**Supplementary Table 2: Extracted data from each of the included studies**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Study** | **Country** | **No. of patients** | **Method** | **Anti-CD163 antibody** | **Survival** | **Cut-off** | **Result**  **(univar)** | **Result**  **(multivar)** | **Histopathological localization** |
| **Lung cancer (n =35)** | | | | | | | | | | |
| 1 | Backman, 2021 | Sweden | 357 | IHC | 10D6 (Novocastra) | OS | Median | N.A. | N.S. | Tumor, Stroma, Total\* |
| 2 | Cao, 2019 | China | 137 | mIF | 10D6 (ZSGB-Bio) | **DFS**, **OS** | Median | Poor | Poor | **Central, Margin** |
| 3 | Carus, 2013 | Denmark | 335 | IHC | EDHu-1 (AbD Serotec) | OS, RFS | Median | N.S. | N.A. | Tumor nest, Tumor stroma |
| 4 | Chen, 2020 | China | 213 | IHC | 10D6 (ZSGB-Bio) | N.A. | ROC | Poor | N.A. | **Stroma** |
| 5 | Gao, 2020 | China | 217 | IHC | EPR19518 (Neo-markers) | **DFS**, **OS** | X-tile / Scoring system | Poor | Poor | **Center of tumor + invasive margin (total)** |
| 6 | Huang, 2021 | China | 73 | IHC | EPR19518 (Abcam) | **OS** | Scoring system | Poor | N.A. | N.A. |
| 7 | Hwang, 2020 | South Korea / Japan | 349 | IHC | EPR19518 (Abcam) | OS | Median | N.S. | N.A. | N.A. |
| 8 | Jackute, 2018 | Lithuania | 80 | IHC | MRQ-26 (Ventana) | **OS** | Median | Poor | Poor | Tumor islets, Tumor stroma, **Total** |
| 9 | Katopodi, 2021 | Greece | 96 | N.A. | N.A. | **OS, RFS** | N.A. | Poor | N.A. | **Invasive border** |
| 10 | Klein, 2023 | Germany | 45 | IHC | MRQ-26 (CellMarque) | **OS** | Median / scoring system | Poor | Poor | N.A. |
| 11 | Kovaleva, 2021 | Russia | 87 | IHC | 10D6 (Biocare) | **OS** | Scoring system | Poor | N.S. | **Tumor nest + tumor stroma (total)** |
| 12 | La Fleur, 2018 | Sweden | 312 | IHC | 10D6 (Novocastra) | OS | Quantiles | N.S. | N.S. | Tumor + stroma + lumen (total) |
| 13 | Larroquette, 2022 | France | 152 | IHC | 10D6 (Leica Biosystems) | **OS, PFS** | “Maxstat” / “Survminer” R package | Poor | Poor | **Tumor**, Stroma |
| 14 | Li, 2021 | China | 33 | mIHC | 10D6 (ZSGB-Bio) | **PFS** | “Survminer” R package | N.S. | Poor | Tumor region, Stroma region, **Total region** |
| 15 | Lin, 2016 | Taiwan | 97 | IHC | 10D6 (Thermo Fisher Scientific) | **DFS**, **OS** | ≥5% positive cells | Poor | N.A. | N.A. |
| 16 | Lu, 2023 | China | 150 | IHC | 10D6 (ZSGB-Bio) | **OS** | X-tile | Poor (tumor)  Fav. (stroma) | N.A. | **Tumor region, Stroma region** |
| 17 | Ma, 2010 | China | 100 | IHC | 10D6 (ZSGB-Bio) | OS | Median | N.S. | N.S. | Tumor islets, Tumor stroma, Total |
| 18 | Matsubara, 2021[[1]](#footnote-1) | Japan | 331 | IHC | 10D6 (Leica Biosystems) | **OS, PFS** | ROC | Poor | Poor | N.A. |
| 19 | Nagano, 2024 | Japan | 172 | IHC | 10D6 (Leica Biosystems) | OS, RFS | Continuous | N.S. | N.A. | N.A. |
| 20 | Ohri, 2009 | United Kingdom | 40 | IHC | 10D6 (Novocastra) | N.A. | Median | Fav. | N.A. | **Tumor islets,** Tumor stroma |
| 21 | Peng, 2023 | China | 553 | mIF | 10D6 (ZSGB-Bio) | DFS | Scoring system | N.S. | N.A. | Tumor nest, Tumor stroma |
| 22 | Rakee, 2019 | Norway | 523 | IHC | MRQ-26 (Ventana) | DSS | Mean / Maximal χ2 method | N.S. | N.S. | Intratumoral, Stromal |
| 23 | Shen, 2018 | China | 85 | IHC | N.A. (Boster Biological Technology) | **OS** | Median | Poor | N.S. | N.A. |
| 24 | Sumitomo, 2019 | Japan | 160 | IHC | MRQ-26 (Roche/ Ventana Medical Systems) | **DFS**, **OS** | ROC / Median | Poor | N.S. | Tumor islets, **Tumor stroma** |
| 25 | Sumitomo, 2023 | Japan | 221 | IHC | MRQ-26 (Ventana Medical Systems) | **OS** | ROC / Median | Poor | N.A. | Tumor islets, **Tumor stroma** |
| 26 | Takam Kamga, 2024 | France | 52 | IHC | N.A. (Novocastra) | OS, PFS | >25% positive cells | N.S. | N.A. | N.A. |
| 27 | Tosi, 2024 | Italy | 39 | mIF | 10D6 (Leica Biosystems) | **OS** | Linear predictor median value | N.A. | Poor | **Peritumoral/stromal\*** |
| 28 | Vieira, 2016 | France | 64 | IHC | 10D6 (Novocastra) | OS | Median | N.S. | N.A. | N.A. |
| 29 | Wang, 2020 | China | 122 | IHC | N.A. (Thermo Fisher Scientific) | **OS**, **PFS** | Median | Poor | N.A. | N.A. |
| 30 | Wu, 2022 | China | 681 | mIF | 10D6 (ZSGB-Bio) | **DFS** | Scoring system | Poor | N.S. | **Tumor nest**, Tumor stroma |
| 31 | Yanagawa, 2023 | Japan | 104 | IHC | 10D6 (Leica Biosystems) | **OS, RFS** | Median | Poor | Poor | N.A. |
| 32 | Yang, 2022 | China | 250 | IHC | 10D6 (Invitrogen) | **OS** | X-tile | Poor | N.A. | **Core of tumor**, Invasive margin |
| 33 | Yoshida, 2022 | Japan | 485 | IHC | MRQ-26 (CellMarque) | **RFS** | 75th percentile | Poor | N.A. | N.A. |
| 34 | Zhang, 2017 | China | 164 | IHC | RM3/1 (Abcam) | **DFS**, **OS** | Median | Poor | N.A. | N.A. |
| 35 | Zhang, 2023 | China | 248 | IHC | Polyclonal (Abcam) | **DSS** | N.A. | Poor | Poor | **Stroma** |
| **Colorectal cancer (n = 34)** | | | | | | | | | | |
| 1 | Akter, 2022 | South Korea | 399 | IHC | N.A. (Abcam) | OS, RFS | Scoring system | N.S. | N.S. | N.A. |
| 2 | Cavalleri, 2022 | Italy | 165 | IHC | 10D6 (Leica Biosystems) | **DFS** | Median | Fav. | Fav. | **Invasive front** |
| 3 | Deng, 2023 | China | 116 | IHC | N.A. (Abcam) | **OS** | Median | Poor | N.A. | N.A. |
| 4 | Edin, 2012 | Sweden | 431 | IHC | N.A. (Novocastra) | **DSS** | Scoring system | Fav. | N.S. | **Invasive front** |
| 5 | Herrera, 2013 | Spain | 235 | RT-qPCR | N.A. | **DFS**, **OS** | Tertiles (low/ medium vs. high) | Poor | N.A. | N.A. |
| 6 | Kaidi, 2022 | Sweden | 310 | RT-qPCR | N.A. | RFS | N.A. | N.S. | N.S. | N.A. |
| 7 | Kather, 2018 | Germany | 286 | IHC | EDHu-1 (BioRad) | OS | Continuous | N.A. | N.S. | Tumor Core, Outer Margin\* |
| 8 | Ke, 2023 | China | 45 | IHC | N.A. (Abcam) | **OS** | Median | Poor | N.S. | N.A. |
| 9 | Kim, 2018 | South Korea | 516 | IHC | N.A. (Leica Biosystems) | OS, PFS | Median | N.S. | N.A. | Intra-epithelial, Stromal |
| 10 | Kitagawa, 2022 | Japan | 275 | IHC | 10D6 (Leica Biosystems) | OS, RFS | Median | N.S. | N.A. | Intratumoral, Stromal |
| 11 | Koelzer, 2016 | Greece | 137 | IHC | 10D6 (Novocastra) | OS | Mean | N.S. | N.A. | Stroma |
| 12 | Kou, 2022 | China | 64 | IHC | GHI/61 (Santa Cruz) | **OS, RFS** | ROC | Poor | N.A. | N.A. |
| 13 | Kwak, 2016 | South Korea | 193 | IHC | N.A. (Novocastra) | **OS** | Maximal χ2 method | Poor | N.A. | **Tumor center**, Invasive Margin |
| 14 | Liu, 2021 | China | 201 | IHC | D6U1J (Cell Signaling Technology) | **OS** | Scoring system | Poor | Poor | N.A. |
| 15 | Liu, 2021 | China | 191 | IHC | EPR19518 (Abcam) | **DFS, OS** | X-tile | Poor | Poor | N.A. |
| 16 | Ma, 2022 | Sweden | 1247 | IHC | 10D6 (Abcam) | N.A. | N.A. | Poor | N.A. | **Tumor tissue cellular, Tumor tissue stromal** |
| 17 | Majid, 2024 | Norway | 1096 | mIHC | EPR14643 (Abcam) | **RFS** | 33rd vs 66th percentile | Fav. | N.A. | **Stroma** |
| 18 | Mezheyeuski, 2023 | Sweden | 286 | mIHC | 10D6 (Novocastra) | **OS** | 33rd and 66th percentile | Poor | N.A. | N.A. |
| 19 | Nagorsen, 2007 | Germany | 40 | IHC | 10D6 (Novocastra) | **OS** | Median | Fav. | N.A. | **Stromal**, Total (stromal + epithelial) |
| 20 | Noti, 2022 | Switzer-land / Canada | 257 | IHC | 10D6 (Leica Biosystems) | **OS** | Median | Fav. | N.A. | **Tumor center**, Tumor Front (invasive margin), Tumor microenvironment (stroma) |
| 21 | Pinto, 2019 | Portugal | 44 | IHC | MRQ-26 (Novocastra) | OS | Median | N.S. | N.A. | Intratumoral region, Invasive front |
| 22 | Shabo, 2009[[2]](#footnote-2) | Sweden | 101 | IHC | 10D6 (Novocastra) | **OS, RFS** | Positive (any positive cells) vs. negative | Poor | Poor | N.A. |
| 23 | Shabo, 2014[[3]](#footnote-3) | Sweden | 75 | IHC | 10D6 (Novocastra) | **DSS** | Scoring system | Poor | Poor | N.A. |
| 24 | Shi, 2022 | China | 129 | IHC | 10D6 (Origene) | **OS** | Mean | Poor | N.A. | N.A. |
| 25 | Shibutani, 2021 | Japan | 54 | IHC | N.A. (Leica Biosystems) | **PFS** | ROC | Poor | N.A. | **Invasive margin** |
| 26 | Shin, 2021 | South Korea | 148 | IHC | N.A. (Thermo Fisher Scientific) | DFS, OS | “Maxstat” in R | N.S. | N.A. | N.A. |
| 27 | Sugimura-Nagata, 2021 | Japan | 269 | IHC | 10D6 (Leica Biosystems) | OS | ROC | N.S. | N.A. | N.A. |
| 28 | Wang, 2023 | China | 255 | IHC | N.A. (ZSGB-Bio) | **OS** | X-tile | Poor | Poor | Intratumor, **Invasive front** |
| 29 | Wei, 2019 | China | 81 | IHC | N.A. (Abcam) | **OS**, **RFS** | Median | Poor | Poor | **Tumor invasive front**, Non-invasive front |
| 30 | Xu, 2021 | China | 1021 | IHC | 10D6 (Fuzhou Maixin Biotech.) | **DFS, OS** | StepMiner algorithm | Poor | Poor | N.A. |
| 31 | Xue, 2021 | China | 209 | IHC | EPR19518 (Abcam) | **DFS, OS** | Median | Poor | Poor | N.A. |
| 32 | Ye, 2019 | China | 1008 | IHC | EPR19518 (Abcam) | **DFS**, **OS** | Median | Poor | Poor | N.A. |
| 33 | Yılmaz, 2022 | USA | 1218 | IHC | 10D6 (Leica Biosystems) | DSS | Median | N.S. | N.A. | N.A. |
| 34 | Zlobec, 2010 | Switzer-land | 1138 | IHC | 10D6 (Neo-Markers) | **DSS** | Scoring system | N.S. | N.A. | Intratumoral + stromal (total) |
| **Gastric cancer (n = 25)** | | | | | | | | | | |
| 1 | Cheng, 2017[[4]](#footnote-4) | China | 136 | IHC | EPR14643 (Abcam) | **OS**, **DSS** | Scoring system | Poor | Poor | N.A. |
| 2 | Fu, 2017 | China | 36 | IHC | N.A. (Abcam) | **DSS** | Median | Poor | N.A. | N.A. |
| 3 | Guo, 2020 | China | 490 | IHC | Polyclonal (Abcam) | **OS** | Median | Poor | N.S. | N.A. |
| 4 | Hu, 2021 | China | 112 | IHC | EPR19518 (Abcam) | **OS** | Median | Poor | Poor | N.A. |
| 5 | Huang, 2018 | China | 662 | IHC | 10D6 (Fuzhou Maixin Biotech.) | **DFS**, **DSS** | Median | Poor | Poor | N.A. |
| 6 | Huang, 2019 | Australia | 43 | IHC | MRQ-26 (Cell Marque) | **OS**, **RFS** | Terciles | Fav. | N.A. | **Tumor core** |
| 7 | Jeremiasen, 2020 | Sweden | 71 | IHC | 10D6 (Novus Biologicals) | **OS** | Scoring system | Poor | N.S. | N.A. |
| 8 | Jia, 2023 | China | 80 | mIHC | D6U1J (Cell Signaling Technology) | **OS** | “Survminer” R package | Poor | N.A. | N.A. |
| 9 | Kawahara, 2010 | Japan | 111 | IHC | N.A. (Novocastra) | OS | Median/ 25% quantile vs. 75% quantile | N.S. | N.A. | N.A. |
| 10 | Kim, 2017 | South Korea | 373 | IHC | MRQ-26 (Cell Marque) | OS | Mean | N.S. | N.A. | Tumor cell nests + invasive front area (total) |
| 11 | Kim, 2015 | South Korea | 128 | IHC | 10D6 (Novocastra) | **DFS** | Scoring system | Fav. | Fav. | **Invasive front – (Stromal + Epithelial)**  Tumor center – (Stromal + Epithelial)  **Stromal – (Tumor center + Invasive front)**  **Epithelial – (Tumor center + Invasive front)** |
| 12 | Kinoshita, 2022 | Japan | 68 | IHC | Polyclonal (Bioss) | **OS** | ROC | Poor | Poor | N.A. |
| 13 | Kovaleva, 2022 | Russia | 63 | IHC | 10D6 (BioCare) | **OS** | Median | N.S. | Poor | N.A. |
| 14 | Liu, 2019 | China | 598 | IHC | Polyclonal (Abcam) | **OS** | Median | Poor | Poor | N.A. |
| 15 | Liu, 2021 | China | 200 | IHC | N.A. (Abcam) | **DFS, DSS, OS** | Median | Poor (invasive margin)  Fav. (core of tumor) | Poor (invasive margin) | **Core of tumor, Invasive Margin** |
| 16 | Ni, 2021 | China | 584 | IHC | EPR19518 (Abcam) | N.A. | X-tile | Poor | N.S. | N.A. |
| 17 | Pantano, 2013 | Italy | 52 | IF | 10D6 (Novocastra) | OS | Median | N.S. | N.A. | N.A. |
| 18 | Park, 2016 | South Korea | 113 | IHC | N.A. (Novocastra) | **DFS**, **OS** | ROC | Poor | N.S. | **Tumor nest, Tumor stroma, Invasive tumor margin** |
| 19 | Wei, 2021 | China | 50 | IHC | 10D6 (Leica Biosystems) | **OS** | Median | Poor | Poor | N.A. |
| 20 | You, 2023 | China | 95 | IHC | Polyclonal (Servicebio) | **OS** | N.A. | Poor | Poor | N.A. |
| 21 | Zhang, 2017 | China | 236 | IHC | N.A. (Abcam) | **DSS**, **OS** | Mean | Poor | Poor | N.A. |
| 22 | Zhang, 2021 | China | 166 | IHC | D6U1J (Cell Signaling Technology) | **DFS, OS** | Median | Poor | Poor | N.A. |
| 23 | Zhang, 2022 | China | 409 | IHC | EPR19518 (Abcam) | DFS, OS | N.A. | N.S. | N.A. | N.A. |
| 24 | Zhou, 2020 | China | 173 | IHC | N.A. (Abcam) | **RFS** | N.A. | Poor | N.A. | N.A. |
| 25 | Zhu, 2020 | China | 90 | IHC | N.A. (Fuzhou Maixin Biotech.) | **OS** | 16.5 cells per high power field | Poor | Poor | N.A. |
| **Liver cancer (n = 12)** | | | | | | | | | | |
| 1 | Ali, 2024 | Czech Republic | 64 | IHC | 10D6 (Leica Biosystems) | **DFS**, OS, RFS | 25th percentile | Poor | N.A. | Tumor center, Inner Margin, Outer Margin, **Peritumoral** |
| 2 | Asahi, 2020 | Japan | 69 | IHC | 10D6 (Leica Biosystems) | OS | ROC | N.S. | N.A. | Outer border area, Inner border area, Intratumor area |
| 3 | Atanasov, 2019 | Germany | 58 | IHC | 10D6 (Leica Biosystems) | OS, RFS | ≤5% vs. >5% positive cells | N.S. | N.A. | Tumor central area, Tumor-infiltrating front |
| 4 | Bao, 2019 | China | 69 | IHC | 10D6 (Thermo Fisher Scientific) | **OS**, **RFS** | Median | Poor | N.A. | N.A. |
| 5 | Hasita, 2010 | Japan | 39 | IHC | 10D6 (Novocastra) | **DFS**, OS | Median | Poor | Poor | N.A. |
| 6 | Jing, 2019 | China | 153 | IHC | N.A. (Cell Signaling Technology) | OS, RFS | X-tile | N.S. | N.A. | N.A. |
| 7 | Kong, 2013 | China | 295 | IHC | N.A. (AbD Serotec) | **OS**, RFS | 75th percentile | Poor | N.S. | Intratumoral, **Peritumoral** |
| 8 | Kono, 2016 | Japan | 77 | IHC | N.A. (Abcam) | **DFS, OS** | ROC | Poor | Poor | **Peritumoral** |
| 9 | Mashiko, 2024 | Japan | 53 | IHC | N.A. (Novocastra) | **OS, RFS** | N.A. | Poor | Poor | **Intratumoral, Peritumoral** |
| 10 | Minami, 2018 | Japan | 105 | IHC | 10D6 (Diagnostic BioSystems) | OS, RFS | Mean | N.S. | N.A. | Intratumoral + Peritumoral (total) |
| 11 | Woo, 2022 | South Korea | 322 | IHC | MRQ-26 (CellMarque) | **DFS** | N.A. | Poor | Poor | N.A. |
| 12 | Yeung, 2015 | China | 84 | IHC | N.A. (Novocastra) | **DFS**, **OS** | ROC | Poor | Poor | Intratumoral, **Peritumoral** |
| **Breast cancer (n = 51)** | | | | | | | | | | |
| 1 | Adams, 2018 | USA | 138 | IHC | N.A. (Cell Marque) | **OS** | Median | Poor | N.A. | N.A. |
| 2 | Ali, 2021 | Egypt | 120 | IHC | EP324 (Medaysis) | **OS** | Median | Poor | N.S. | N.A. |
| 3 | Bobrie, 2022 | France | 276 | IHC | 10D6 (BioSB) | OS, **RFS** | Scoring system | Fav. | N.S. | N.A. |
| 4 | Bottai, 2016 | Italy | 203 | IHC | N.A. (Novocastra) | OS, **RFS** | Scoring system | Poor | N.S. | N.A. |
| 5 | Cha, 2018 | South Korea | 140 | IHC | MRQ-26 (Ventana) | DFS, OS | Median | N.S. | N.A. | N.A. |
| 6 | Chafe, 2021 | Canada | 2960 | IHC | 10D6 (Novocastra) | DSS | Scoring system | Poor | N.A. | N.A. |
| 7 | Esbona, 2018 | USA | 313 | IF | 10D6 (Novus Biologicals) | **OS**, PFS | Lowest vs. highest quartile | Poor | Poor | **Tumor nest, Tumor stroma** |
| 8 | Fang, 2024 | China | 163 | IHC | (10D6, Invitrogen) | DFS, OS | Median | N.S. | N.A. | Tumor region, Stromal region |
| 9 | Fortis, 2017 | Greece | 97 | IHC | 10D6 (BioCare) | DFS, OS | Median | N.S. | N.A. | Tumor center, Invasive margin |
| 10 | Garvin, 2018[[5]](#footnote-5) | Sweden | 81 | IHC | 10D6 (Novocastra) | DFS | Scoring system | N.S. | N.A. | N.A. |
| 11 | Hammerl, 2021 | The Nether-lands | 68 | mIF | MRQ-26 (Cell Marque) | **DFS** | N.A. | Fav. | N.A. | Border stroma  **Border tumor**  Center stroma  Center tumor |
| 12 | Honkanen, 2019 | Finland | 40 | IHC | 10D6 (Neo-markers) | OS | Median | N.S. | N.A. | Tumor center, Invasive margin |
| 13 | Jamiyan, 2020 | Japan | 107 | IHC | 10D6 (Novocastra) | **OS, RFS** | Median | Poor | Poor | **Tumor nest, Tumor stroma** |
| 14 | Jeong, 2019 | South Korea | 367 | IHC | N.A. (Thermo Fisher Scientific) | **DFS**, **OS** | Maximal χ2 method | Poor | Poor | **Tumor nest**, Tumor stroma |
| 15 | Kaewkangsadan, 2017 | United Kingdom | 33 | IHC | 10D6 (Abcam) | DFS, OS | Scoring system | N.S. | N.A. | N.A. |
| 16 | Kim, 2020 | South Korea | 334 | IHC | Polyclonal (Abcam) | DFS, OS | Median | N.S. | N.A. | N.A. |
| 17 | Klingen, 2017 | Norway | 282 | IHC | 10D6 (Dako) | DSS, **RFS** | Upper quartile | Poor | Poor | N.A. |
| 18 | Li, 2020 | China | 108 | IHC | N.A. (Cell Signaling Technology) | **RFS** | ROC | Poor | Poor | Tumor tissue, **Invasive Margin** |
| 19 | Li, 2021 | China | 50 | IHC | 10D6 (ZSGB-Bio) | **OS** | Specified number of CD163+ cells | Poor | N.A. | Tumor nest, **Tumor stroma** |
| 20 | Liu, 2017 | China | 102 | IHC | OTI1B4 (Origene) | **DFS**, **OS** | >10% staining | Poor | Poor | N.A. |
| 21 | Liu, 2017 | China | 203 | IHC | OTI1B4 (Origene) | **DFS**, **OS** | >10% staining | Poor | Poor | N.A. |
| 22 | Liu, 2022 | China | 68 | IHC | N.A. | **RFS** | X-tile | Poor | N.A. | Tumor tissue, **Invasive Margin** |
| 23 | Maisel, 2022 | USA | 443 | IF-IHC | Polyclonal (Sigma-Aldrich) | **PFS** | Bootstrap approach | Poor | Poor | N.A. |
| 24 | Matikas, 2018 | Sweden | 71 | IHC | 10D6 (Novocastra) | DFS | <10% vs. 10-30% vs. >30% | N.S. | N.A. | Tumor + Adjacent stroma area (total) |
| 25 | Medrek, 2012 | Sweden | 144 | IHC | 10D6 (Novocastra) | **DSS**, **OS**, RFS | Scoring system | Poor | N.S. | Tumor nest, **Tumor stroma** |
| 26 | Miyasato, 2017 | Japan | 149 | IHC | 10D6 (Novocastra) | DRFS, DSS, RFS | Mean | N.S. | N.A. | N.A. |
| 27 | Ntostoglou, 2024 | South Korea | 791 | IHC | 10D6 (Novocastra) | **DFS** | ”SurvMisc” package in R | Poor | Poor | **Tumor center** |
| 28 | Oda, 2023 | Sweden | 83 | IHC | 10D6 (Novocastra) | DFS | Scoring system | N.S. | N.A. | N.A. |
| 29 | Omilian, 2024 | USA | 546 | IHC | 10D6 (Novocastra) | DSS, **OS** | Tertiles | N.A. | Fav. | **Tumor center\*** |
| 30 | Ozkan, 2020 | Turkey | 51 | IHC | EP324 (Epitomics) | **OS**, **PFS** | Median | Fav. | N.S. | Intratumoral, **Stromal** |
| 31 | Pelekanou, 2018 | USA | 554 | IF | 10D6 (Novocastra) | **OS** | Median | Fav. | N.S. | N.A. |
| 32 | Ramos, 2020 | France | 238 | IHC | 10D6 (Novocastra) | **PFS** | Scoring system | Poor | N.A. | N.A. |
| 33 | Reddy, 2019 | USA | 20 | IHC | 10D6 (Thermo Fisher Scientific) | OS, PFS | Highest vs. lowest quartiles | N.S. | N.A. | N.A. |
| 34 | Schnellhardt, 2020 | Germany | 132 | IHC | N.A. | **DFS**, **RFS** | ROC | Poor | N.A. | **Invasive front – Stromal**  **Invasive front – Intraepithelial**  **Central tumor – Stromal**  Central tumor - Intraepithelial |
| 35 | Shabo, 2008[[6]](#footnote-6) | Sweden | 127 | IHC | 10D6 (Novocastra) | **DRFS, DSS** | 25% positive cancer cells | Poor | Poor | N.A. |
| 36 | Shimada, 2017 | Japan | 258 | IHC | 10D6 (Leica Biosystems) | DSS, RFS | Median | N.S. | N.A. | N.A. |
| 37 | Shinohara, 2022 | Japan | 20 | mIHC | 10D6 (Leica Biosystems) | RFS | Median | N.S. | N.A. | Intratumoral, Stromal |
| 38 | Sousa, 2015 | Finland / Sweden | 537 | IHC | 10D6 (Novocastra) | OS, **RFS** | Median | N.S. | Poor | N.A. |
| 39 | Takada, 2018 | Japan | 30 | IHC | 10D6 (Leica Biosystems) | OS, PFS | Median | N.S. | N.A. | N.A. |
| 40 | Tavares, 2021 | Brazil | 76 | IHC | 10D6 (Ventana) | OS | Maximization of the log-rank test | N.S. | N.A. | N.A. |
| 41 | Tiainen, 2015 | Finland | 276 | IHC | N.A. (Thermo Fisher Scientific) | **OS** | Median | Poor | Poor | Invasive area + stroma (total) |
| 42 | Tian, 2016 | China | 278 | IHC | OTI2G12 (Abcam) | **DFS, OS** | N.A. | Poor | N.A. | N.A. |
| 43 | Tymoszuk, 2014 | Austria/ France | 86 | RT-qPCR | N.A. | OS, **RFS** | Median | Poor | N.A. | N.A. |
| 44 | Wang, 2022 | China | 272 | IHC | EPR19518 (Abcam) | **DFS** | Median | Poor | N.S. | N.A. |
| 45 | Xuan, 2014 | China | 48 | IHC | 10D6 (Novocastra) | **RFS** | Scoring system | Poor | N.A. | N.A. |
| 46 | Yamaguchi, 2021 | Japan | 116 | IHC | N.A. | **DSS, OS** | Scoring system | Poor | N.A. | N.A. |
| 47 | Yang, 2018 | China | 200 | IHC | 10D6 (Abcam) | **OS, RFS** | Median | Poor | Poor | Tumor nest, **Tumor stroma** |
| 48 | Ye, 2021 | China | 91 | IHC | N.A. (Abcam) | **OS, RFS** | Mean | Poor | N.A. | N.A. |
| 49 | Zhang, 2018 | China | 278 | IHC | N.A. (Abcam) | **DFS, OS** | Mean | Poor | Poor | N.A. |
| 50 | Zhang, 2021 | China | 105 | IHC | EPR19518 (Abcam) | **OS** | Scoring system | Poor | N.A. | N.A. |
| 51 | Zwager, 2023 | The Nether-lands | 347 | IHC | MRQ-26 (Ventana) | DFS, OS | N.A. | N.S. | N.A. | N.A. |

**Supplementary Table 2**: Characteristics of studies (n = 157) included in the present review, including the reported survival analyses results. For each paper, the following characteristics are listed:

**Study:** First author and year published.

**No. of patients**: Patients included in the survival analyses regarding CD163.

**Methods:** Method used to measure CD163. IF: Immunofluorescence, IHC: Immunohistochemistry, mIF: Multiplex immunofluorescence, mIHC: Multiplex immunohistochemistry, RT-qPCR: Quantitative reverse transcription polymerase chain reaction.

**Anti-CD163**: The anti-CD163 antibody clone used for IHC or IF. The company selling the antibody is stated in parentheses.

**Survival**: The survival time parameters investigated in the studies. DFS: Disease-free survival, DRFS: Distant relapse-free survival, DSS: Disease-specific survival, OS: Overall survival, PFS: Progression-free survival, RFS: Relapse/recurrence-free survival. The survival time parameter associated with a statistically significant result is marked with **bold**.

**Cut-off**: The parameter used to distinguish between low and high tumoral presence of CD163+ cells. ROC: Receiver operating characteristic curve.

**Results**: Results in univariate (univar) and multivariate (multivar) analyses, respectively. Poor: Significant association between a high tumoral presence of CD163+ cells and reduced survival. Favorable: Significant association between a high tumoral presence of CD163+ cells and prolonged survival. N.S.: No significant association between a high tumoral presence of CD163+ cells and survival.

**Histopathological localization**: The tumor components and/or spatial localizations (within the primary tumor or in the surrounding peritumoral tissue) in which CD163 was measured (using the terminology as stated in the individual papers). Localizations marked with **bold** indicates that a significant association with survival was found based on measurement of CD163 in this location. An asterisk (\*) marks papers that only performed multivariate analyses, and these papers were not included in the overview of histopathological localizations in the “Results”-section. A list stating e.g. “Tumor nest, Tumor stroma, Total” indicates that three different analyses were performed, while a list stating e.g. “Invasive area + stroma (total)” indicates that only one analysis including CD163 measurements from all mentioned areas was performed (these papers were not included in the overview of histopathological localizations).

N.A.: Not available / Not applicable.

1. Matsubara *et al*. (2021): CD163 expression in lung cancer cells. [↑](#footnote-ref-1)
2. Shabo *et al.* (2009): CD163 expression in rectal cancer cells. [↑](#footnote-ref-2)
3. Shabo *et al*. (2014): They present data for CD163 expression on macrophages and tumor cells separately. This table uses the data for macrophages. [↑](#footnote-ref-3)
4. Cheng *et al*. (2017): They present data for CD163 expression on macrophages and tumor cells separately. This table uses the data for macrophages. [↑](#footnote-ref-4)
5. Garvin *et al*. (2018): They present data for CD163 expression on macrophages and tumor cells separately. This table uses the data for macrophages. [↑](#footnote-ref-5)
6. Shabo *et al.* (2008): CD163 expression in breast cancer cells. [↑](#footnote-ref-6)