**Table 1. Characteristics of the 1,962 probands and 16,270 first-degree relatives.**

|  |  |
| --- | --- |
| Characteristic | N |
| Sex of proband |  |
| Male | 1,153 (59.1 %) |
| Female | 799 (40.9 %) |
| Age of onset, Median(IQR) | 61.7, 63 (55 - 70) |
| Less than 50 | 229 (11.7 %) |
| Over 50 | 1,723 (88.3 %) |
| Total number of FDRs | 16,270 |
| Parents | 3,904 |
| Siblings | 7,649 |
| Offsprings | 4,717 |
| FDRs with affected colorectal cancer | 216 |
| Parents | 77 |
| Siblings | 132 |
| Offsprings | 7 |

**Table 2. Estimates for probability of being affected in CRC and relative risks**

|  |  |  |  |
| --- | --- | --- | --- |
| Age | Sex | Pr(CRC) | RR |
| Under 50 | Female | 0.00037 | 1.00 |
| Male | 0.00049 | 1.31 |
| Over 50 | Female | 0.00325 | 8.77 |
| Male | 0.00409 | 11.05 |

**Table 2. Increased risk of colorectal cancer according to positive family history in first-degree relatives**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Factor | Number  of subjects | Covariate adjusted Hazard ratio | 95% Confidence Interval | P-value |
| Family history of CRC |  |  |  |  |
| No | 1,766 | 1.00 (ref) | - |  |
| Yes | 186 | 1.1998 | [1.0306 , 1.3968] | 0.0188 |
| No. of affected FDRs |  |  |  |  |
| 0 (no FH) | 1,766 | 1.00 (ref) |  |  |
| 1 FDR | 160 | 1.2540 | [1.0657 , 1.4756] | 0.0064 |
| ≥ 2 FDR | 26 | 0.9479 | [0.9133 , 1.0948] | 0.7865 |

**Table 3. Proportion of affected FDR according to onset of proband**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Age at onset | Number of  affected FDR | | | Proportion of  affected FDR | |
| 0 | 1 | ≥2 | Mean | SD |
| ≤ 50 | 257 | 33 | 3 | 0.0238 | 0.0709 |
| > 50 | 1,509 | 127 | 23 | 0.0126 | 0.0437 |

* P-value? CI?
* 이 나이별로 FDR그룹별로 HR이 달라지는지? 아니면 나이 무관하게 비슷한 경향성을 보였는지?

**Table 4.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Cutoffs | | Number of probands | | | Hazard ratio | 95% Confidence Interval | P-value |
| 1st | 2nd | low FH | moderate FH | high FH |
| 0.125 | 0.200 | 1,843 | 72 | 37 | 1.7128 | [1.3523 , 2.1694] | 1.29310-5 |
| 1.5436 | [1.1136 , 2.1398] |
| 0.125 | 0.225 | 1,843 | 86 | 23 | 1.6151 | [1.3002 , 2.0063] | 1.32510-5 |
| 1.8043 | [1.1939 , 2.7267] |
| 0.125 | 0.250 | 1,843 | 86 | 23 | 1.6151 | [1.3002 , 2.0063] | 1.32510-5 |
| 1.8043 | [1.1939 , 2.7267] |
| 0.125 | 0.275 | 1,843 | 97 | 12 | 1.6080 | [1.3101 , 1.9737] | 1.01310-5 |
| 2.1184 | [1.1989 , 3.7432] |
| **0.125** | **0.300** | **1,843** | **100** | **9** | **1.5949** | **[1.3031 , 1.9519]** | **5.16110-6** |
| **2.7498** | **[1.4246 , 5.3078]** |
| 0.125 | 0.325 | 1,843 | 100 | 9 | 1.5949 | [1.3031 , 1.9519] | 5.16110-6 |
| 2.7498 | [1.4246 , 5.3078] |

Reference group이 그럼 0.005-0.125 분율로 존재하는 그룹 (다시말해 적어도 1명의 FDR이 내재된 그룹), 말하자면 FDR(+)면 이미 위험도가 1.2배. 이것이 low FH group 의 CRC risk와 같다고 가정하면 mod FH는 1.2 \* 1.6 = 1.92배, high FH는 3.3배 위험이 높다고 이야기할 수 있는지? 다시 말해 FH(-)을 reference group으로 잡으면 위와 같은 cut-off로 만들어진 각 그룹은 각각의 위험도가 어떻게 되는지?

**Figure 1.**

**A screenshot of a cell phone

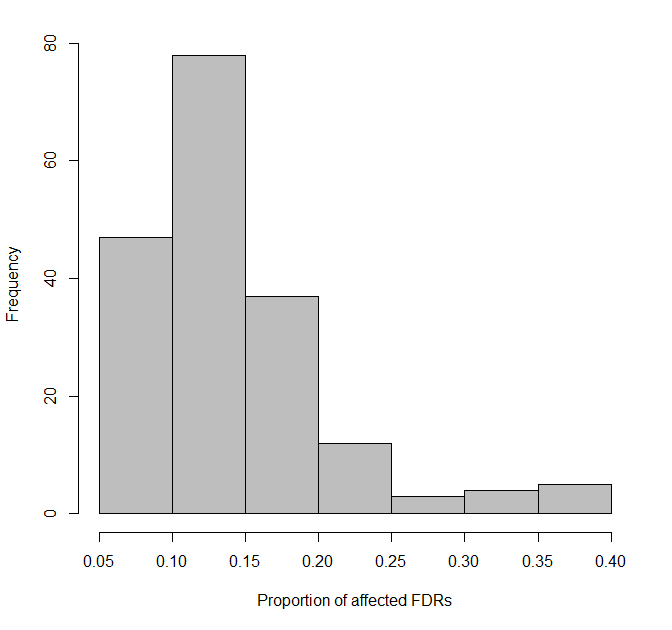
Description automatically generated**

**Figure 2.**

**A close up of a map

Description automatically generated**

**Figure 3. Histogram of proportion of affected FDRs excluding those with no family history.**

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