Supplementary Materials: Table S1: Univariate logistic regression with selected variables for wound healing complications, Table S2: Multivariate logistic regression for wound healing perioperative complications after parotidectomy, Table S3: Univariate logistic regression with selected variables for perioperative occurrence of seroma, Table S4: Multivariate logistic regression for occurrence of seromas, Table S5: Univariate logistic regression with selected variables for Clavien-Dindo grade > 1 complications, Table S6: Multivariate logistic regression for Clavien-Dindo grade > 1 complications.

Figure S1: Length of hospital stay. Patients with no complication (surgical procedures: n = 100), Figure S2: Length of hospital stay. Patients with complications (surgical procedures: n = 336), Figure S3: Length of hospital stay with no facial paralysis, Figure S4: Length of hospital stay with facial paralysis , Figure S5: Length of hospital stay with no wound healing complication, Figure S6: Length of stay in patients with wound healing complications, Figure S7: Length of hospital stay with no seroma/sialocele, Figure S8: Length of hospital stay with seroma/sialocele.

| **Variable** | **Odds ratio (95% CI)** | **p-value** |
| --- | --- | --- |
| **Age at surgery:** as a continuous variable | 1.001 (0.990-1.012) | 0.859 |
| **Gender**: F/M | 0.671 (0.447-1.006) | 0.054 |
| **ASA score:** ASA 2 vs 1 | 1.075 (0.651-1.777) | 0.776 |
| **ASA score:** ASA 3 vs 1 | 1.182 (0.550-2.542) | 0.668 |
| **BMI (kg/m²):** as a continuous variable | 1.037 (0.998-1.079) | 0.065 |
| **Active smoking:** y/n | 1.224 (0.804-1.862) | 0.347 |
| **Previous head & neck RT:** y/n | 1.036 (0.307-3.501) | 0.954 |
| **Previous parotid surgery:** y/n | 0.504 (0.165-1.535) | 0.228 |
| **Group 2** (Parotidectomy + ND**) vs Group 1** (Parotidectomy alone) | 0.562 (0.221-1.430) | 0.226 |
| **Group 3** (Parotidectomy + other T res.) **vs Group 1** | 0.655 (0.286-1.504) | 0.318 |
| **Group 4** (Parotidectomy + ND + other T res.) **vs Group 1** | 1.138 (0.524-2.471) | 0.744 |
| **Type** 2 (complete superficial) **vs**  **Type 1** (partial superficial) | 1.107 (0.655-1.872) | 0.705 |
| **Type 3** (subtotal/total**) vs Type 1** | 0.807 (0.434-1.499) | 0.498 |
| **Drainage :** Active suction vs n | 1.301 (0.798-2.123) | 0.292 |
| **SMAS flap :** y/n | 1.168 (0.469-2.906) | 0.738 |
| **Surgery duration:**  as a continuous variable | 0.997 (0.992-1.001) | 0.142 |
| **Class 2** (Primary malignant parotid T) vs Class 1 (Benign parotid T) | 1.226 (0.676-2.223) | 0.503 |
| **Class 3** (Non-parotid primary T) vs Class 1 | 0.829 (0.501-1.373) | 0.466 |

Table S1: Univariate logistic regression with selected variables for wound healing complications after parotidectomy (surgical procedures: n = 436). Variables with a p-value < 0.2 selected for multivariate logistic analysis are in colored lines. Abbreviations: y: yes, n: no, ASA: American Society of Anesthesiologists, BMI: Body Mass Index, RT: radiotherapy, T: tumor, res.: resection, ND: neck dissection, SMAS: Superficial Musculoaponeurotic System

| **MULTIVARIATE LOGISTIC REGRESSION TABLE** | | |
| --- | --- | --- |
| **Factor** | **Odds ratio (95% CI)** | **p-value** |
| **BMI (kg/m²) :** as a continuous variable | 1.050 (1.001-1.101) | 0.048 |

Table S2: Multivariate logistic regression for wound healing perioperative complications after parotidectomy (surgical procedures: n=436). Abbreviation: BMI= Body Mass Index

| **Variable** | **Odds ratio (95% CI)** | **p-value** |
| --- | --- | --- |
| **Age at surgery:** as a continuous variable | 0.999 (0.986-1.012) | 0.880 |
| **Gender**: F/M | 0.747 (0.460-1.213) | 0.238 |
| **ASA score:** ASA 2 vs 1 | 0.900 (0.502-1.613) | 0.723 |
| **ASA score:** ASA 3 vs 1 | 1.031 (0.423-2.513) | 0.947 |
| **BMI (kg/m²):** as a continuous variable | 1.027 (0.981-1.075) | 0.263 |
| **Active smoking:** y/n | 0.799 (0.475-1.342) | 0.396 |
| **Previous head & neck RT:** y/n | 0.847 (0.182-3.940) | 0.832 |
| **Previous parotid surgery:** y/n | 0.460 (0.105-2.021) | 0.303 |
| **Group 2** (Parotidectomy + ND)vs. **Group 1** (Parotidectomy alone) | 0.495 (0.145-1.690) | 0.261 |
| **Group 3** (Parotidectomy + other T res.) vs**. Group 1** | 0.565 (0.192-1.665) | 0.301 |
| **Group 4** (Parotidectomy + ND + other T res.) vs. **Group 1** | 0.989 (0.389-2.513) | 0.982 |
| **Type 2** (complete superficial)vs. **Type 1** (partial superficial) | 0.899 (0.486-1.663) | 0.734 |
| **Type 3** (subtotal/total) **Type 1** | 0.743 (0.357-1.546) | 0.427 |
| **Drainage :** Active Suction vs. n | 1.857 (0.978-3.527) | 0.059 |
| **SMAS flap:** y/n | 1.673 (0.483-5.794) | 0.417 |
| **Surgery duration:**  as a continuous variable | 0.995 (0.990-1.001) | 0.095 |
| **Class 2** (Primary malignant parotid T) vs**. Class 1** (Benign parotid T) | 1.554 (0.789-3.060) | 0.202 |
| **Class 3** (Non-parotid primary T) vs. **Class 1** | 1.135 (0.631-2.042) | 0.672 |

Table S3: Univariate logistic regression with selected variables for perioperative occurrence of seroma (surgical procedures: n = 436). Variables with a p-value < 0.2 selected for multivariate logistic analysis are in colored lines. Abbreviations: y: yes, n: no, ASA: American Society of Anesthesiologists, BMI: Body Mass Index, RT: radiotherapy, T: tumor, res.: resection, ND: neck dissection, SMAS: Superficial Musculoaponeurotic System

| **MULTIVARIATE LOGISTIC REGRESSION TABLE** | | |
| --- | --- | --- |
| **Factor** | **Odds ratio (95% CI)** | **p-value** |
| **Drainage :**  Active suction y/n | 3.797 (1.117-12.901) | 0.033 |

Table S4: Multivariate logistic regression for occurrence of seromas (surgical procedures: n=436)

|  |  |  |
| --- | --- | --- |
| **Age at surgery:** as a continuous variable | 0.981 (0.968-0.994) | 0.004 |
| **Gender**: F/M | 1.087 (0.669-1.765) | 0.736 |
| **ASA score:** ASA 2 vs 1 | 1.234 (0.672-2.265) | 0.497 |
| **ASA score:** ASA 3 vs 1 | 0.705 (0.250-1.985) | 0.508 |
| **BMI (kg/m²):** as a continuous variable | 1.019 (0.972-1.067) | 0.436 |
| **Active smoking:** y/n | 1.666 (1.001-2.772) | 0.050 |
| **Previous head & neck RT:** y/n | 0.289 (0.036-2.310) | 0.242 |
| **Previous parotid surgery:** y/n | 0.602 (0.168-2.164) | 0.437 |
| **Group 2** (Parotidectomy + ND)vs **Group 1** (Parotidectomy alone) | 0.816 (0.312-2.134) | 0.678 |
| **Group 3** (Parotidectomy + other T res**.**) vs. **Group 1** | 0.367 (0.106-1.272) | 0.114 |
| **Group 4** (Parotidectomy + ND + other T res.) vs. **Group 1** | 0.765 (0.271-2.162) | 0.613 |
| **Type 2** (complete superficial)vs. **Type 1** (partial superficial) | 1.075 (0.504-2.289) | 0.852 |
| **Type 3** (subtotal/total)vs**. Type 1** (partial superficial) | 2.963 (1.362-6.444) | 0.006 |
| **Drainage :** Active Suction vs. n | 0.786 (0.448-1.381) | 0.402 |
| **Neuromonitoring:** y/n | 1.130 (0.605-2.113) | 0.701 |
| **SMAS flap :** y/n | 1.228 (0.386-3.904) | 0.728 |
| **Surgery duration:** as a continuous variable | 0.999 (0.994-1.005) | 0.806 |
| **Class 2** (Primary malignant parotid T) vs**. Class 1** (Benign parotid T | 0.770 (0.425-1.395) | 0.388 |
| **Class 3** (Non-parotid primary T) vs**. Class 1** | 0.284 (0.096-0.834) | 0.284 (0.096-0.834) |

Table S5: Univariate logistic regression with selected variables for Clavien-Dindo grade > 1 complications (surgical procedures: n = 436). Variables with a p-value < 0.2 selected for multivariatlogistic analysis are in colored lines. Abbreviations: y: yes, n: no, ASA: American Society of Anesthesiologists, BMI: Body Mass Index, RT: radiotherapy, T: tumor, res.: resection, ND: neck dissection, SMAS: Superficial Musculoaponeurotic System

| **MULTIVARIATE LOGISTIC REGRESSION TABLE** | | |
| --- | --- | --- |
| **Factor** | **Odds ratio (95% CI)** | **p-value** |
| **Age et surgery:** as a continuous variable | 0.981 (0.968-0.994) | 0.006 |
| **Extent of parotidectomy :**  Type 3 vs. Type 1 | 2.866 (1.307-6.283) | 0.009 |

Table S6: Multivariate logistic regression for Clavien-Dindo grade > 1 complications (surgical procedures: n =436)

Figure S1: Length of hospital stay. Patients with no complication (surgical procedures: n = 100)

Figure S2: Length of hospital stay. Patients with complications (surgical procedures: n = 336)

Figure S3: Length of hospital stay with no facial paralysis (surgical procedures: n = 164)

Figure S4: Length of hospital stay with facial paralysis (surgical procedures: n = 264)

Figure S5: Length of hospital stay with no wound healing complication (surgical procedures: n = 294)

Figure S6: Length of hospital stay with wound healing complications (surgical procedures: n = 142)

Figure S7: Length of hospital stay with no seroma/sialocele (surgical procedures: n = 353)

Figure S8: Length of hospital stay in patients with seromas/sialoceles (surgical procedures: n = 83)