Update_Writeup

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```
## Warning in read_fun(path = path, sheet_i = sheet, limits = limits, shim =
## shim, : Expecting numeric in I1195 / R1195C9: got 'lOO'
```

```
## Warning: NAs introduced by coercion
```

Effective Dose

Summary Statistics

Using the fixed data for effective dosage of radiation administered to patients, we retrieve the plots shown in Figure 1. Here we can see the right-skew in the histogram suggesting several patients recieved much higher amounts of radiation than average. The mean effective dose given to a patient was 5.631 millisieverts, with a range of 0.1 to 48.8 millisieverts. Out of all 2382 patients, only 54 recieved a radiation dose above 20 millisieverts.

Table 1: Summary Statistics of Radiation and Contrast

	Min	1st Q	Median	Mean	3rd Q	Max
Effective Dose	0.10	3.06	4.30	5.631	6.36	48.83
Contrast	5.0	75.0	95.0	88.5	98.0	150.0

Figure 1a: Histogram of Effective Dose

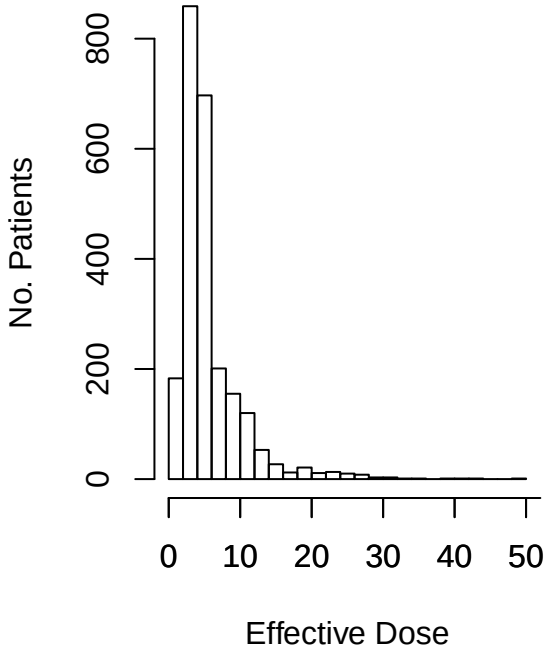
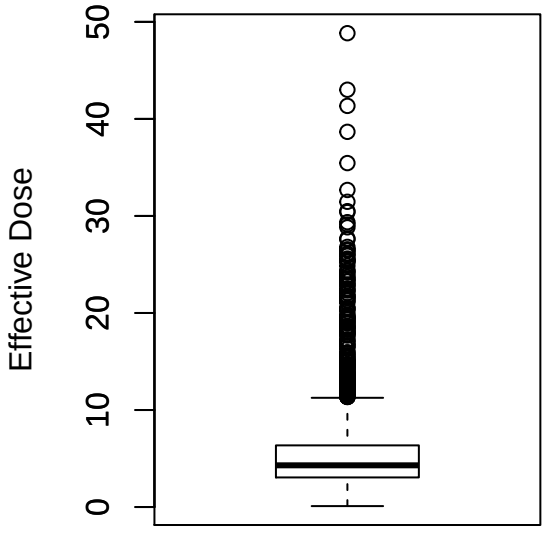


Figure 1b: Boxplot of Effective Dose

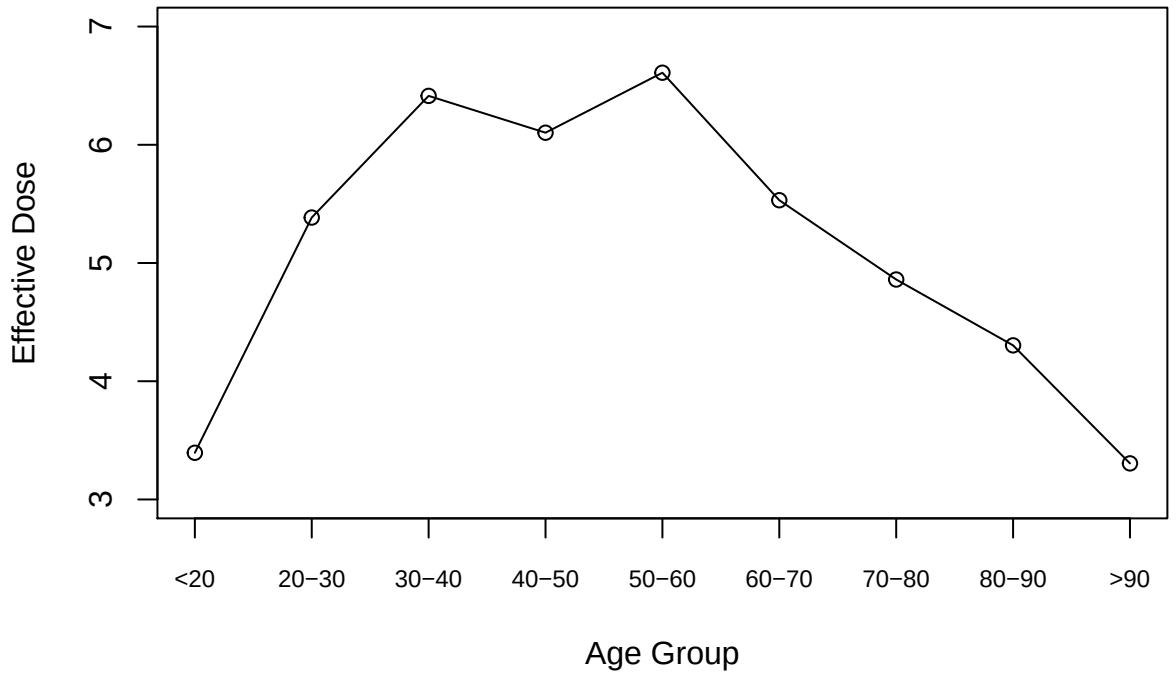


```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.098   3.055   4.298   5.631   6.356  48.832
```

We are also interested in the relationship between the effecive dose administered and both the age and BMI of the patient. For the case of age, patients were grouped into 10-year age groups. The number of patients that belong to group is given below. Figure 2 shows the average radiation administered for each of these age groups.

```
##   <20 20-30 30-40 40-50 50-60 60-70 70-80 80-90   >90
##    55   133   222   294   514   562   397   179    26
```

Figure 2: Mean Effective Dose by Age



Contrast Given