Pre-diagnostic Circulating Levels of Sex Hormones and Survival in Esophageal Adenocarcinoma

Shao-Hua Xie, Eivind Ness-Jensen, Hilde Langseth, Randi E. Gislefoss, Fredrik Mattsson, Jesper Lagergren

Supplementary Table 1. Distributions of circulating levels of sex hormone measures by surgical treatment

Supplementary Table 2. Pair-wise Spearman's correlation coefficients between circulating levels of sex hormone measures
**Supplementary Table 1.** Distributions of circulating levels of sex hormone measures by surgical treatment

| Hormone                                      | Surgical treatment | Mean   | Standard deviation | Median | Lower quartile | Upper quartile | Minimum | Maximum |
|----------------------------------------------|--------------------|--------|--------------------|--------|----------------|----------------|---------|---------|
| Sex hormone-binding globulin, nmol/L         | No                 | 39.8   | 14.5               | 37.0   | 28.0           | 49.5           | 14.0    | 84.0    |
|                                              | Yes                | 43.3   | 17.6               | 40.0   | 31.0           | 54.0           | 12.0    | 89.0    |
| Dehydroepiandrosterone sulfate, µmol/L       | No                 | 7.0    | 3.4                | 7.1    | 4.6            | 8.6            | 0.3     | 21.2    |
|                                              | Yes                | 7.1    | 3.5                | 6.7    | 4.4            | 9.4            | 1.7     | 20.1    |
| Follicle-stimulating hormone, IU/L           | No                 | 5.1    | 4.0                | 3.9    | 2.9            | 5.7            | 0.7     | 32.2    |
|                                              | Yes                | 4.2    | 2.2                | 3.9    | 2.7            | 4.9            | 0.7     | 13.5    |
| Luteinizing hormone, IU/L                    | No                 | 5.1    | 2.8                | 4.7    | 3.5            | 6.1            | 1.5     | 25.6    |
|                                              | Yes                | 4.7    | 1.8                | 4.6    | 3.2            | 6.1            | 1.5     | 10.2    |
| Prolactin, mIU/L                             | No                 | 150.7  | 91.4               | 140.5  | 80.5           | 187.5          | 28.0    | 627.0   |
|                                              | Yes                | 194.9  | 302.6              | 143.0  | 105.0          | 201.0          | 24.0    | 2690.0  |
| Testosterone, nmol/L                         | No                 | 16.2   | 6.0                | 15.3   | 11.8           | 19.6           | 1.9     | 38.7    |
|                                              | Yes                | 16.6   | 8.2                | 15.3   | 11.1           | 19.8           | 1.7     | 47.7    |
| 17-OH-progesterone, nmol/L                   | No                 | 2.1    | 1                  | 1.9    | 1.4            | 2.5            | 0.3     | 5.8     |
|                                              | Yes                | 2.1    | 1.4                | 1.8    | 1.2            | 2.4            | 0.1     | 8.9     |
| Progesterone, nmol/L                         | No                 | 1.4    | 0.5                | 1.1    | 1.1            | 1.7            | 1.1     | 3.6     |
|                                              | Yes                | 1.3    | 0.4                | 1.1    | 1.1            | 1.6            | 1.1     | 2.7     |
| Estradiol, nmol/L                            | No                 | 0.08   | 0.03               | 0.08   | 0.06           | 0.09           | 0.04    | 0.15    |
|                                              | Yes                | 0.07   | 0.02               | 0.07   | 0.06           | 0.09           | 0.04    | 0.13    |
| Androstenedione, nmol/L                      | No                 | 5.1    | 5.3                | 3.2    | 1.9            | 4.9            | 1.9     | 28.1    |
|                                              | Yes                | 5.5    | 6.5                | 3.1    | 1.9            | 5.8            | 1.9     | 33.7    |
| Testosterone:estradiol ratio                 | No                 | 226.0  | 93.8               | 218.6  | 168.7          | 268.8          | 44.8    | 669.4   |
|                                              | Yes                | 236.8  | 107.3              | 219.2  | 152.5          | 282.9          | 24.3    | 581.7   |
| Free testosterone index                      | No                 | 4.3    | 1.4                | 4.2    | 3.4            | 5.3            | 0.4     | 8.9     |
|                                              | Yes                | 4.0    | 1.4                | 3.9    | 3.0            | 4.7            | 0.4     | 8.9     |
### Supplementary Table 2. Pair-wise Spearman's correlation coefficients between circulating levels of sex hormone measures

| Hormone | DHEAS  | FSH    | LH     | Prolactin | Testosterone | 17-OHP  | Progesterone | Estradiol | AE       | T:E2 ratio | FTI       |
|---------|--------|--------|--------|-----------|-------------|---------|--------------|-----------|----------|------------|-----------|
| SHBG    | 0.013  | 0.114  | 0.271**| 0.136*    | 0.613**     | 0.207** | 0.057        | 0.212**   | 0.118    | 0.432**    | -0.402**  |
| DHEAS   | -0.120 | -0.06  | 0.014  | 0.056     | -0.085      | 0.451** | 0.076        | 0.135     | -0.003   | 0.080      |           |
| FSH     | 0.493**| 0.015  | 0.113  | -0.052    | -0.062      | 0.147*  | 0.107        | 0.026     | 0.016    |            |           |
| LH      | 0.102  | 0.240**| 0.082  | 0.086     | 0.321**     | 0.192** | -0.018       | -0.008    |           |            |           |
| Prolactin | -0.017 | -0.065 | -0.106 | -0.004    | -0.104      | -0.059  | -0.164*      |           |           |            |           |
| Testosterone | 0.486**| 0.067  | 0.395**| 0.226**   | 0.623**     | 0.419** |              |           |           |            |           |
| 17-OHP  |        | 0.105  | 0.119  | 0.250**   | 0.342**     | 0.356** |              |           |           |            |           |
| Progesterone |        | 0.146  | 0.095  | -0.027    | -0.005      |        |              |           |           |            |           |
| Estradiol |        | 0.130  | -0.399**| 0.220**   |            |        |              |           |           |            |           |
| AE      |        |        |        | 0.120     | 0.142*      |        |              |           |           |            |           |
| T:E2 ratio |        |        |        |           | 0.207**     |        |              |           |           |            |           |

* P<0.05; ** P<0.01

AE: androstenedione; DHEAS: dehydroepiandrosterone sulfate; FSH: follicle stimulating hormone; FTI: free testosterone index; LH: luteinizing hormone; 17-OHP: 17-OH-progesterone; SHBG: sex hormone-binding globulin; T:E2 ratio: testosterone/estradiol ratio