**Supplementary Table 1. The annual incidence rates of ESCC and 95%CIs for patients with different histologic diagnoses at baseline**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Surveillance year** | **Annual incidence rates of patients with different histologic diagnoses at baseline** | | | | | | | | | | | |
| **Normal** | | **Esophagitis** | | **BCH** | | **Mild Dysplasia** | | **Moderate Dysplasia** | | **SD/ CIS** | |
| **Rate (%)** | **95%CI** | **Rate (%)** | **95%CI** | **Rate (%)** | **95%CI** | **Rate (%)** | **95%CI** | **Rate (%)** | **95%CI** | **Rate (%)** | **95%CI** |
| >0, <1 | 0.06 | 0.03-0.12 | 0.16 | 0.07-0.40 | 0.23 | 0.09-0.62 | 0.21 | 0.09-0.50 | 1.45 | 0.72-2.90 | 3.13 | 1.01-9.69 |
| ≥1, <2 | 0.02 | 0.01-0.07 | 0.10 | 0.03-0.31 | 0.06 | 0.01-0.42 | 0.04 | 0.01-0.30 | - | - | 1.10 | 0.15-7.80 |
| ≥2, <3 | 0.03 | 0.01-0.08 | 0.03 | 0.00-0.24 | 0.12 | 0.03-0.47 | 0.04 | 0.01-0.30 | 0.37 | 0.09-1.48 | - | - |
| ≥3, <4 | 0.04 | 0.02-0.09 | 0.03 | 0.00-0.24 | 0.06 | 0.01-0.42 | 0.13 | 0.04-0.39 | 1.13 | 0.51-2.51 | 2.35 | 0.59-9.41 |
| ≥4, <5 | 0.02 | 0.01-0.07 | 0.10 | 0.03-0.31 | 0.12 | 0.03-0.48 | 0.29 | 0.14-0.62 | 0.57 | 0.19-1.78 | 3.61 | 1.17-11.21 |
| ≥5, <6 | 0.03 | 0.01-0.08 | 0.10 | 0.03-0.31 | 0.24 | 0.09-0.64 | 0.30 | 0.14-0.62 | 0.58 | 0.19-1.80 | 2.56 | 0.64-10.25 |
| ≥6, <7 | 0.02 | 0.01-0.07 | - | - | - | - | 0.13 | 0.04-0.40 | 0.39 | 0.10-1.56 | - | - |
| ≥7, <8 | 0.01 | 0.00-0.08 | 0.04 | 0.01-0.32 | 0.07 | 0.01-0.51 | 0.22 | 0.08-0.59 | 0.23 | 0.03-1.65 | 3.08 | 0.77-12.3 |
| ≥8, <9 | 0.03 | 0.01-0.13 | 0.05 | 0.01-0.39 | 0.10 | 0.01-0.70 | 0.08 | 0.01-0.54 | - | - | 2.56 | 0.36-18.2 |
| ≥9, <10 | 0.05 | 0.01-0.21 | - | - | - | - | 0.28 | 0.07-1.13 | - | - | 3.57 | 0.50-25.35 |

Abbreviations: BCH, basal cell hyperplasia; mD, mild dysplasia; MD, moderate dysplasia; SD, severe dysplasia; CIS, carcinoma-in-situ.

**Supplementary Table 2. Progression rates of patients with baseline diagnoses of MD or SD/CIS, by treatment status**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Dysplasia grade at baseline** | **Treatment status** | **Case Number at baseline** | **ESCC cases** | **Number of ESCC cases** | **Prevalence or Progression rate (%)** | **P value** |
| Moderate dysplasia | Received treatment | 172 | Prevalent cases found at treatment | 20/172 | 11.6 |  |
| Incident cases during surveillance | 7/152 | 4.6 | 0.9 |
| No treatment | 555 | Incident cases during surveillance | 25/555 | 4.5 |
| Severe dysplasia or CIS | Received treatment | 235 | Prevalent cases found at treatment | 19/235 | 8.1 |  |
| Incident cases during surveillance | 20/216 | 9.3 | 0.1 |
| No treatment | 97 | Incident cases during surveillance | 15/97 | 15.5 |

**Supplementary Table 3. Cumulative risk of esophageal squamous cell carcinoma incidence, by worst baseline histologic diagnosis, in the present study and the previous study1**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Baseline Diagnosis** | **Present study** | | | | | **Previous study1** | | | | |
| No of subjects | No of ESCC cases | Cumulative incidence (%) | Incidence per person-year of follow-up (%) | Hazard ratio (95% CI) 2 | No of subjects3 | No of ESCC cases | Cumulative incidence (%) | Incidence per person-year of follow-up (%) | Relative risk (95% CI)4 |
| **Normal** | 13285 | 35 | 0.3 | 0.02 | 1 | 375 | 31 | 8.3 | 0.72 | 1 |
| **Esophagitis** | 3038 | 18 | 0.6 | 0.05 | **1.96 (1.11-3.47)** | 33 | 2 | 6.1 | 0.55 | 0.8 (0.2-3.2) |
| **BCH** | 1714 | 16 | 0.9 | 0.08 | **3.06 (1.69-5.54)** | 40 | 6 | 15.0 | 0.95 | 1.9 (0.8-4.5) |
| **mD** | 2422 | 34 | 1.4 | 0.12 | **4.55 (2.82-7.34)** | 76 | 18 | 23.7 | 2.42 | **2.9 (1.6-5.2)** |
| **MD5** | 555 | 25 | 4.5 | 0.39 | **15.18 (8.98-25.66)** | 30 | 15 | 50.0 | 6.80 | **9.8 (5.3-18.3)** |
| **SD/ CIS5** | 97 | 15 | 15.5 | 1.45 | **55.78 (29.78-104.49)** | 39 | 29 | 74.4 | SD: 16.63  CIS: 25.35 | **SD: 28.3 (15.3-52.3)**  **CIS:34.4 (16.6-71.4)** |
| **Total** | 21111 | 143 | 0.7 | 0.06 |  | 593 | 101 | 17.0 | 1.60 |  |

Abbreviations: BCH, basal cell hyperplasia; mD, mild dysplasia; MD, moderate dysplasia; SD, severe dysplasia; CIS, carcinoma-in-situ. Numbers in bold mean that the P value was less than 0.05.

1. Ref: Wang GQ, Abnet CC, Shen Q, et al. Histological precursors of oesophageal squamous cell carcinoma: results from a 13-year prospective follow up study in a high risk population. Gut 2005;54:187-92.
2. HRs come from Cox models adjusted for age, gender, educational level, smoking, alcohol drinking, BMI, history of digestive system diseases, and family history of cancer.
3. 77 subjects with a baseline diagnosis of Acanthosis and 12 subjects with a baseline diagnosis of Dysplasia Not Otherwise Specified (NOS) were excluded from this Supplementary Table because these diagnoses were not used in the current study.
4. RRs come from Cox models adjusted for age, gender, tobacco use, alcohol use, 1983 cytology diagnosis, and Linxian Dysplasia Trial treatment group.
5. In present study, cases with MD or SD/CIS were excluded if they received treatment at baseline.