**Supplementary Material**

**Supplementary Table 1. ICD-10 morphology codes for NSCLC.**

| **Morphology code (ICD-O/3)** | **Type of NSCLC** |
| --- | --- |
|  | **Adenocarcinoma (non-squamous NSCLC)** |
| 81403 | Adenocarcinoma UNS |
| 81443 | Enteric adenocarcinoma |
| 82303 | Solid adenocarcinoma with mucin production |
| 82443 | Mixed adenoneuroendocrine carcinoma |
| 82500 | Atypical adenomatous hyperplasia |
| 82502 | Adenocarcinoma in situ, non-mucinous |
| 82503 | Adenocarcinoma, BAC, bronchiolar carcinoma (incl pathologic in situ-variant) |
| 82523 | Bronchio-alveolar carcinoma |
| 82532 | Adenocarcinoma in situ, mucinous |
| 82533 | Adenocarcinoma, mucinous BAC |
| 82543 | Bronchio-alveolar carcinoma, mixed mucinous and non-mucinous |
| 82553 | Adenocarcinoma, mixed with other types of carcinoma incl. squamous cell and small cell carcinoma |
| 82563 | Minimally invasive adenocarcinoma, non-mucinous |
| 82573 | Minimally invasive adenocarcinoma, mucinous |
| 82603 | Papillary adenocarcinoma, NOS |
| 82653 | Micropapillary adenocarcinoma |
| 83103 | Clear cell adenocarcinoma |
| 83333 | Foetal adenocarcinoma |
| 84703 | Mucinous cystadenocarcinoma |
| 84803 | Mucinous adenocarcinoma |
| 84903 | Signet ring cell carcinoma |
| 85503 | Acinar cell carcinoma |
| 85513 | Acinar adenocarcinoma |
|  | **Squamous-cell carcinoma** |
| 80523 | Papillary squamous cell carcinoma |
| 80702 | Squamous cell carcinoma in situ |
| 80703 | Squamous cell carcinoma |
| 80713 | Keratinizing squamous cell carcinoma |
| 80723 | Non-keratinizing squamous cell carcinoma |
| 80733 | Squamous cell carcinoma, small cell non-keratinizing |
| 80833 | Basaloid squamous cell carcinoma |
| 80843 | Squamous cell carcinoma, clear cell type |
|  | **NSCLC NOS** |
| 80103 | Carcinoma, NOS |
| 80203 | Carcinoma, undifferentiated NOS |
| 80213 | Carcinoma, anaplastic NOS |
| 80463 | Carcinoma, non-small cell unspecified |
|  | **Large cell carcinoma (non-squamous NSCLC)** |
| 80123 | Large-cell carcinoma, unspecified |
|  | **Neuroendocrine NSCLC carcinoma (other specified NSCLC carcinoma)** |
| 80133 | Large cell neuroendocrine carcinoma |
| 82463 | Neuroendocrine carcinoma, NOS |
|  | **Other miscellaneous NSCLC (other specified NSCLC carcinoma)** |
| 80143 | Large cell carcinoma with rhabdoid phenotype |
| 80223 | Sarcomatoid carcinoma, pleomorphic |
| 80233 | NUT carcinoma |
| 80303 | Spindle cell and giant cell carcinoma |
| 80313 | Giant cell carcinoma |
| 80323 | Spindle cell carcinoma, NOS |
| 80333 | Pseudosarcomatous carcinoma |
| 81233 | Basaloid carcinoma |
| 82003 | Adenocystic carcinoma |
| 84303 | Mucoepidermoid carcinoma |
| 85603 | Adenosquamous carcinoma |
| 85623 | Epithelial-myoepithelial carcinoma |
| 89723 | Blastoma, pulmonary (pneumoblastoma) |
| 89803 | Carcinosarcoma, NOS |
| 89823 | Myoepithelial carcinoma |

ICD-10: International Classification of Diseases for Oncology, 10th Revision; BAC: Bronchiolo-alveolar; NOS: Not otherwise specified; NSCLC: Non-small cell lung cancer; UNS: Unspecified.

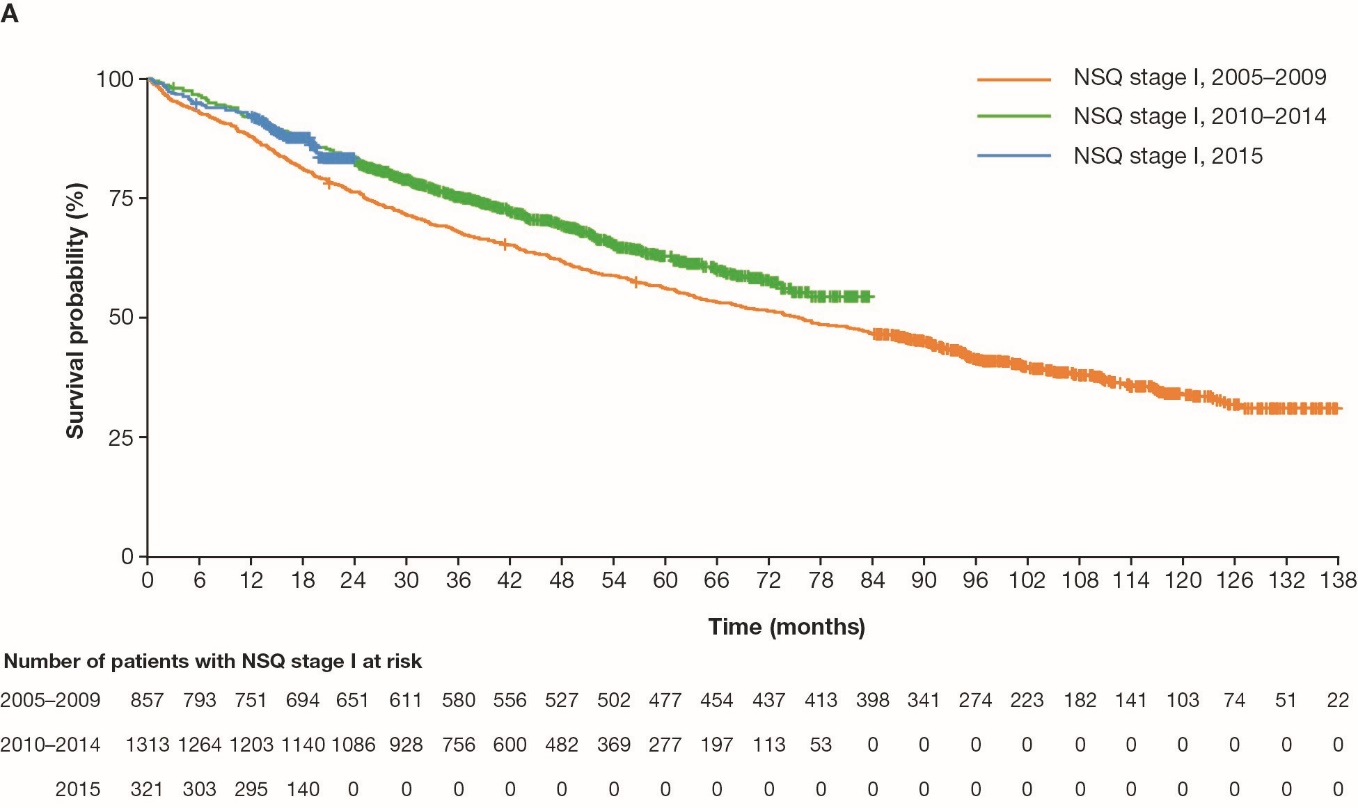
**Supplementary Table 2. Initial treatment categories and definitions.**

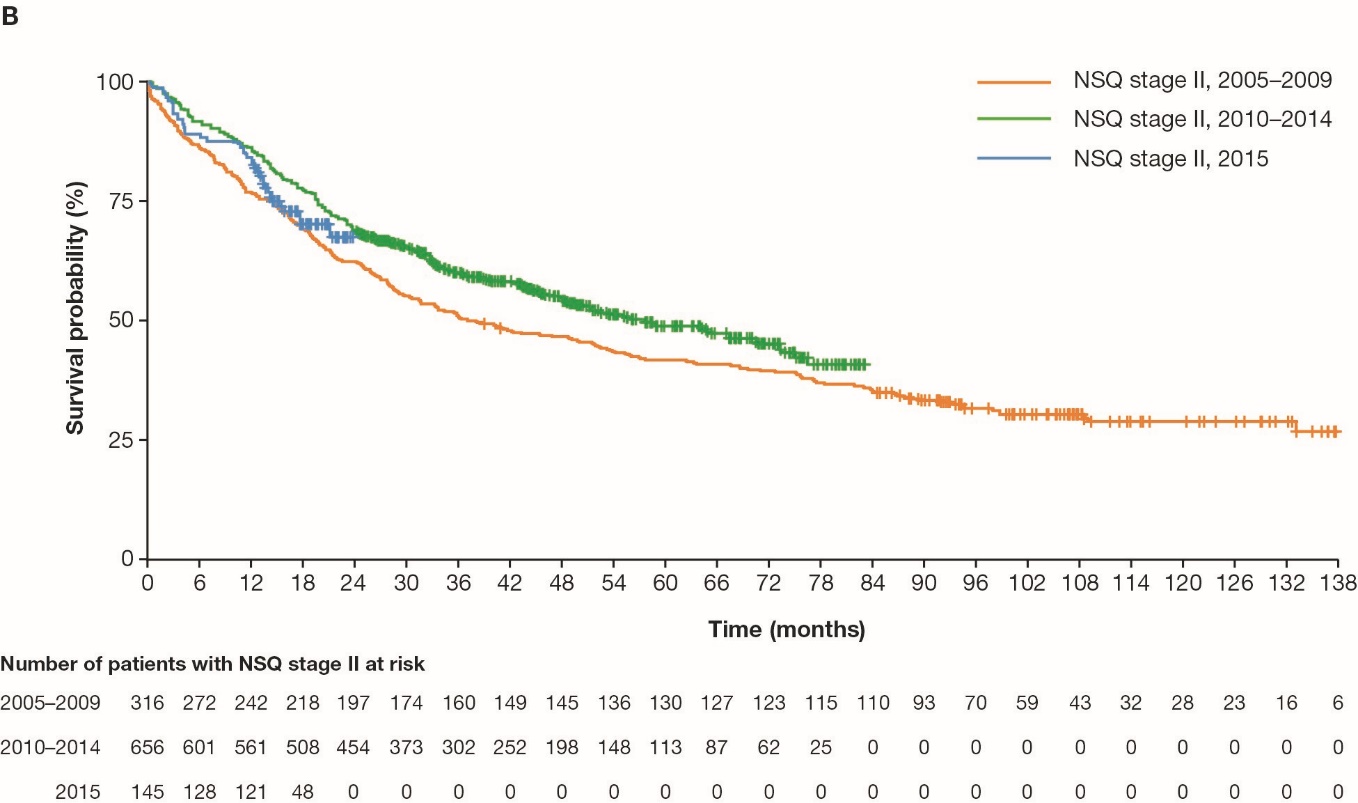
Initial treatment was defined as the first treatment received within 6 months of diagnosis, associated with any other treatment received within a certain time period following first treatment as defined in the table below.

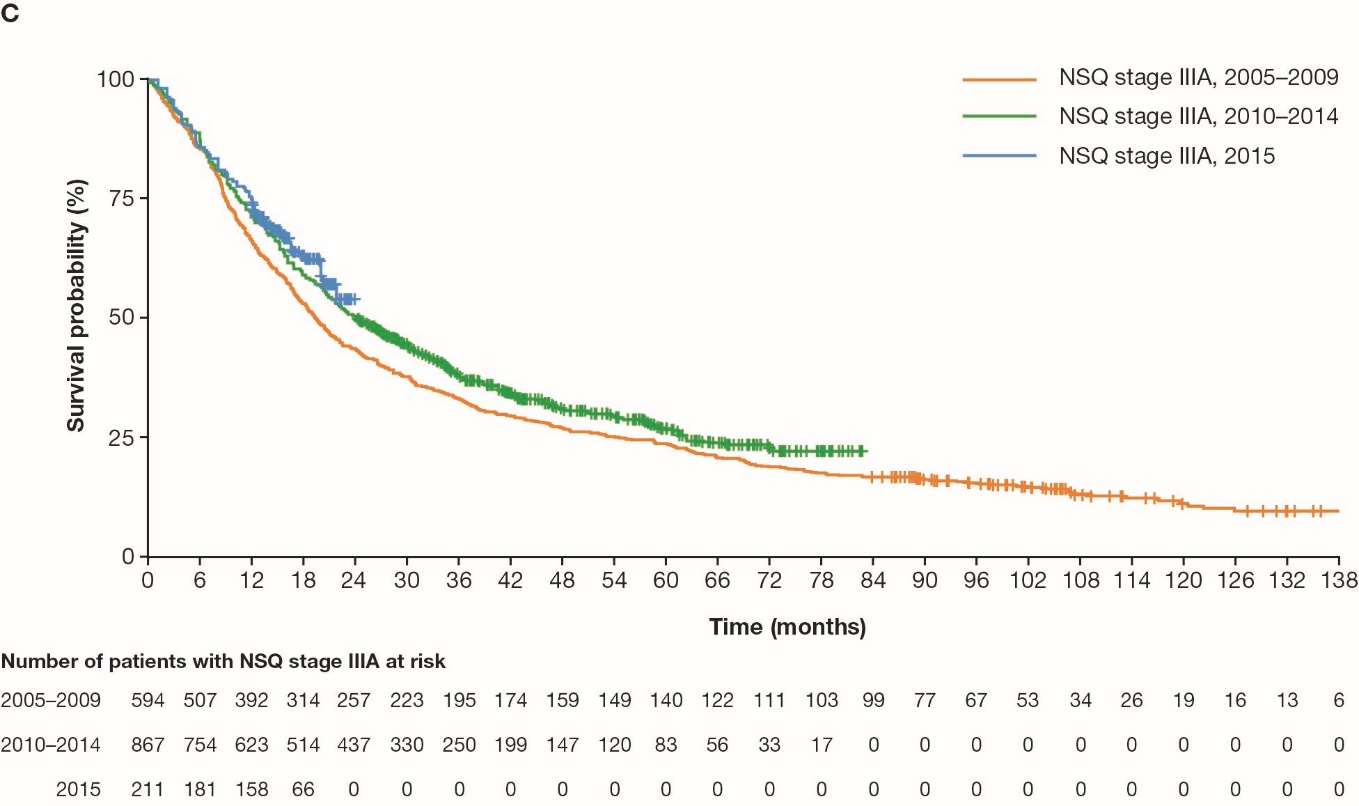
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| --- | --- |
| **Initial treatment category** | **Definitions** |
| A. Surgery | Sum of all A sub-groups |
| A0. Surgery only | Surgery + no SACT or RT within 12 weeks after surgery |
| A1. Surgery + adjuvant SACT (only) – no RT within 6 months of SACT start | Surgery + identification of SACT only (start) within 84 days (12 weeks) after surgery |
| A2. Surgery + adjuvant RT (only) – no SACT within 6 months of RT start | Surgery + identification of RT only (start) within 84 days (12 weeks) after surgery |
| A3. Surgery + adjuvant RT and SACT | Surgery + identification of RT [or SACT] (start) within 84 days (12 weeks) after surgery + identification of SACT [or RT] (start) within 180 days (6 months) after RT [or SACT] |
| A4. Neoadjuvant SACT + surgery | SACT + identification of surgery within 120 days (4 months) after 1st SACT regimen start + no RT identification prior to surgery  AND: |
| A4.1 Neoadjuvant SACT + surgery alone | No SACT and RT within 12 weeks (start of SACT) after surgery |
| A4.2 Neoadjuvant SACT + surgery + adjuvant SACT | SACT only within 12 weeks (start) after surgery, continued SACT regimen |
| A4.3 Neoadjuvant SACT + surgery + adjuvant RT | RT only within 12 weeks (start) after surgery |
| A4.4 Neoadjuvant SACT + surgery + adjuvant SACT and RT | SACT and RT within 12 weeks (start) + 3 months (end) after surgery, continued SACT regimen |
| A5. Neoadjuvant RT + surgery | RT + identification of surgery within 90 days (3 months) after 1st RT treatment start + no SACT identification prior to surgery AND: |
| A5.1 Neoadjuvant RT + surgery alone | No SACT and RT within 12 weeks after surgery |
| A5.2 Neoadjuvant RT + surgery + adjuvant SACT | SACT only within 12 weeks after surgery |
| A5.3 Neoadjuvant RT + surgery + adjuvant RT | RT only within 12 weeks after surgery |
| A5.4 Neoadjuvant RT + surgery + adjuvant SACT and RT | SACT and RT within 12 weeks (start) + 3 months (end) after surgery |
| A6. Neoadjuvant SACT and RT + surgery | RT or SACT + identification of surgery within 3 months after start + identification of SACT and RT prior to surgery  Note: Neoadjuvant SACT and RT corresponds to RT within 6 weeks of SACT start (i.e., chemoradiation) |
| A6.1 Neoadjuvant SACT and RT + surgery alone | No SACT and RT within 12 weeks after surgery |
| A6.2 Neoadjuvant SACT and RT + surgery + adjuvant SACT | SACT only within 12 weeks (start) after surgery |
| A6.3 Neoadjuvant SACT and RT + surgery + adjuvant RT | RT only within 12 weeks (start) after surgery |
| A6.4 Neoadjuvant SACT and RT + surgery + adjuvant SACT and RT | SACT and RT within 12 weeks (start) + 6 months (start) after surgery |
| B. RT alone | RT + no SACT nor surgery within 90 days (3 months) after RT |
| C. SACT + RT | Sum of C1, C2, and C3 |
| C1. RT followed by SACT | RT + identification of SACT within 90 days (3 months) after 1st SACT regimen start + no surgery within 6 months after 1st SACT start |
| C2. SACT followed by RT | SACT + identification of RT within 90 days (3 months) after 1st SACT regimen start + no surgery within 6 months after 1st SACT start |
| C3. Chemoradiation | SACT or RT + [regimen identified as being a chemoradiation]  OR  [start RT within 6 weeks of SACT] + no surgery within 3 months after chemoradiation |
| D. SACT alone | SACT + no RT nor surgery within 90 days (3 months) after 1st SACT regimen start |
| E. Not treated | No SACT, surgery, or RT identified over entire follow-up period |

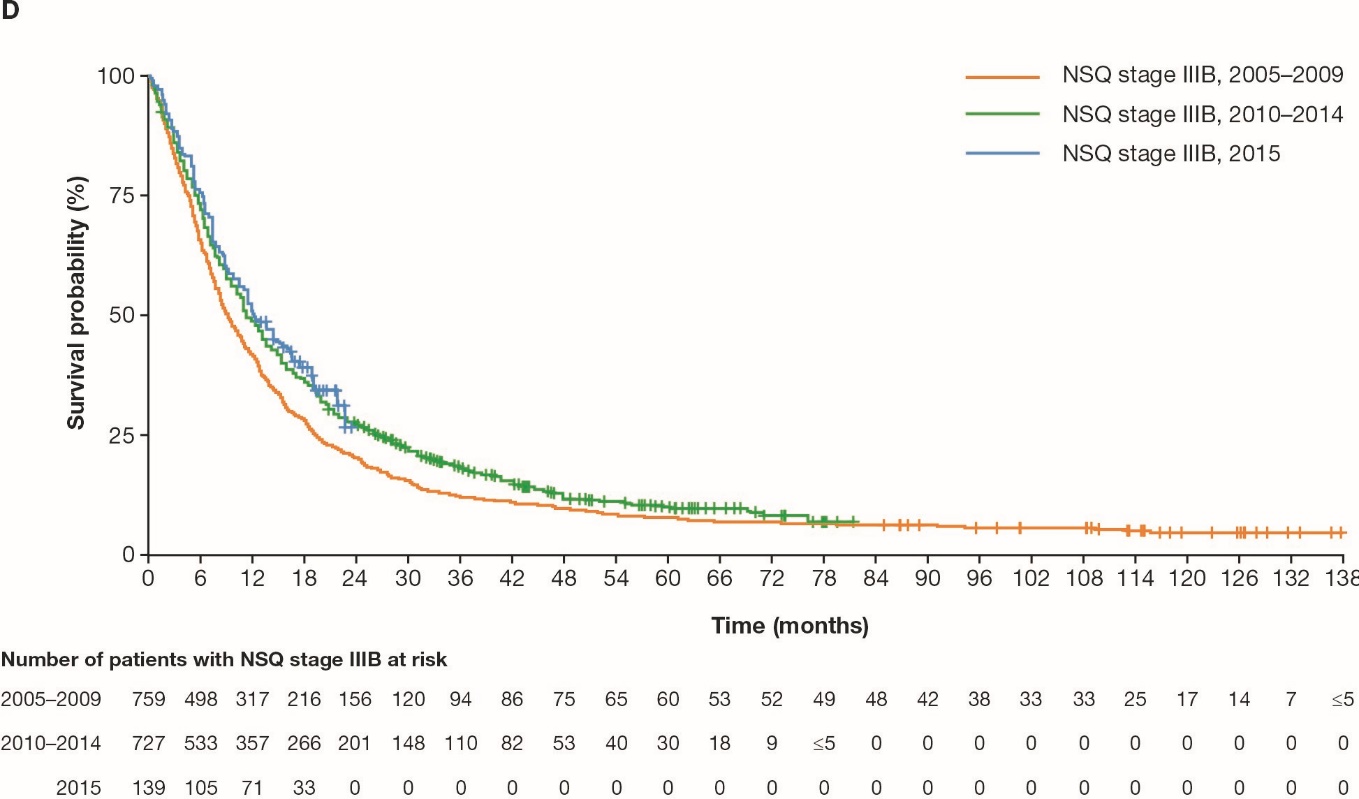
RT: Radiotherapy; SACT: Systemic anticancer therapy.

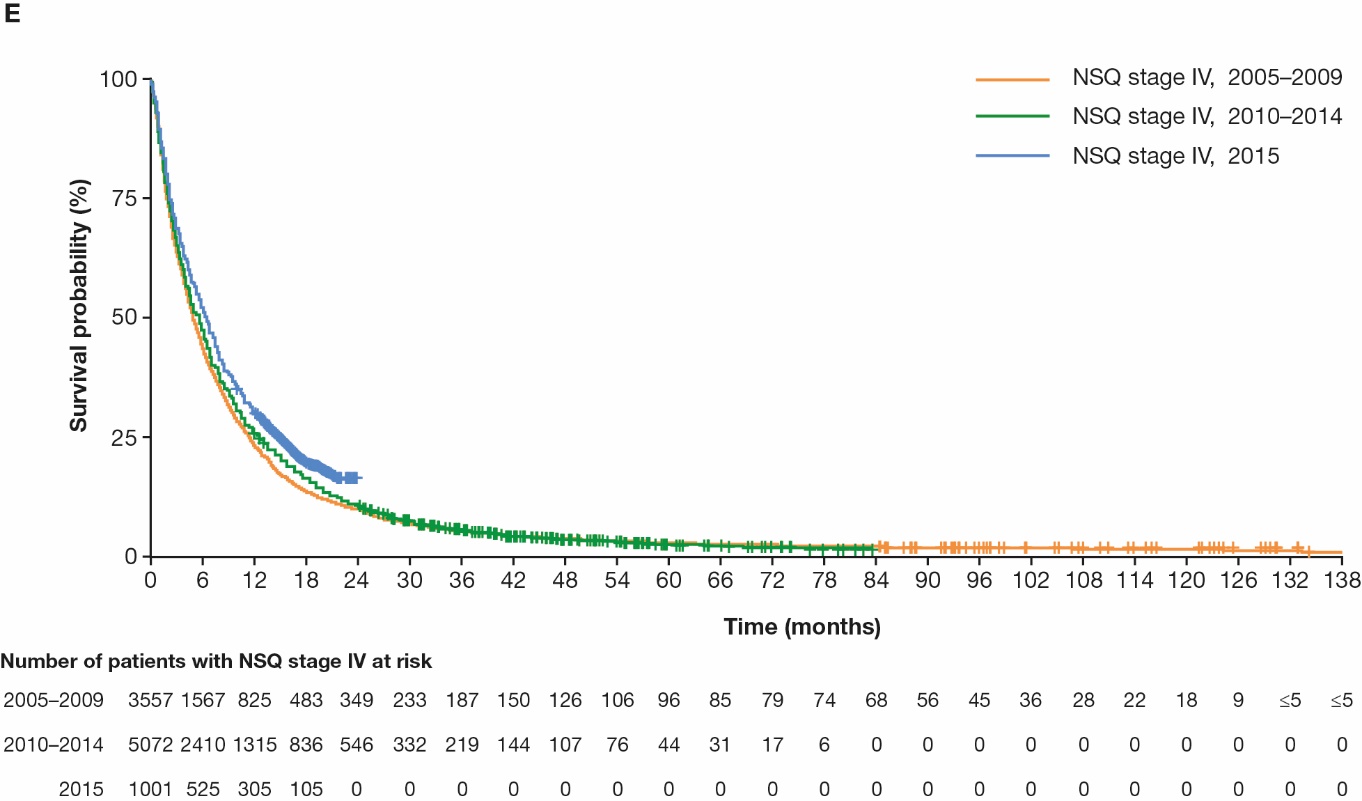
**Supplementary Figure 1. Kaplan-Meier curves for overall survival in patients with NSQ NSCLC by TNM stage and year of diagnosis in Denmark. A) Stage I, B) Stage II, C) Stage IIIA, D) Stage IIIB and E) Stage IV.**

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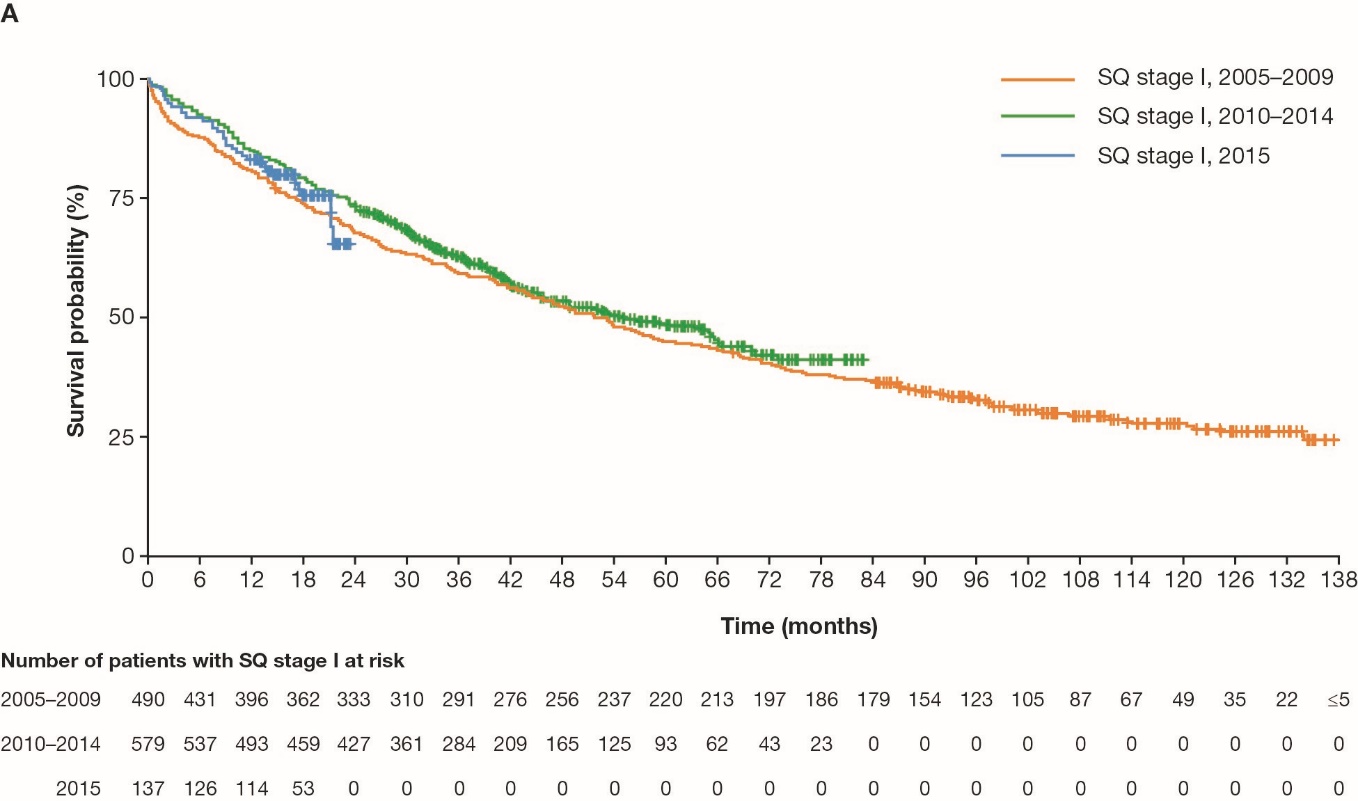
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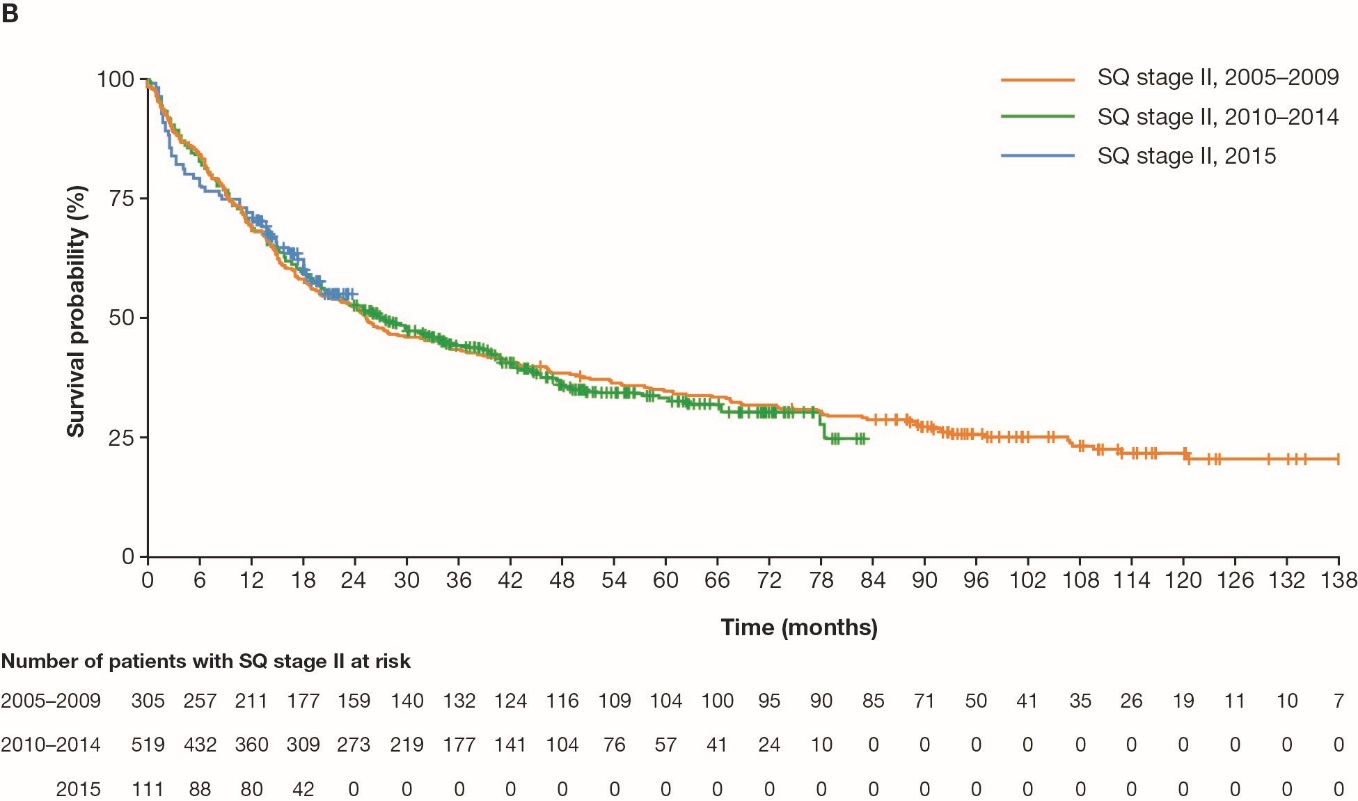
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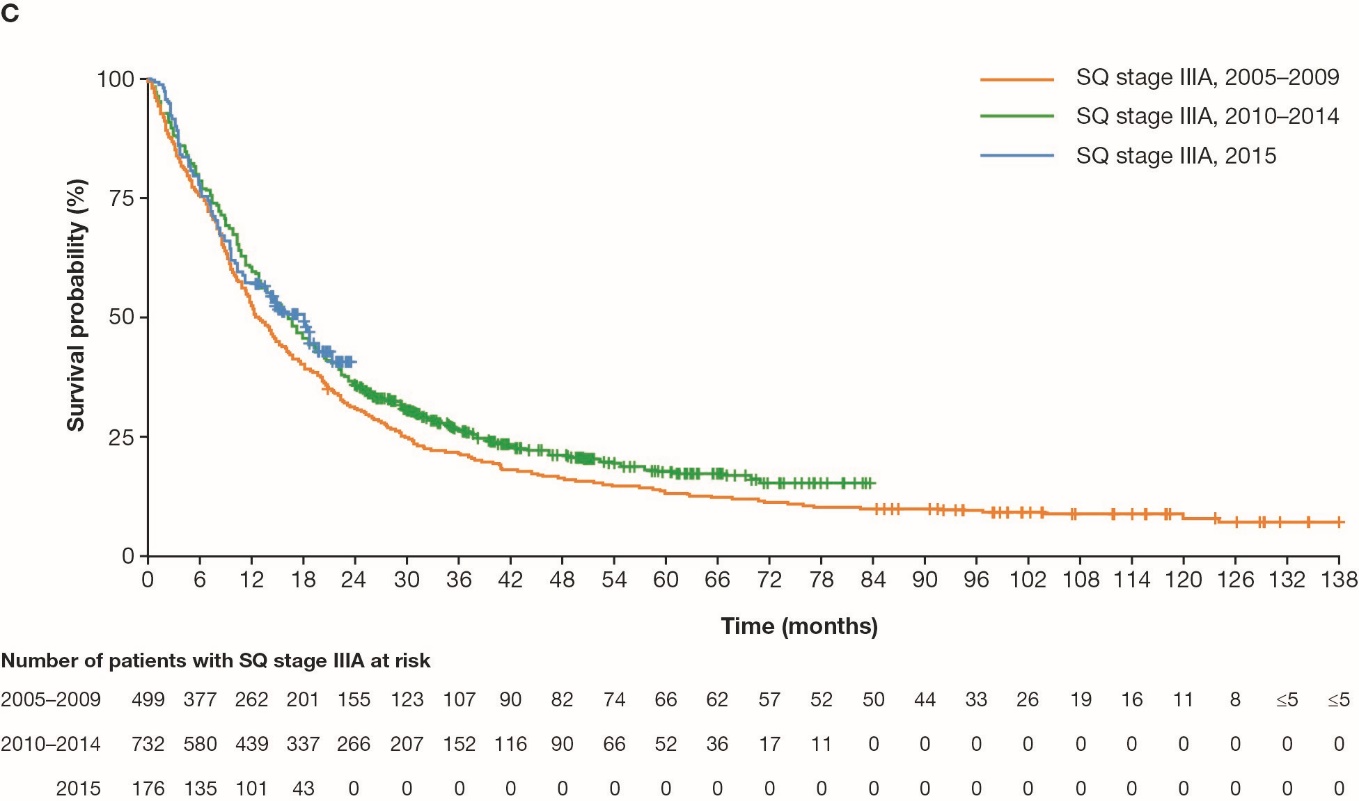
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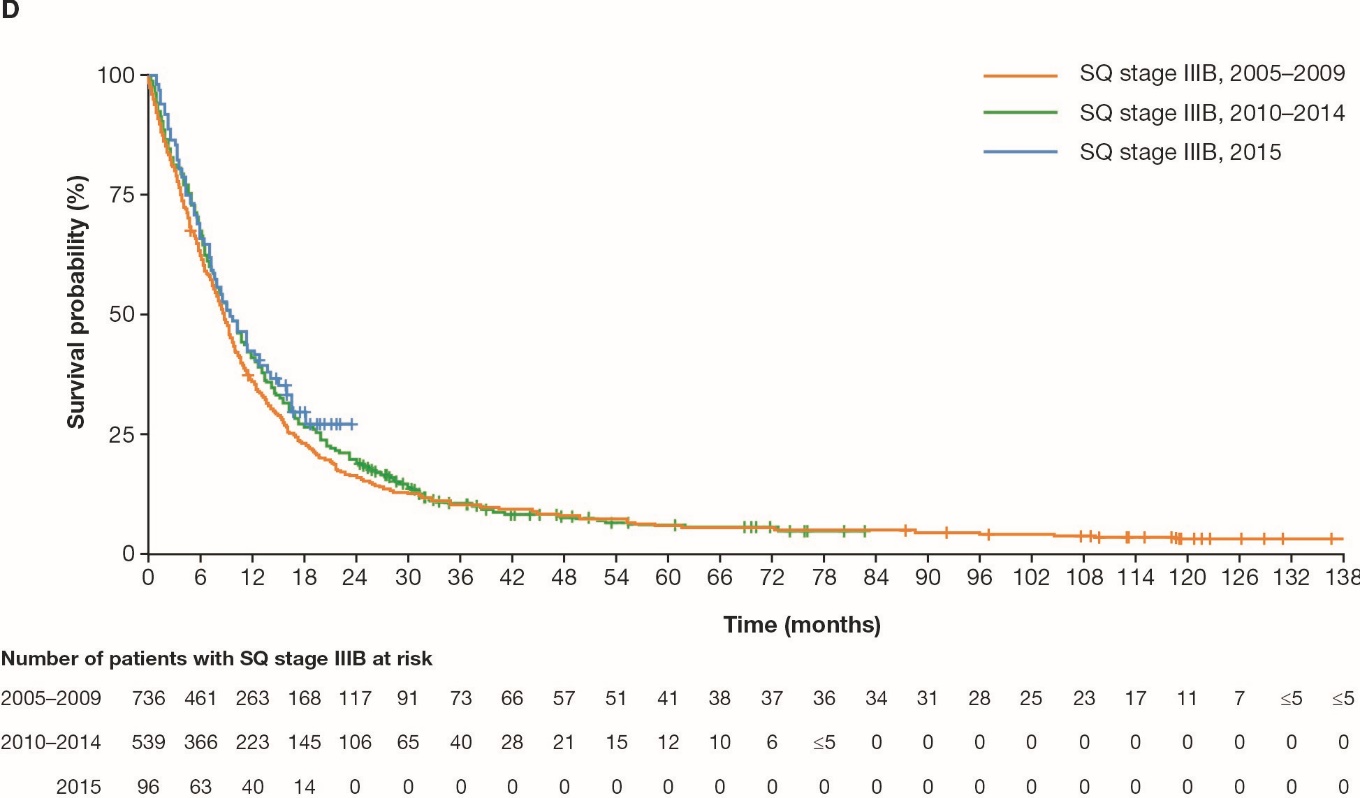
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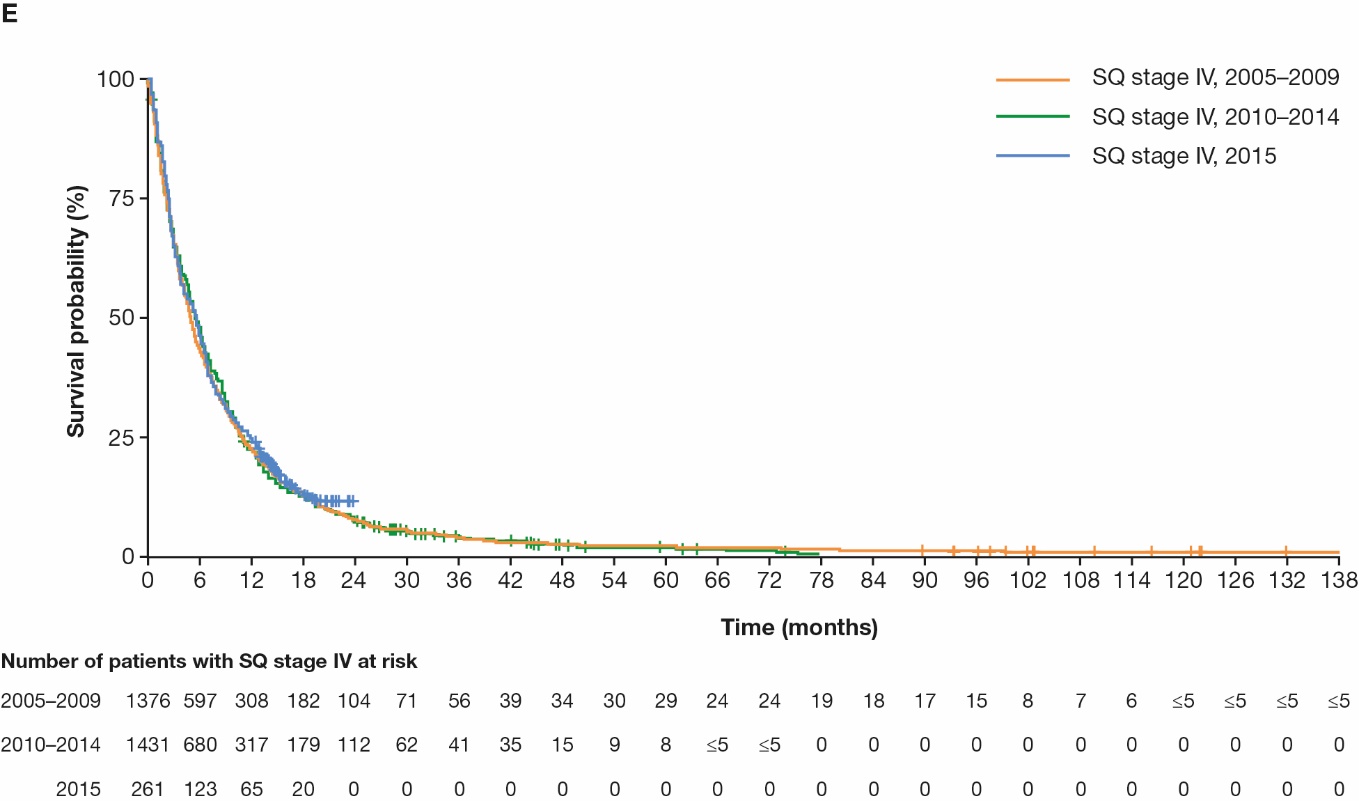
**Supplementary Figure 2. Kaplan-Meier curves for overall survival in patients with SQ NSCLC by TNM stage and year of diagnosis in Denmark. A) Stage I, B) Stage II, C) Stage IIIA, D) Stage IIIB and E) Stage IV.**

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**** Data were truncated at month 138.