnr disease;
  if first.disease;
run;
```

```
DATA: c
idnr disease cancerdate
  1 1 2003.5
  1 2 2005.5
```

```
* STRATIFICATION AND AGGREGATION ;
%stratify(data=studybase out=b outcomes=c
  scale=1 granularity=0.001
  mode=m eventtype=disease noeventvalue=0
  eventtime=cancerdate subject=idnr;
  class sex;
  axis age o=birthdate c=0 20 23 26 29);
```

```
DATA: b
sex disease age events pyrs
  1 0 26 0 2.000
  1 0 23 0 3.000
  1 0 20 0 3.000
  1 1 26 0 2.000
  1 1 23 1 2.499
  1 2 26 0 2.000
  1 2 23 1 0.499
```

```
POST-PROCESSING ;
data b; set b;
  if disease ne 0 then do;
    pyrs=-pyrs; output;
  end;
  if disease=0 then do;
    do disease=1,2; output; end;
  end;
run;
```

```
DATA: b
sex disease age events pyrs
  1 1 26 0 2.000
  1 2 26 0 2.000
  1 1 23 0 3.000
  1 2 23 0 3.000
  1 1 20 0 3.000
  1 2 20 0 3.000
  1 1 26 0 -2.000
  1 1 23 1 -2.499
  1 2 26 0 -2.000
  1 2 23 1 -0.499
```

```
proc summary nway data=b;
  class disease sex age;
  var events pyrs;
  output out=multi
    (drop=_freq_ _type_ where=(pyrs>0)) sum= ;
run;
```

```
DATA: multi
disease sex age events pyrs
  1 1 20 0 3.000
  1 1 23 1 0.501
  2 1 20 0 3.000
  2 1 23 1 2.501
```