FIVE-YEAR SURVIVAL OF UPPER THIRD OESOPHAGEAL CANCER PATIENTS WAS SIGNIFICANTLY SUPERIOR IN COMPARISON WITH MIDDLE AND LOWER THIRD OESOPHAGEAL CANCER PATIENTS AFTER RADICAL SURGERY AND STRONGLY DEPENDED ON PHASE TRANSITION EARLY-INVASIVE CANCER, LYMPH NODE METASTASES, CELL RATIO FACTORS AND ADJUVANT CHEMOIMMUNORADIOOTHERAPY

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Objectives: This study aimed to determine the localisation influence of tumours for 5-year survival (SYS) of oesophageal (EC) cancer patients (ECP) after complete en bloc (R0) oesophago-gastrectomies (EG) through left/right thoraco-abdominal incision.

Methods: We analysed data of 428 consecutive patients (age 55.7 ± 8.8 years; tumour size 6.6 ± 3.3 cm) radically operated and monitored in 1975–2014 (male = 320, female = 108; EG Garlock = 273, EG Lewis = 155, combined EG with resection of pancreas, liver, diaphragm, colon transversum, lung, trachea, pericardium, splenectomy = 133; adenocarcinoma = 230, squamous = 188, mix = 10; T1 = 66, T2 = 103, T3 = 148, T4 = 111; N0 = 184, N1 = 58, N2 = 186, G1 = 118, G2 = 105, G3 = 205; early cancer = 47, invasive cancer = 381; upper third = 59, middle and lower third = 369, only surgery = 341, adjuvant chemoimmunoradiotherapy-AT = 87: 5-FU + thymalin/taktivin + radiotherapy 45-50 Gy). Multivariate Cox modelling, clustering, SFPATH, Monte Carlo, bootstrap and neural networks computing were used to determine any significant dependence.

Results: Overall life span (LS) was 1675.2 ± 2157.1 days and cumulative SYS reached 41.8% (10 years, 35%; 20 years, 25.1%). One hundred and twelve patients lived more than 5 years without progression. Two hundred and sixteen patients died because of generalisation. SYS of upper-third ECP (55.7%) was significantly superior in comparison with middle and lower third ECP (38.7%) after surgery (P = 0.00175 by log-rank test). Cox modelling displayed that SYS significantly depended on phase transition (PT) early-invasive cancer in terms of synergetics, PT N0–N12, tumour localisation, T1–4, G1–3, histology, blood cell subpopulations, age, etc. (P = 0.000–0.039). Neural networks, genetic algorithm selection and bootstrap simulation revealed relationships between SYS and PT early-invasive cancer (rank = 1), localization (2), healthy cells/cancer cells (CC) (3), lymphocytes/CC (4), PT N0–N12 (5), thrombocytes/CC (6), leucocytes/CC (7), erythrocytes/CC (8), AT (9). Correct prediction of SYS was 100% by neural networks computing.

Conclusion: SYS of upper-third ECP was significantly superior in comparison with middle and lower third ECP after radical procedures and strongly depended on PT early-invasive cancer, lymph node metastases, cell ratio factors and AT.