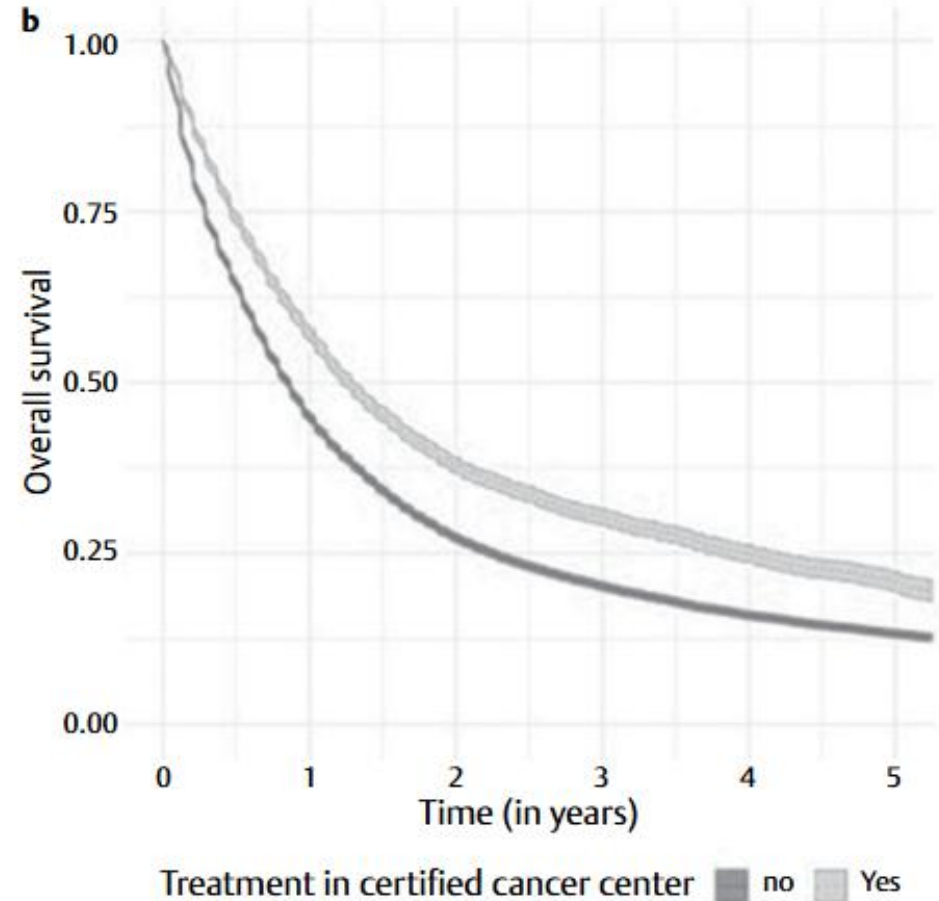
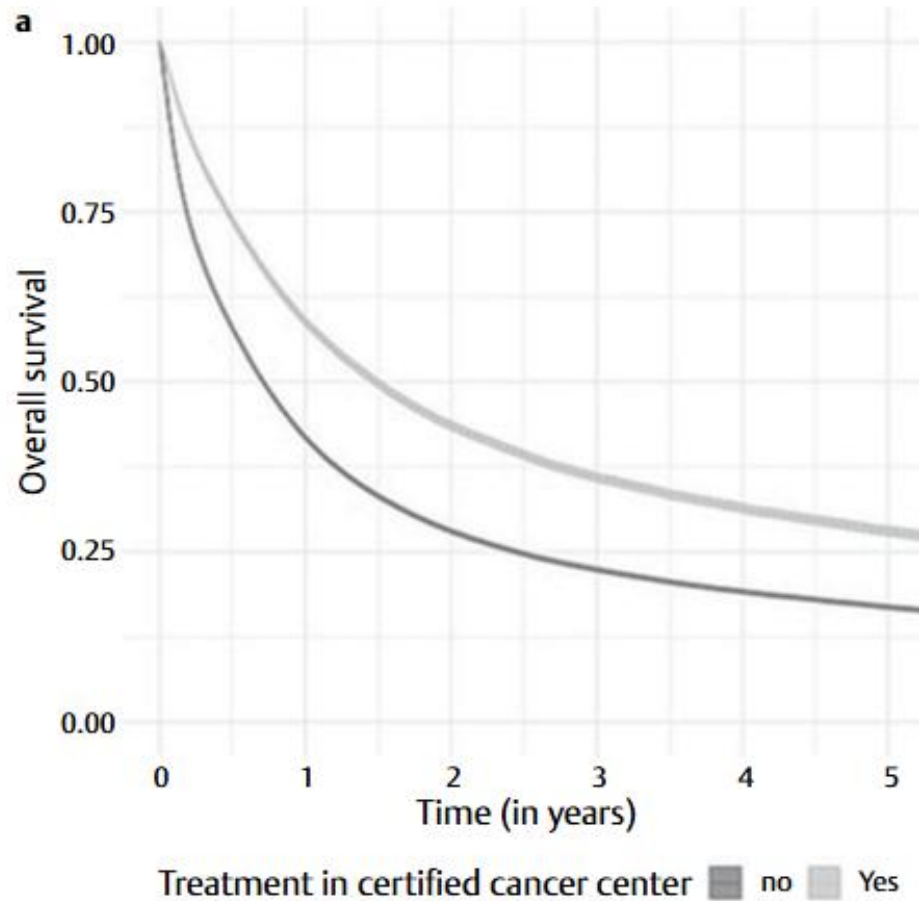
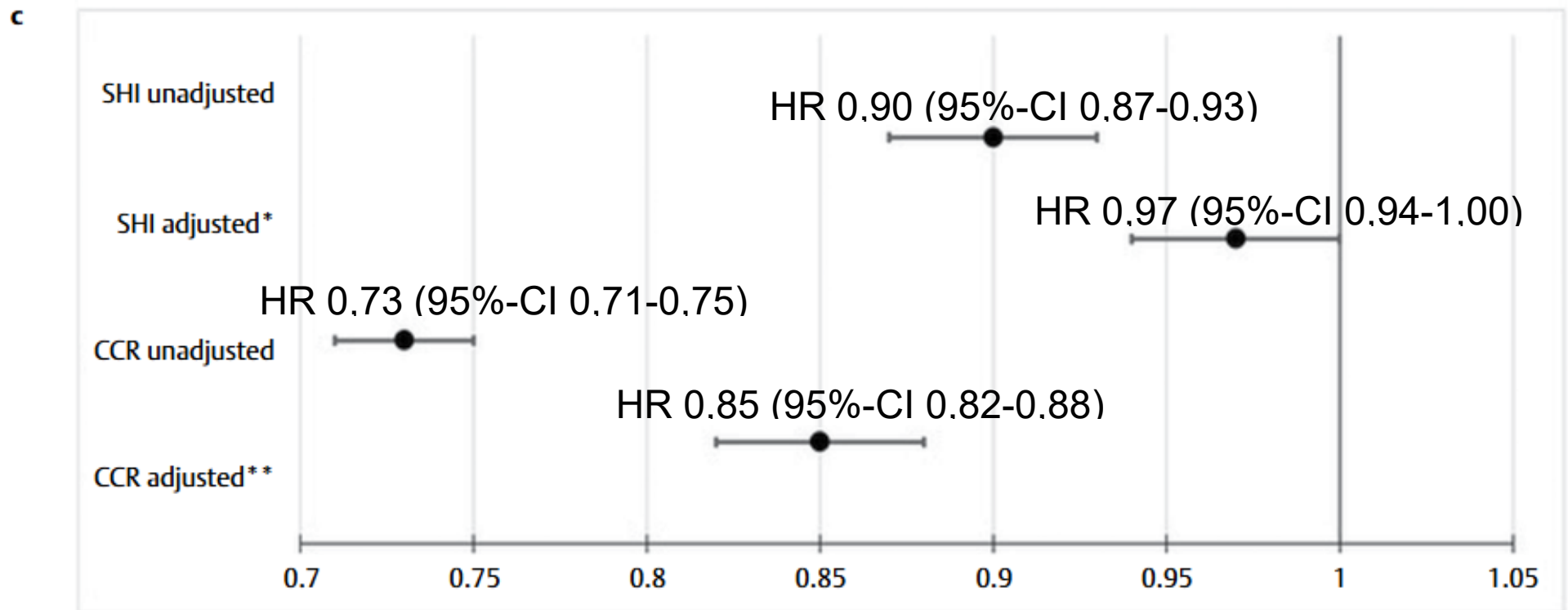


## Gesamtüberlebensvorteil für Lungenkrebs-Behandlung in einem zertifizierten Zentrum (WiZEN-Studie):



## Gesamtüberlebensvorteil für Lungenkrebs-Behandlung in einem zertifizierten Zentrum (WiZEN-Studie):



► **Fig. 3** Kaplan-Meier curves and Cox regression analysis for overall survival (OAS). (a) Kaplan-Meier survival curves OAS (SHI data). (b) Kaplan-Meier survival curves OAS (CCR data). (c) Unadjusted and adjusted hazard ratios with 95%CI for all-cause mortality (SHI and CCR data) following treatment in GCS-certified lung cancer centers compared to treatment in non-certified hospitals. \* adjusted for age, sex, year of index treatment, distant metastasis, Elixhauser comorbidities, and hospital characteristics \*\* adjusted for age, sex, year of diagnosis, histological subtype, UICC-stage, grade, lymphatic, and venous invasion.

## Vorteile von institutioneller Behandlung (Fallzahlen) (ERS-Guideline on various aspects of quality in lung cancer care)

**PICO 4: Should patients with lung cancer (or those suspected of having lung cancer) receive lung cancer-specific diagnostic or therapeutic procedures in hospitals/from professionals with higher volumes of activity/with a higher grade of specialisation for these procedures rather than receiving them in hospitals/from professionals with lower volumes of activity/with lower grade of specialisation for these procedures?**

PICO question, PICO subgroups and outcomes per subgroup	Total number and type <sup>#</sup> of included studies (total number of patients) per outcome	Effect strength <sup>¶</sup> and effect direction <sup>†</sup> per outcome	Quality of evidence per outcome
Subgroup 1: All lung cancer, all stages, higher hospital volume of surgical resections ( <i>versus</i> lower hospital volume)			
<i>Overall survival</i>	18 OBS (448 402 patients)	L: 12 (275 995 patients); M: 3 (57 643 patients); T: 3 (154 764 patients) →higher hospital volume	Very low ⊕○○○
<i>In-house mortality</i>	12 OBS (434 948 patients)	L: 9 (388 079 patients); S: 2 (26 731 patients); T: 1 (20 138 patients) →higher hospital volume	Very low ⊕○○○
<i>30-day mortality</i>	31 OBS (1 745 923 patients)	L: 19 (965 608 patients); M: 4 (364 835 patients); S: 5 (384 345 patients); T: 3 (31 135 patients) →higher hospital volume	Very low ⊕○○○
<i>60-day mortality</i>	2 OBS (42 838 patients)	L: 1 (2084 patients); M: 1 (40 754 patients) →higher hospital volume	Very low ⊕○○○
<i>90-day mortality</i>	6 OBS (600 425 patients)	L: 4 (457 203 patients); M: 1 (139 802 patients); S: 1 (3420 patients) →higher hospital volume	Very low ⊕○○○
<i>Morbidity</i>	7 OBS (75 972 patients)	Due to heterogeneity see supplementary material B for details →higher hospital volume	Very low ⊕○○○
<i>Receipt of curative treatment</i>	1 OBS (1591 patients)	L: 1 (1591 patients) →higher hospital volume	Low ⊕⊕○○

Quelle: Blum TG et al. Eur Respir J 2023; 61: 2103201; DOI: 10.1183/13993003.03201-2021

## Vorteile von institutioneller Behandlung (Spezialisierung) (ERS-Guideline on various aspects of quality in lung cancer care)

**PICO 4: Should patients with lung cancer (or those suspected of having lung cancer) receive lung cancer-specific diagnostic or therapeutic procedures in hospitals/from professionals with higher volumes of activity/with a higher grade of specialisation for these procedures rather than receiving them in hospitals/from professionals with lower volumes of activity/with lower grade of specialisation for these procedures?**

PICO question, PICO subgroups and outcomes per subgroup	Total number and type <sup>#</sup> of included studies (total number of patients) per outcome	Effect strength <sup>¶</sup> and effect direction <sup>+</sup> per outcome	Quality of evidence per outcome
<b>Subgroup 2: All lung cancer, all stages, better hospital specialisation in surgical resections (<i>versus</i> less hospital specialisation)</b>			
<i>Overall survival</i>	8 OBS (95 099 patients)	L: 4 (53 563 patients); M: 3 (39 945 patients); T: 1 (1591 patients) →better hospital specialisation	Very low ⊕○○○
<i>In-house mortality</i>	3 OBS (185 454 patients)	S: 2 (122 826 patients); T: 1 (62 628 patients) →better hospital specialisation	Very low ⊕○○○
<i>30-day mortality</i>	11 OBS (431 489 patients)	L: 6 (364 796 patients); M: 3 (49 686 patients); T: 2 (17 007 patients) →better hospital specialisation	Very low ⊕○○○
<i>90-day mortality</i>	3 OBS (349 685 patients)	L: 3 (349 685 patients) →better hospital specialisation	Very low ⊕○○○
<i>Morbidity</i>	1 OBS (13 735 patients)	L: 1 (13 735 patients) →better hospital specialisation	Low ⊕⊕○○
<i>Accuracy of staging</i>	1 OBS (40 090 patients)	L: 1 (40 090 patients) →better hospital specialisation	Very low ⊕○○○
<i>Receipt of curative treatment</i>	1 OBS (1591 patients)	L: 1 (1591 patients); OR 1.72, 95% CI 1.06–2.80 →better hospital specialisation	Very low ⊕○○○

Quelle: Blum TG et al. Eur Respir J 2023; 61: 2103201; DOI: 10.1183/13993003.03201-2021

## Vorteile von individueller Behandlung (Fallzahlen) (ERS-Guideline on various aspects of quality in lung cancer care)

**PICO 4: Should patients with lung cancer (or those suspected of having lung cancer) receive lung cancer-specific diagnostic or therapeutic procedures in hospitals/from professionals with higher volumes of activity/with a higher grade of specialisation for these procedures rather than receiving them in hospitals/from professionals with lower volumes of activity/with lower grade of specialisation for these procedures?**

PICO question, PICO subgroups and outcomes per subgroup	Total number and type <sup>#</sup> of included studies (total number of patients) per outcome	Effect strength <sup>¶</sup> and effect direction <sup>+</sup> per outcome	Quality of evidence per outcome
Subgroup 3: All lung cancer, all stages, higher surgeon volume of surgical resections ( <i>versus</i> lower surgeon volume)			
<i>Overall survival</i>	2 OBS (2950 patients)	L: 2 (2950 patients) →higher surgeon volume	Low ⊕⊕○○
<i>In-house mortality</i>	2 OBS (8869 patients)	L: 1 (4841 patients); T: 1 (4028 patients) →higher surgeon volume	Very low ⊕○○○
<i>30-day mortality</i>	4 OBS (53 981 patients)	L: 2 (9249 patients); M: 1 (24 092 patients); T: 1 (20 640 patients) →higher surgeon volume	Very low ⊕○○○
<i>Morbidity</i>	1 OBS (2295 patients)	Due to heterogeneity see supplementary material B for details →higher surgeon volume	Very low ⊕○○○

Quelle: Blum TG et al. Eur Respir J 2023; 61: 2103201; DOI: 10.1183/13993003.03201-2021

## Vorteile von individueller Behandlung (Spezialisierung) (ERS-Guideline on various aspects of quality in lung cancer care)

**PICO 4: Should patients with lung cancer (or those suspected of having lung cancer) receive lung cancer-specific diagnostic or therapeutic procedures in hospitals/from professionals with higher volumes of activity/with a higher grade of specialisation for these procedures rather than receiving them in hospitals/from professionals with lower volumes of activity/with lower grade of specialisation for these procedures?**

PICO question, PICO subgroups and outcomes per subgroup	Total number and type <sup>#</sup> of included studies (total number of patients) per outcome	Effect strength <sup>¶</sup> and effect direction <sup>+</sup> per outcome	Quality of evidence per outcome
Subgroup 4: All lung cancer, all stages, better surgeon specialisation in surgical resections ( <i>versus</i> less surgeon specialisation)			
<i>Overall survival</i>	3 OBS (21 576 patients)	L: 1 (19 745 patients); T: 2 (1831 patients) →better surgeon specialisation	Very low ⊕○○○
<i>In-house mortality</i>	3 OBS (224 056 patients)	L: 3 (224 056 patients) →better surgeon specialisation	Very low ⊕○○○
<i>30-day mortality</i>	4 OBS (266 488 patients)	L: 2 (45 290 patients); M: 1 (9579 patients); S: 1 (211 619 patients) →better surgeon specialisation	Very low ⊕○○○
<i>Accuracy of staging</i>	1 OBS (222 233 patients)	L: 1 (222 233 patients) →better surgeon specialisation	Low ⊕⊕○○
<i>Receipt of curative treatment</i>	2 OBS (4482 patients)	L: 1 (2891 patients); T: 1 (1591 patients) →better surgeon specialisation	Very low ⊕○○○

**ERS recommendation:** In lung cancer patients, we recommend performing lung cancer surgery a) in lung cancer services specialised in thoracic surgery with high institutional volumes of pulmonary resections and b) by surgeons specialised in thoracic surgery with high individual volumes of pulmonary resections. (Strong recommendation for the intervention; paradigmatic situation in very low overall quality of evidence.)



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