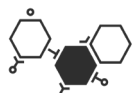


VII CONVEGNO NAZIONALE DELLA RETE ONCOLOGICA SIFaCT



Oltre il modello mutazionale e l'oncologia di precisione: la medicina personalizzata



ONCOFARMA

Milano 23-24 Giugno 2023



La ricerca SIFaCT: confrontare le curve di sopravvivenza
con l'intelligenza artificiale

Andrea Messori

Il software dei tre statistici texani.....

Liu et al. *BMC Medical Research Methodology* (2021) 21:111
<https://doi.org/10.1186/s12874-021-01308-8>

BMC Medical Research
Methodology

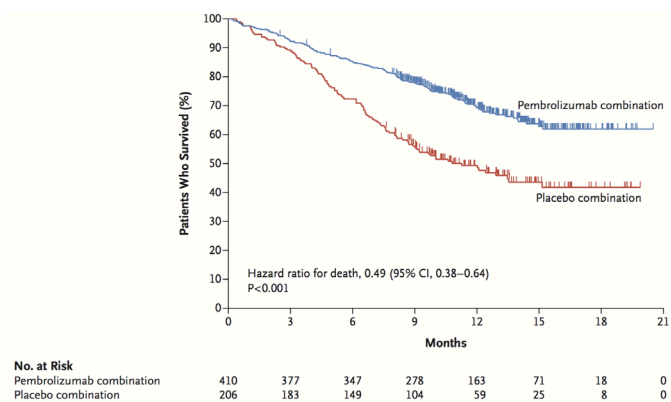
SOFTWARE

Open Access

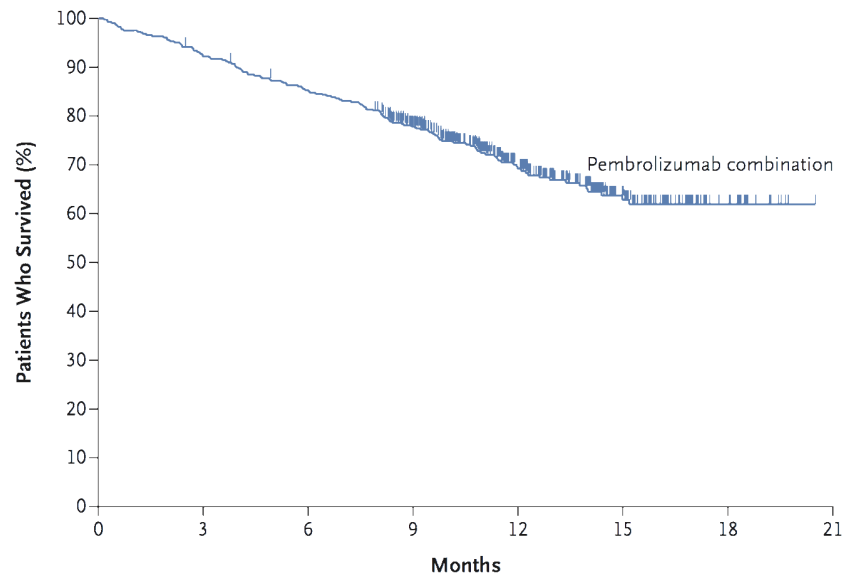
IPDfromKM: reconstruct individual patient data from published Kaplan-Meier survival curves



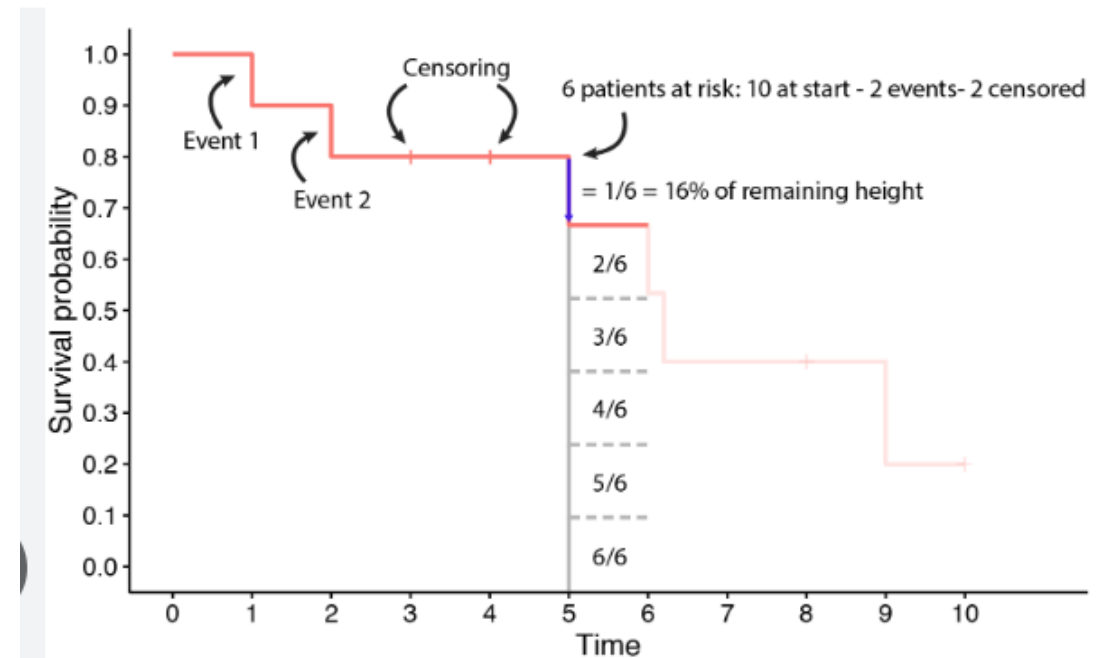
Na Liu, Yanhong Zhou and J. Jack Lee*



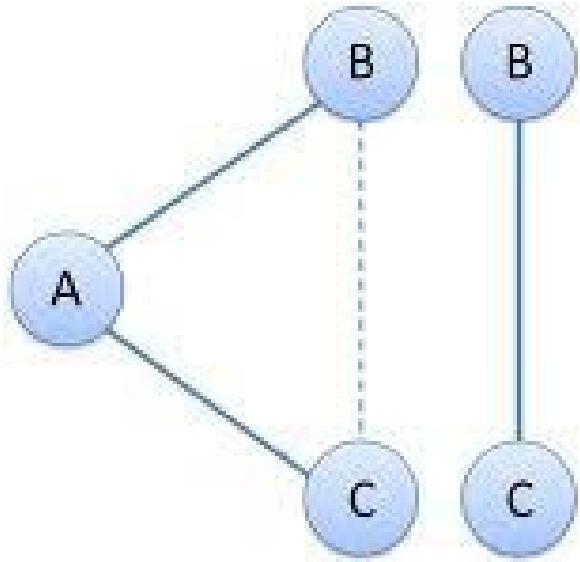
Regole (pluridecennali) per costruire una curva di sopravvivenza o «time to event»: non conta soltanto se l'evento si verifica oppure no, ma conta anche quando si verifica se si verifica



No. at Risk	0	3	6	9	12	15	18	21
Pembrolizumab combination	410	377	347	278	163	71	18	0
Placebo combination	206	183	149	104	59	25	8	0

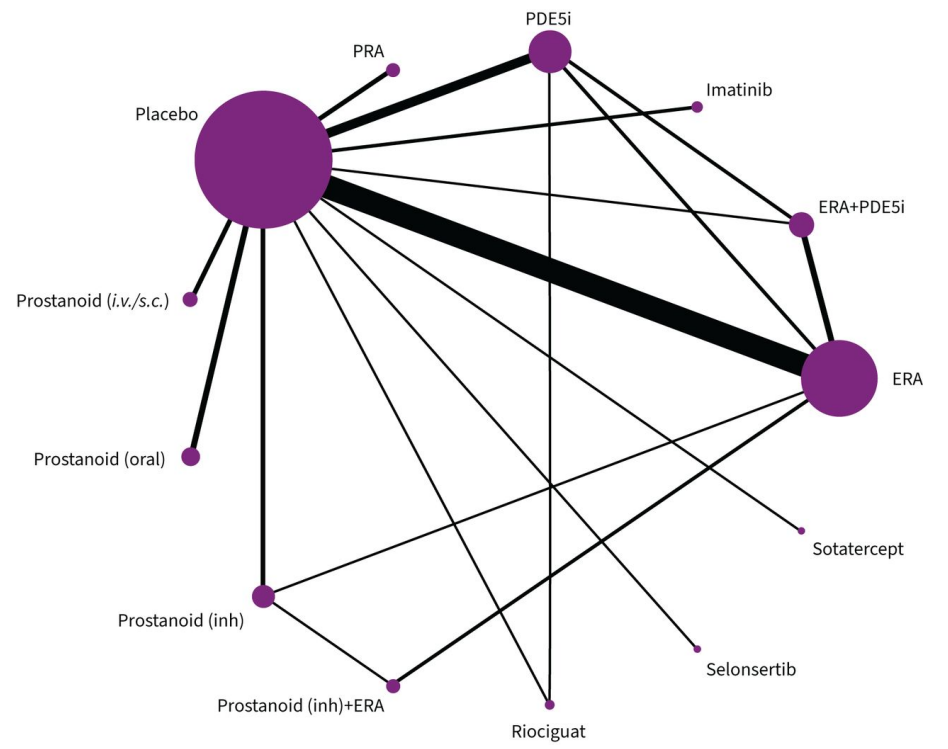
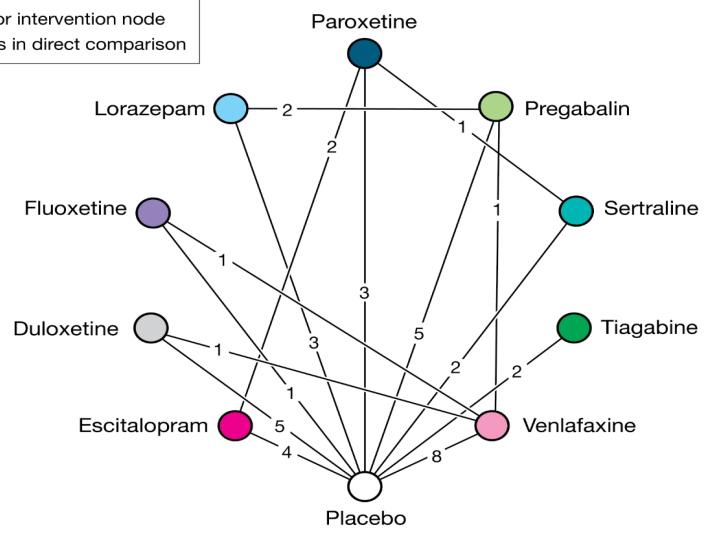


Disponibilità di due o più trattamenti candidati al trattamento della stessa popolazione

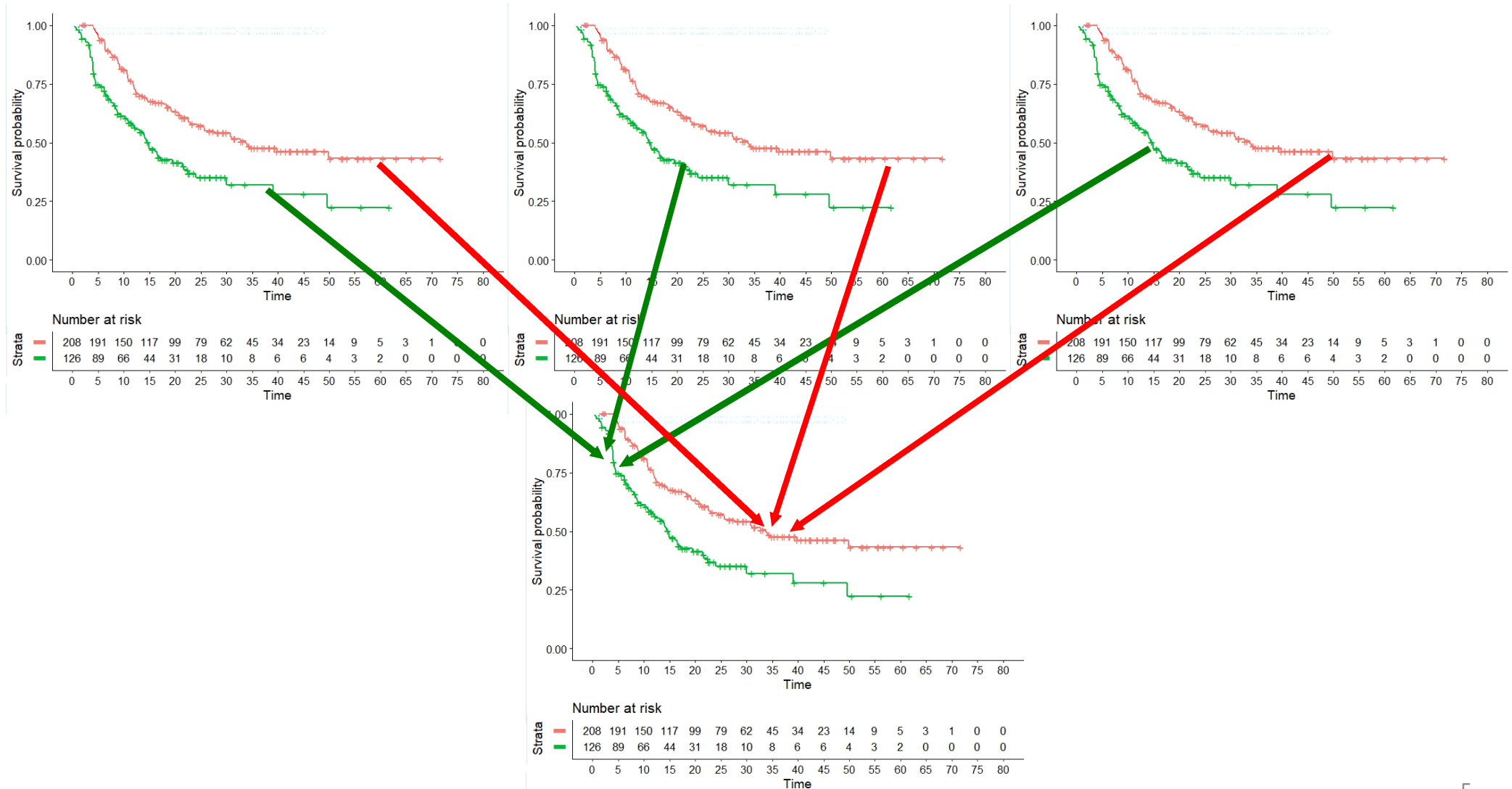


— direct comparisons
 - - - indirect comparisons

○ Treatment or intervention node
 -n- No. of RCTs in direct comparison



rosso ————— = trattati
 verde ————— = controlli



La omogeneità delle casistiche incluse nei confronti di efficacia

1) Nei trial randomizzati (di solito sono due casistiche):

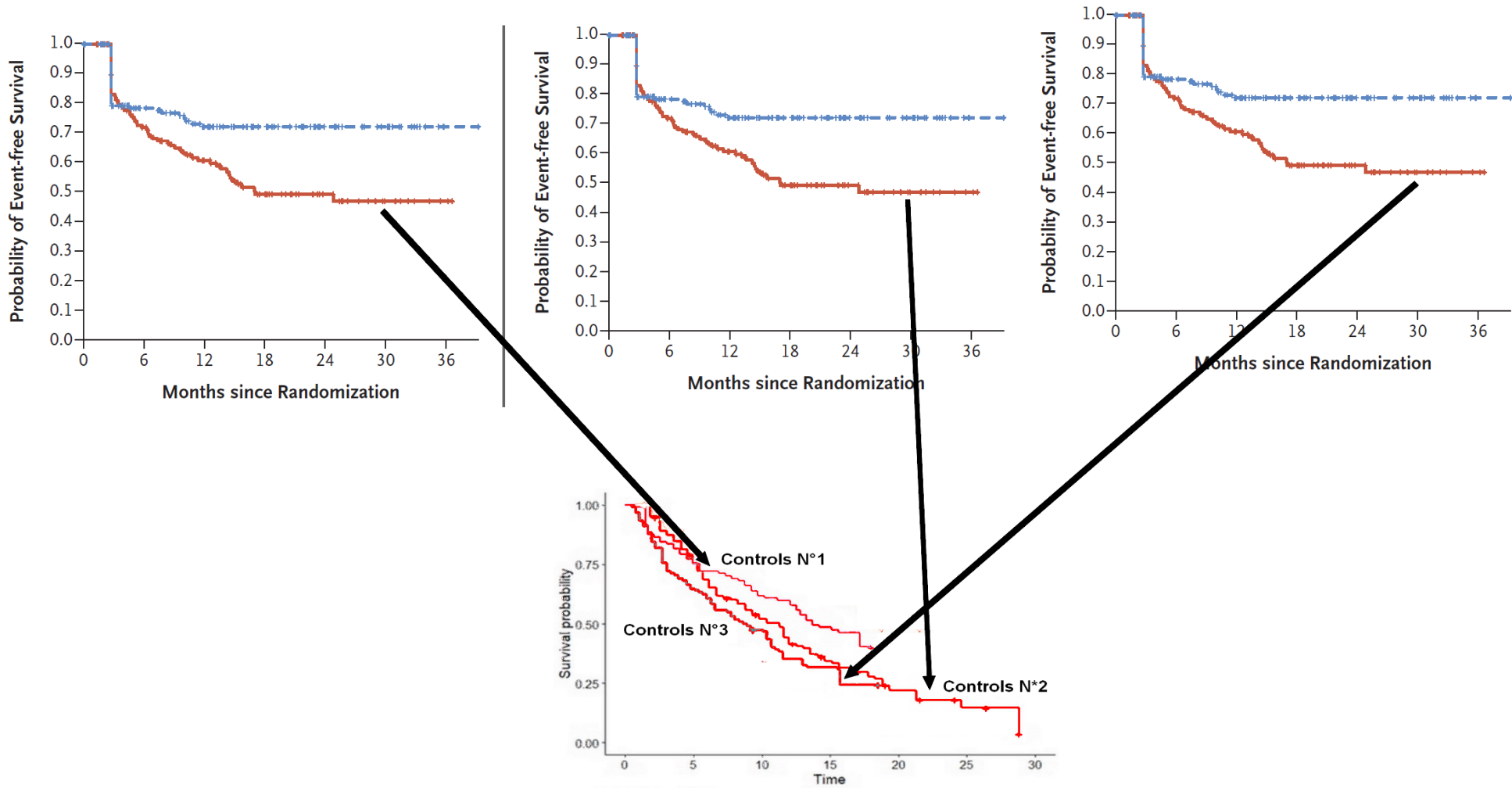
È la randomizzazione che rende omogenei i «trattati» ed i «controlli»

2) Nelle analisi secondo Shiny (di solito sono 3-4 casistiche):

Si esegue un'analisi Kaplan-Meier separata **solo sui controlli** dei vari trial, e si verifica se tali curve sono omogenee; se una curva dei controlli è migliore o peggiore delle curve degli altri controlli, se ne tiene conto.

Nota: i controlli con esiti «peggiori del normale» determinano un bias che avvantaggia «quel» rispettivo trattamento mentre quelli con esiti «migliori del normale» determinano un bias che svantaggia il trattamento; Shiny, comunque, «rimedia» al bias.

blu ————— = trattati
rosso ————— = controllati



Dove sta il valore aggiunto di questo «sistema»?


Liu et al. *BMC Medical Research Methodology* (2021) 21:111
<https://doi.org/10.1186/s12874-021-01308-8>

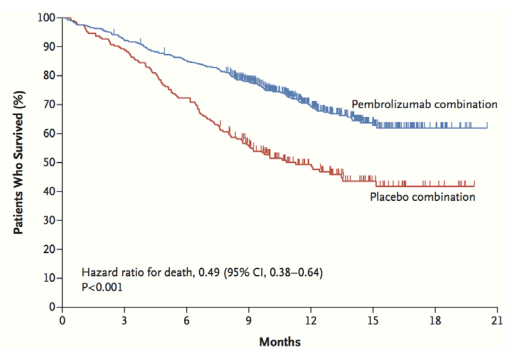
BMC Medical Research
Methodology

SOFTWARE

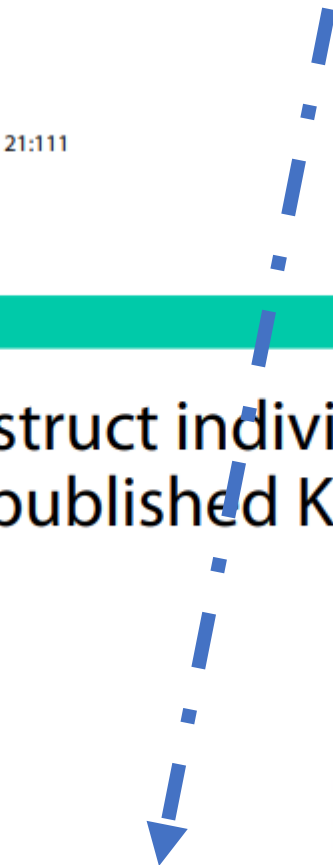
Open Access

IPDfromKM: reconstruct individual patient data from published Kaplan-Meier survival curves

Na Liu, Yanhong Zhou and J. Jack Lee* 



No. at Risk	0	3	6	9	12	15	18	21
Pembrolizumab combination	410	377	347	278	163	71	18	0
Placebo combination	206	183	149	104	59	25	8	0



Valore aggiunto?

«Inventarsi» dei trial controllati randomizzati, mai svoltisi nella realtà, ai quali facciamo partecipare i pazienti ricostruiti

Le analisi realizzate nel 2021-2022

<p>A COMPENDIUM OF PUBLISHED ARTICLES FOCUSED ON THE APPLICATION OF THE SHINY TECHNIQUE Andrea Messori HTA Unit, Centro Operativo, Regione Toscana, Firenze, Italy</p>
<p>THE SHINY TECHNIQUE: METHODOLOGICAL PAPERS AND REVIEWS</p> <ul style="list-style-type: none"> Messori A Damuzzo V, Rivano M, Cancanelli L, Di Spazio L, Ossato A, Chiumente M, Mengato D. Application of the IPDFromKM-Shiny method to compare the efficacy of novel treatments aimed at the same disease condition: a report of 14 analyses. Cancers 2023, 15(6), 1633; https://doi.org/10.3390/cancers15061633 Damuzzo V, Rivano M, Baldo P, Cancanelli L, Di Spazio L, Ossato A, Chiumente M, Messori A, Mengato D. Applicazione dell'intelligenza artificiale per un precoce confronto di efficacia tra nuovi farmaci oncologici. Application of artificial intelligence for an early comparison of efficacy between new cancer drugs (in Italian). Recenti Prog Med. 2022 Nov;113(11):680-687. Italian. doi: 10.1701/3907.38896. PMID: 36318172. https://www.recentiproggressi.it/fr.php?v=3907&a=38896&l=349711&f=allegati/03907_2022_11/fultext/RPM_1122.10_Articoli%20originale%20-%20Damuzzo.pdf Messori A, Rivano M, Cancanelli L, Damuzzo V, Ossato A, Chiumente M, Mengato D. The "One-to-Many" Survival Analysis to Evaluate a New Treatment in Comparison With Therapeutic Alternatives Based on Reconstructed Patient Data: Enfortumab Vedotin Versus Standard of Care in Advanced or Metastatic Urothelial Carcinoma. Cureus. 2022 Aug 25;14(8):e28369. doi: 10.7759/cureus.28369. PMID: 36171827; PMCID: PMC9508613, url https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9508613/pdf/cureus-0014-00000028369.pdf Messori A. Synthesizing published evidence on survival by reconstruction of patient-level data and generation of a multi-trial Kaplan-Meier curve. Cureus 2021 Nov 9;13(11):e19422. doi: 10.7759/cureus.19422. PMID: 34786276; PMCID: PMC8578838, url https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8578838/ Messori A. Lutetium in prostate cancer: Reconstruction of patient-level data from published trials and generation of a multi-trial Kaplan-Meier curve. World Journal of Methodology 2022;12(3):107-112. doi: 10.5662/wjm.v12.i3.107 available at https://www.f6publishing.com/ArticleInPressDetail?id=72756
<p>HEMATOLOGIC MALIGNANCIES</p>
<p>CART T-CELL</p> <ul style="list-style-type: none"> Messori A, Rivano M, Mengato D, Cancanelli L, Di Spazio L, Chiumente M. A preliminary estimate of survival gain and cost-effectiveness of CAR-T in adult patients with acute lymphoblastic leukaemia. Leukemia & Lymphoma 2021 Dec 31:1-4. doi: 10.1080/10428194.2021.2022141. https://www.tandfonline.com/eprint/TWPKPRVUQV6YKXDXHDX/full?target=10.1080/10428194.2021.2022141 Messori A. CAR-T treatment: determining the progression-free survival gain in patients with heavily pre-treated multiple myeloma. eJHem 2020;1(1):371-373. available at https://onlinelibrary.wiley.com/doi/full/10.1002/jha2.63 Messori A, Chiumente M, Mengato D. CAR T-cells in large B-cell lymphoma: analysis of overall survival based on reconstructed patient-level data. Clin Ther 2022 Dec 8:S0149-2918(22)00377-0. doi:

<p>CART T-CELL</p> <ul style="list-style-type: none"> Messori A, Rivano M, Mengato D, Cancanelli L, Di Spazio L, Chiumente M. A preliminary estimate of survival gain and cost-effectiveness of CAR-T in adult patients with acute lymphoblastic leukaemia. Leukemia & Lymphoma 2021 Dec 31:1-4. doi: 10.1080/10428194.2021.2022141. https://www.tandfonline.com/eprint/TWPKPRVUQV6YKXDXHDX/full?target=10.1080/10428194.2021.2022141 Messori A. CAR-T treatment: determining the progression-free survival gain in patients with heavily pre-treated multiple myeloma. eJHem 2020;1(1):371-373. available at https://onlinelibrary.wiley.com/doi/full/10.1002/jha2.63 Messori A, Chiumente M, Mengato D. CAR T-cells in large B-cell lymphoma: analysis of overall survival based on reconstructed patient-level data. Clin Ther 2022 Dec 8:S0149-2918(22)00377-0. doi: 10.1016/j.clinthera.2022.11.002. , http://www.osservatorioinnovazione.net/papers/clin_ther2022.pdf and https://authors.elsevier.com/a/1gDZhXyUs1BOW Messori A, Damuzzo V, Leonardi L, Agnoletto L, Chiumente M, Mengato D. CAR-T Treatment: Determining the Survival Gain in Patients With Relapsed or Refractory Diffuse Large B-cell Lymphoma. Clin Lymphoma Myeloma Leuk. 2020;20(7):490-491. doi:10.1016/j.clml.2020.02.007, preprint at 10.1159/000505891. [Epub ahead of print] PubMed PMID: 32074609.
<p>CHRONIC LYMPHOCYTIC LEUKEMIA</p> <ul style="list-style-type: none"> Messori A. Long-term progression-free survival in patients with chronic lymphocytic leukaemia treated with novel agents: an analysis based on indirect comparisons. Eur J Haematol. 2023 Jan;110(1):60-66. doi: 10.1111/ejh.13873. Epub 2022 Oct 11, galley proofs available at url http://www.osservatorioinnovazione.net/papers/eurjhaematol2022.pdf
<p>ACUTE MYELOID LEUKEMIA</p> <ul style="list-style-type: none"> Messori A, Hyeraci G. Meta-analysis on allogeneic transplant for treating pediatric patients with acute myeloid leukemia in first remission: reanalysis of primary data. Ann Hematol 2023 (in press) url http://www.osservatorioinnovazione.net/papers/messori2023annhematol.pdf
<p>DIFFUSE LARGE B-CELL LYMPHOMA (except CAR T-CELL)</p> <ul style="list-style-type: none"> Messori A, Caccese E. Treatments for relapsed-refractory diffuse large B-cell lymphoma: comparison of overall survival outcomes observed with four novel agents. Eur Rev Med Pharmacol Sci 2022;26(13):4666-4670. doi: 10.26355/eurrev_202207_29190, https://pubmed.ncbi.nlm.nih.gov/35856357/ and https://www.europeanreview.org/wp/wp-content/uploads/4666-4670.pdf
<p>MULTIPLE MYELOMA (EXCEPT CAR T-CELL)</p> <ul style="list-style-type: none"> Cancanelli L, Rivano M, Di Spazio L, Chiumente M, Mengato D, Messori A. Survival in patients with relapsed-refractory multiple myeloma: indirect comparison of six new treatments. Hematology reports, 2023, url http://www.osservatorioinnovazione.net/papers/hematologyreports2022.pdf
<p>SOLID TUMORS</p>
<p>RENAL CELL CARCINOMA</p> <ul style="list-style-type: none"> Ossato A, Mengato D, Chiumente M, Messori A, Damuzzo V. Progression-Free and Overall Survival of First-Line Treatments for Advanced Renal Cell Carcinoma: Indirect Comparison of Six

<p>COLO-RECTAL CANCER</p> <ul style="list-style-type: none"> Cancanelli L, Rivano M, Di Spazio L, Chiumente M, Mengato D, Messori A. Efficacy of Immune Checkpoint Inhibitors in Patients with Mismatch Repair-Deficient or Microsatellite Instability-High Metastatic Colorectal Cancer: Analysis of Three Phase-II Trials. Cureus 2021 Nov 25;13(11):e19893. doi: 10.7759/cureus.19893, url https://pubmed.ncbi.nlm.nih.gov/34966607/
<p>MELANOMA</p> <ul style="list-style-type: none"> Ossato A, Damuzzo V, Baldo P, Mengato D, Chiumente M, Messori A. Immune checkpoint inhibitors as first line in advanced melanoma: Evaluating progression-free survival based on reconstructed individual patient data. Cancer Med. 2022 Aug 3. doi: 10.1002/cam4.5067. Epub ahead of print. PMID: 35920297, available at https://onlinelibrary.wiley.com/doi/epdf/10.1002/cam4.5067
<p>PROSTATE CANCER</p> <ul style="list-style-type: none"> Rivano M, Cancanelli L, Di Spazio L, Mengato D, Chiumente M, Messori A. Survival with novel hormonal therapies in patients with nonmetastatic castration-resistant prostate cancer: indirect comparison of three international Phase III trials. World Journal of Urology 2022 (in press), available at https://trebuchet.public.springernature.app/get_content/aa3f430e-c5c6-4207-a848-b8127261f5e0
<p>UROTHELIAL CANCER</p> <ul style="list-style-type: none"> Messori A, Rivano M, Cancanelli L, et al. (August 25, 2022) The One-to-Many Survival Analysis to Evaluate a New Treatment in Comparison With Therapeutic Alternatives Based on Reconstructed Patient Data: Enfortumab Vedotin Versus Standard of Care in Advanced or Metastatic Urothelial Carcinoma. Cureus 14(8): e28369. doi:10.7759/cureus.28369, url https://www.cureus.com/articles/110065-the-one-to-many-survival-analysis-to-evaluate-a-new-treatment-in-comparison-with-therapeutic-alternatives-based-on-reconstructed-patient-data-enfortumab-vedotin-versus-standard-of-care-in-advanced-or-metastatic-urothelial-carcinoma?medium=email&src=email_share&utm_campaign=share&utm_medium=email&utm_source=email_share_mailer
<p>TRIPLE-NEGATIVE BREAST CANCER</p> <ul style="list-style-type: none"> Di Spazio L, Rivano M, Cancanelli L, Chiumente M, Mengato D, Messori A. The Degree of Programmed Death-Ligand 1 (PD-L1) Positivity as a Determinant of Outcomes in Metastatic Triple-Negative Breast Cancer Treated With First-Line Immune Checkpoint Inhibitors. Cureus. 2022 Jan 9;14(1):e21065. doi: 10.7759/cureus.21065, https://pubmed.ncbi.nlm.nih.gov/35028245/ url https://assets.cureus.com/uploads/review_article/pdf/82270/20220110-16971-mzer54.pdf
<p>OVARIAN CANCER</p> <ul style="list-style-type: none"> Mengato D, Cancanelli L, Di Spazio L, Rivano M, Chiumente M, Messori A. Indirect comparison of three PARP inhibitors (olaparib, niraparib and rucaparib) as maintenance treatment in ovarian carcinoma patients responding to platinum therapy. International Journal of Clinical Pharmacology and Therapeutics, 2022 Jun 2. doi: 10.5414/CP204243. Online ahead of print, preprint available at http://www.osservatorioinnovazione.net/papers/mengato-ijcpt2022.pdf
<p>MESOTHELIOMA</p> <ul style="list-style-type: none"> Messori A, Trippoli S. Current treatments for inoperable mesothelioma: indirect comparisons based on individual patient data reconstructed retrospectively from 4 trials. Journal of Chemotherapy, 2022 Apr 12:1-5. doi: 10.1080/1120009X.2022.2061183 available at http://www.osservatorioinnovazione.net/papers/messori-ioc2022.pdf

RENAL CELL CARCINOMA

- Ossato, A.; Mengato, D.; Chiumente, M.; Messori, A.; Damuzzo, V. Progression-Free and Overall Survival of First-Line Treatments for Advanced Renal Cell Carcinoma: Indirect Comparison of Six Combination Regimens. *Cancers* 2023, 15, 2029. <https://doi.org/10.3390/cancers15072029>, url <http://www.osservatorioinnovazione.net/papers/cancersossato2023.pdf>

COLO-RECTAL CANCER

- Cancanelli L, Rivano M, Di Spazio L, Chiumente M, Mengato D, Messori A. Efficacy of Immune Checkpoint Inhibitors in Patients with Mismatch Repair-Deficient or Microsatellite Instability-High Metastatic Colorectal Cancer: Analysis of Three Phase-II Trials. *Cureus* 2021 Nov 25;13(11):e19893. doi: 10.7759/cureus.19893, url <https://pubmed.ncbi.nlm.nih.gov/34966607/>

MELANOMA

- Ossato A, Damuzzo V, Baldo P, Mengato D, Chiumente M, Messori A. Immune checkpoint inhibitors as first line in advanced melanoma: Evaluating progression-free survival based on reconstructed individual patient data. *Cancer Med.* 2022 Aug 3. doi: 10.1002/cam4.5067. Epub ahead of print. PMID: 35920297, available at <https://onlinelibrary.wiley.com/doi/epdf/10.1002/cam4.5067>

PROSTATE CANCER

- Rivano M, Cancanelli L, Di Spazio L, Mengato D, Chiumente M, Messori A. Survival with novel hormonal therapies in patients with nonmetastatic castration-resistant prostate cancer: indirect comparison of three randomized Phase III trials. *World Journal of Urology* 2022 (in press), available at https://trebuchet.public.springernature.app/get_content/aa3f430e-c5c6-4207-a848-b8127261f5e0

UROTHELIAL CANCER

- Messori A, Rivano M, Cancanelli L, et al. (August 25, 2022) The One-to-Many Survival Analysis to Evaluate a New Treatment in Comparison With Therapeutic Alternatives Based on Reconstructed Patient Data: Enfortumab Vedotin Versus Standard of Care in Advanced or Metastatic Urothelial Carcinoma. *Cureus* 14(8): e28369. doi:10.7759/cureus.28369, url https://www.cureus.com/articles/110065-the-one-to-many-survival-analysis-to-evaluate-a-new-treatment-in-comparison-with-therapeutic-alternatives-based-on-reconstructed-patient-data-enfortumab-vedotin-versus-standard-of-care-in-advanced-or-metastatic-urothelial-carcinoma?medium=email&src=email_share&utm_campaign=share&utm_medium=email&utm_source=email_share_mailer

TRIPLE-NEGATIVE BREAST CANCER

- Di Spazio L, Rivano M, Cancanelli L, Chiumente M, Mengato D, Messori A. The Degree of Programmed Death-Ligand 1 (PD-L1) Positivity as a Determinant of Outcomes in Metastatic Triple-Negative Breast Cancer Treated With First-Line Immune Checkpoint Inhibitors. *Cureus*. 2022 Jan 9;14(1):e21065. doi: 10.7759/cureus.21065, <https://pubmed.ncbi.nlm.nih.gov/35028245/> url https://assets.cureus.com/uploads/review_article/pdf/82270/20220110-16971-mzer54.pdf

OVARIAN CANCER

- Mengato D, Cancanelli L, Di Spazio L, Rivano M, Chiumente M, Messori A. Indirect comparison of three PARP inhibitors (olaparib, niraparib and rucaparib) as maintenance treatment in ovarian carcinoma patients responding to platinum therapy. *International Journal of Clinical*

Papers authored by other research groups:

Dimagli, A.; Cancelli, G.; Soletti, G.J.; Perezgrovas, O.R.; Chadow, D.; Rahouma, M.; Girardi, L.; Gaudino, M. Percutaneous coronary intervention versus repeat surgical revascularization in patients with prior coronary artery bypass grafting: A systematic review and meta-analysis. *JTCVS Open*. 2022, 12, 177-191, doi:10.1016/j.xjon.2022.10.006.

Leung, Y.Y.R.; Bera, K.; Urriza, R. D.; Dardik, A.; Mas, J.L.; Simonte, G.; Rerkasem, K.; Howard, D.P.J. Safety of Carotid Endarterectomy for Symptomatic Stenosis by Age: Meta-Analysis With Individual Patient Data. *Stroke*. 2023, 54, 457-467, doi: 10.1161/STROKEAHA.122.040819.

Magouliotis, D.E.; Zotos, P.A.; Karamolegkou, A.P.; Tatsios, E.; Spiliopoulos, K.; Athanasiou, T. Long-Term Survival after Extended Sleeve Lobectomy (ESL) for Central Non-Small Cell Lung Cancer (NSCLC): A Meta-Analysis with Reconstructed Time-to-Event Data. *J Clin Med*. 2022, 12, 204, doi: 10.3390/jcm12010204.

Tan, B.K.J.; Han, R.; Zhao, J.J.; Tan, N.K.W.; Quah, E.S.H.; Tan, C.J.; Chan, Y.H.; Teo, N.W.Y.; Charn, T.C.; See, A.; et al. Prognosis and persistence of smell and taste dysfunction in patients with covid-19: meta-analysis with parametric cure modelling of recovery curves. *BMJ*. 2022, 27, 378:e069503, doi: 10.1136/bmj-2021-069503. Erratum in: *BMJ*. 2022, 9, 378:o1939.

Yap, D.W.T.; Leone, A.G.; Wong, N.Z.H.; Zhao, J.J.; Tey, J.C.S.; Sundar, R.; Pietrantonio, F. Effectiveness of Immune Checkpoint Inhibitors in Patients With Advanced Esophageal Squamous Cell Carcinoma: A Meta-analysis Including Low PD-L1 Subgroups. *JAMA Oncol*. 2023, 9, 215-224, doi: 10.1001/jamaoncol.2022.5816.

Fong, K.Y.; Zhao, J.J.; Sultana, R.; Lee, J.J.X.; Lee, S.Y.; Chan, S.L.; Yau, T.; Tai, D.W.M.; Sundar, R.; Too, C.W. First-Line Systemic Therapies for Advanced Hepatocellular Carcinoma: A Systematic Review and Patient-Level Network Meta-Analysis. *Liver Cancer*. 2022, 12, 7-18, doi: 10.1159/000526639.

Giacopelli D, Azzolina D, Comoretto RI, Quartieri F, Rovaris G, Schillaci V, Gargaro A, Gregori D. Implantable cardioverter defibrillator lead performance: A systematic review and individual patient data Meta-analysis. *Int J Cardiol*. 2022 Nov 29;S0167-5273(22)01735-1. doi: 10.1016/j.ijcard.2022.11.048. Epub ahead of print. PMID: 36460209.

Il filone cardiologico 2023:

Prosthesis-Patient Mismatch Following Transcatheter Aortic Valve Replacement A New Analytic Approach Provides New Insights*



Linda D. Gillam, MD, MPH

JACC: Cardiovascular Imaging

It seems intuitive that suboptimal relief of the pressure overload of aortic stenosis (AS) with a valve prosthesis that is too small for the patient would negatively impact outcomes. This concept, prosthesis-patient mismatch (PPM), was first described by Rahimtoola¹ in 1978 and expanded upon by Pibarot et al² in the late 1990s. Based on the inflection point at which aortic transprosthetic gradients start to rise significantly and the concept that indexing effective orifice area (EOA) to body surface area (BSA) provides a practical measure of prosthesis-patient match or PPM, PPM has been defined as present if the indexed effective orifice area (iEOA) is $\leq 0.85 \text{ cm}^2/\text{m}^2$. More arbitrarily, severe PPM has been defined by an iEOA $< 0.65 \text{ cm}^2/\text{m}^2$, and these concepts of PPM are now widely applied.³

A link between PPM and adverse outcomes for surgical aortic valve replacement is generally accepted, as captured in a recent meta-analysis focusing on perioperative and 1-, 5-, and 10-year mortality,⁴ although the accompanying forest plots demonstrate heterogeneity in reported associations. The impact of PPM in transcatheter aortic valve replacement (TAVR) is even more controversial. For example, 2 recent studies, both based on the STS/ACC/TVT (Society of Thoracic Surgeons/American College of Cardiology/Transcatheter Valve Therapy)

Herrmann et al⁵ reported severe PPM present in 12% of patients and associated with increased 1-year mortality and heart failure hospitalization, whereas Tang et al⁶ reported severe PPM in only 5% of patients with supra-annular or valve-in-valve TAVR. However, Tang et al⁶ used recommended obesity-adjusted definitions for PPM in patients with BSA $\geq 30 \text{ m}^2$ that lower cutoffs for any and severe PPM from 0.85 to $0.7 \text{ cm}^2/\text{m}^2$ and 0.65 to $0.55 \text{ cm}^2/\text{m}^2$, respectively.⁷ These disparities highlight the impact of confounding variables and differing definitions of PPM on assessing PPM prevalence and impact.

Meta-analyses are important statistical tools in dealing with varying study results by combining results from multiple studies identified through systematic review after formulating a clear question. In this issue of *JACC: Cardiovascular Imaging*, Sá et al⁸ took this approach to address the impact of PPM on mortality in TAVR. **Although there have been other meta-analyses on this topic, as cited by the authors, this is the first to reconstruct time-to-event data from a pooled analysis of Kaplan-Meier estimated individual patient data, rather than by merging HRs produced with different time points. Time-to-event outcomes take into account that both the event and its timing are important, which is clearly the case in the setting of TAVR-associated mortality.**

JACC: CARDIOVASCULAR IMAGING

© 2023 BY THE AMERICAN COLLEGE OF CARDIOLOGY FOUNDATION
PUBLISHED BY ELSEVIER

VOL. 16, NO. 3, 2023

SPECIAL ISSUE: EVIDENCE-BASED IMAGING

ORIGINAL RESEARCH

Impact of Prosthesis-Patient Mismatch After Transcatheter Aortic Valve Replacement



Meta-Analysis of Kaplan-Meier-Derived Individual Patient Data

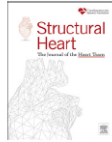
Michel Pompeu Sá, MD, MSc, MHBA, PhD,^{a,b,*} Xander Jacquemyn, BSc,^{c,*} Jef Van den Eynde, BSc,^c Panagiotis Tasoudis, MD,^b Aleksander Dokollari, MD,^b Gianluca Torregrossa, MD, MEBCTS,^{a,b} Serge Sicouri, MD,^b Marie-Annick Clavel, DVM, PhD,^{d,e} Philippe Pibarot, DVM, PhD,^{d,e} Basel Ramlawi, MD^{a,b}



Articles and Issues Available at ScienceDirect

Structural Heart

journal homepage: www.structuralheartjournal.org



Original Research

Impact of Paravalvular Leak on Outcomes After Transcatheter Aortic Valve Implantation: Meta-Analysis of Kaplan-Meier-derived Individual Patient Data



Michel Pompeu Sá, MD, MSc, MHBA, PhD^{a,b,*}, Xander Jacquemyn, BSc^{c,1}, Jef Van den Eynde, BSc^c, Panagiotis Tasoudis, MD^b, Ozgun Erten, MD^b, Serge Sicouri, MD^b, Francisco Yuri Macedo, MD, MSc^d, Tilak Pasala, MD, MRCP^d, Ryan Kaple, MD^d, Alexander Weymann, MD, MHBA, PhD^e, Arjang Ruhparwar, MD, PhD^e, Marie-Annick Clavel, DVM, PhD^{f,g}, Philippe Pibarot, DVM, PhD^{f,g}, Basel Ramlawi, MD^{a,b}

^a Department of Cardiothoracic Surgery, Lankenau Heart Institute, Lankenau Medical Center, Main Line Health, Wynnewood, Pennsylvania, USA

^b Department of Cardiothoracic Surgery Research, Lankenau Institute for Medical Research, Wynnewood, Pennsylvania, USA

^c Department of Cardiovascular Sciences, KU Leuven, Leuven, Belgium

^d Division of Structural Heart Disease, Department of Medicine, Hackensack University Medical Center, Hackensack, New Jersey, USA

^e Department of Thoracic and Cardiovascular Surgery, West German Heart and Vascular Center Essen, University Hospital of Essen, University of Duisburg-Essen, Essen, Germany

^f Quebec Heart & Lung Institute, Université Laval, Québec City, Québec, Canada

^g Department of Medicine, Faculty of Medicine, Université Laval, Québec City, Québec, Canada

ARTICLE IN PRESS

JID: TCM

[m5G; June 2, 2023; 1:1]

Trends in Cardiovascular Medicine xxx (xxxx) xxx



Contents lists available at ScienceDirect

Trends in Cardiovascular Medicine

journal homepage: www.elsevier.com/locate/tcm



Transcatheter aortic valve implantation versus surgical aortic valve replacement in chronic kidney disease: Meta-analysis of reconstructed time-to-event data

Xander Jacquemyn^{a,b,*}, Jef Van den Eynde^{a,b}, Quinten Iwens^b, Janne Billiau^b, Habib Jabagi^c, Derek Serna-Gallegos^{d,e}, Danny Chu^{d,e}, Ibrahim Sultan^{d,e}, Michel Pompeu Sá^{d,e}

^a Department of Cardiovascular Sciences, KU Leuven, Leuven, Belgium

^b Faculty of Medicine, KU Leuven, Leuven, Belgium

^c Department of Cardiothoracic Surgery, Valley Heart and Vascular Institute, Ridgewood, NJ, United States

^d Department of Cardiothoracic Surgery, University of Pittsburgh, Pittsburgh, PA, United States

^e Heart and Vascular Institute, University of Pittsburgh Medical Center, Pittsburgh, PA, United States

Transcatheter Versus Surgical Aortic Valve Replacement in Low-Risk Patients



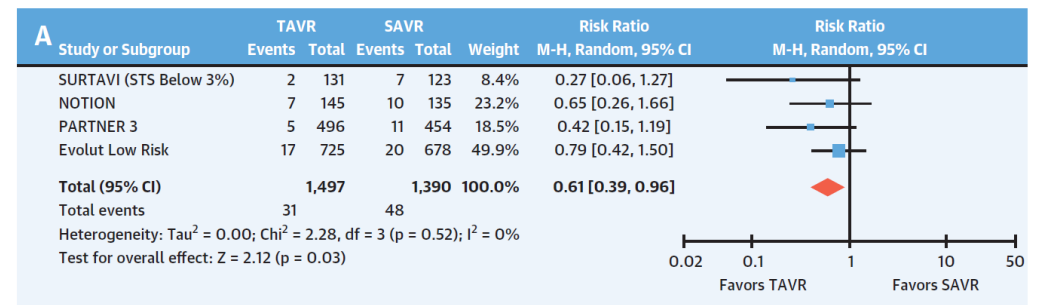
Dhaval Kolte, MD, PhD,^a Gus J. Vlahakes, MD,^b Igor F. Palacios, MD,^a Rahul Sakhuja, MD,^a Jonathan J. Passeri, MD,^a Ignacio Inglessis, MD,^a Sammy Elmariah, MD, MPH^a

Metanalisi tradizionale eseguita nel 2019: da rifare con Shiny

ABSTRACT

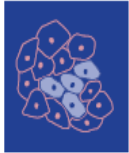
BACKGROUND Transcatheter aortic valve replacement (TAVR) has emerged as a safe and effective therapeutic option for patients with severe aortic stenosis (AS) who are at prohibitive, high, or intermediate risk for surgical aortic valve replacement (SAVR). However, in low-risk patients, SAVR remains the standard therapy in current clinical practice.

CENTRAL ILLUSTRATION All-Cause and Cardiovascular Death at 1 Year After TAVR Versus SAVR in Low-Risk Patients



Il filone oncologico SIFACT:

Messori A Damuzzo V, Rivano M, Cancanelli L, Di Spazio L, Ossato A, Chiumente M, Mengato D. Application of the IPDfromKM-Shiny method to compare the efficacy of novel treatments aimed at the same disease condition: a report of 14 analyses. **Cancers** 2023, 15(6), 1633; <https://doi.org/10.3390/cancers15061633>

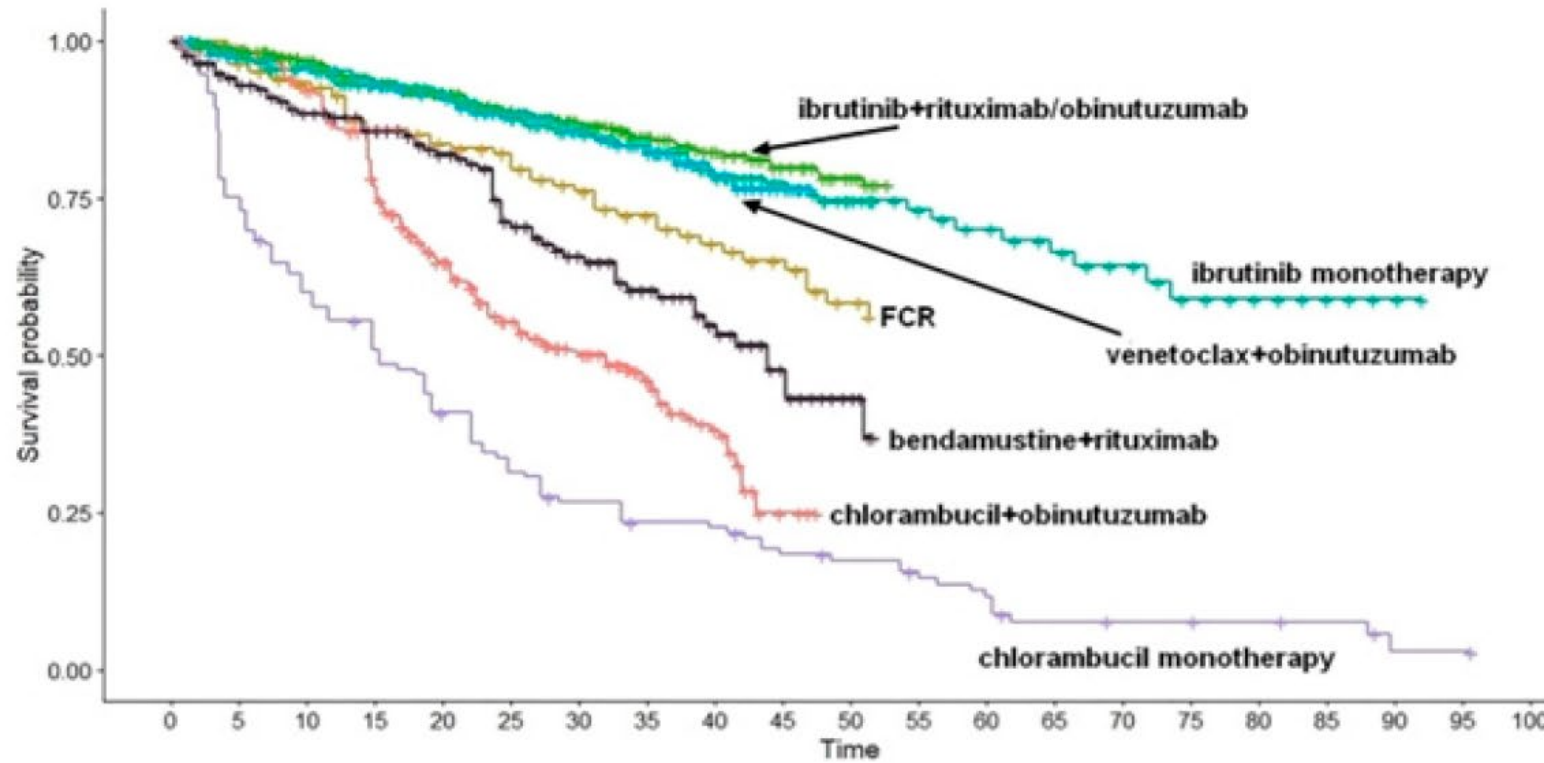


Review

Application of the IPDfromKM-Shiny Method to Compare the Efficacy of Novel Treatments Aimed at the Same Disease Condition: A Report of 14 Analyses

Andrea Messori ^{1,*}, Vera Damuzzo ², Melania Rivano ³, Luca Cancanelli ², Lorenzo Di Spazio ⁴, Andrea Ossato ⁵, Marco Chiumente ⁶ and Daniele Mengato ⁷

Il «progresso»
quantificato



Number at risk

Strata	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
—	332	310	273	213	165	124	98	72	43	16	0	0	0	0	0	0	0	0	0	0	0
—	175	158	144	125	110	99	83	69	53	42	29	0	0	0	0	0	0	0	0	0	0
—	637	581	518	449	387	325	265	205	154	109	76	0	0	0	0	0	0	0	0	0	0
—	314	287	263	235	214	186	162	137	112	89	67	50	42	34	27	20	14	8	4	0	0
—	216	192	174	148	128	104	84	62	40	22	0	0	0	0	0	0	0	0	0	0	0
—	133	100	79	66	52	40	33	28	27	21	19	16	12	7	6	6	5	4	1	1	0
—	176	154	136	122	106	83	67	51	36	21	9	0	0	0	0	0	0	0	0	0	0

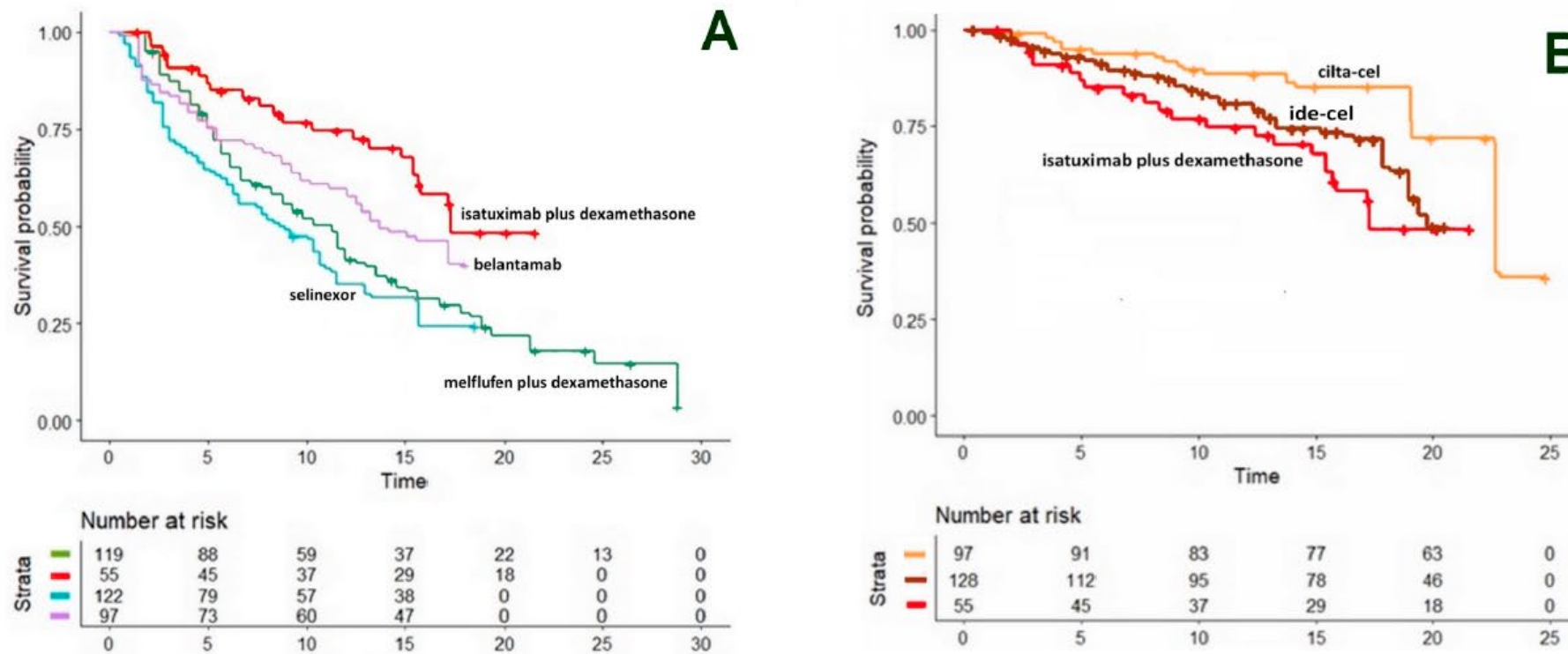


Figure 4. Relapsed-refractory multiple myeloma. (A). OS curves from the reconstruction of IPD

L'entità del beneficio....

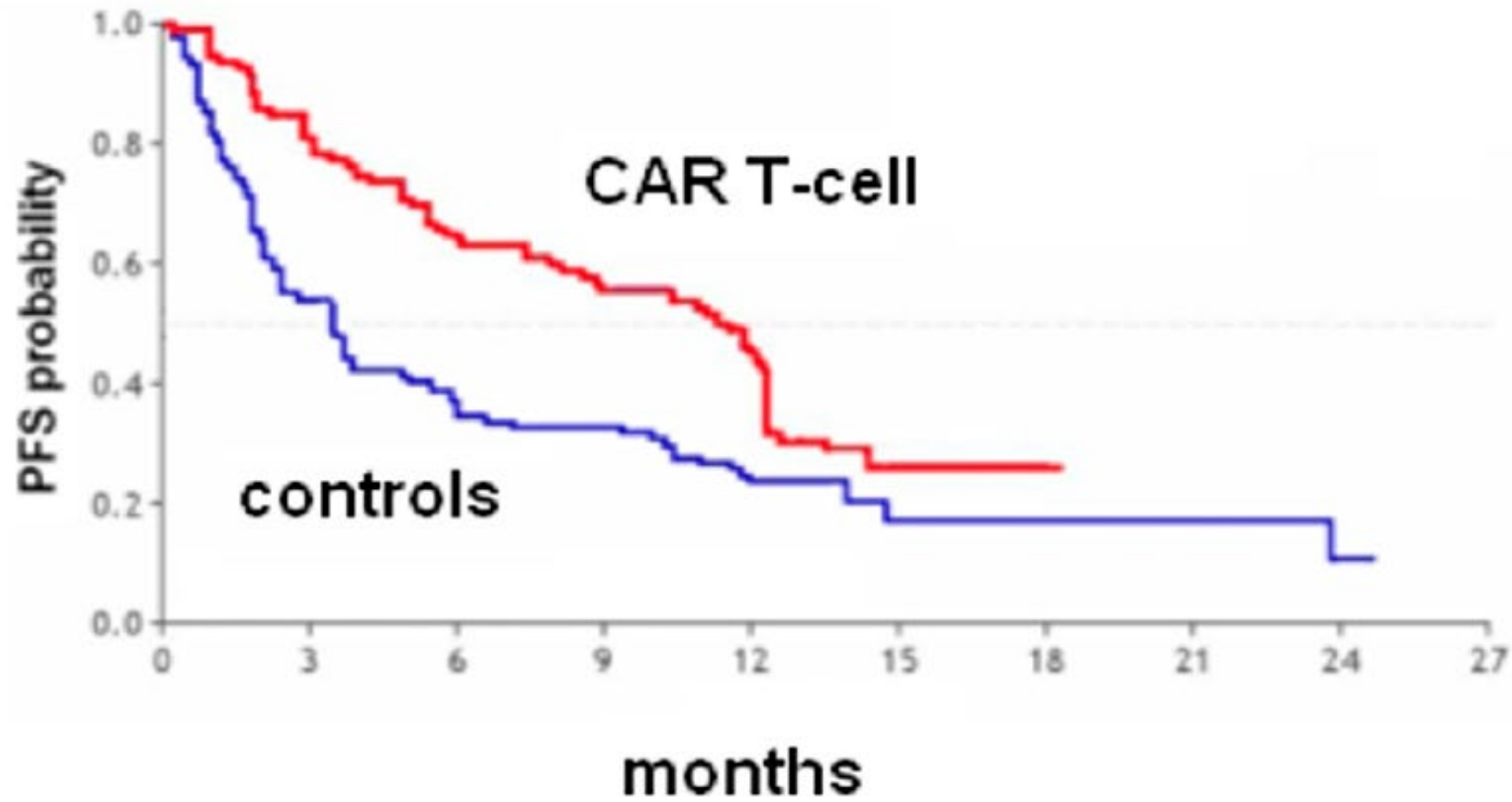


Figure 5. Heavily pretreated multiple myeloma. PFS curves from the reconstruction

Confronti indiretti (impossibili da eseguire nella realtà)

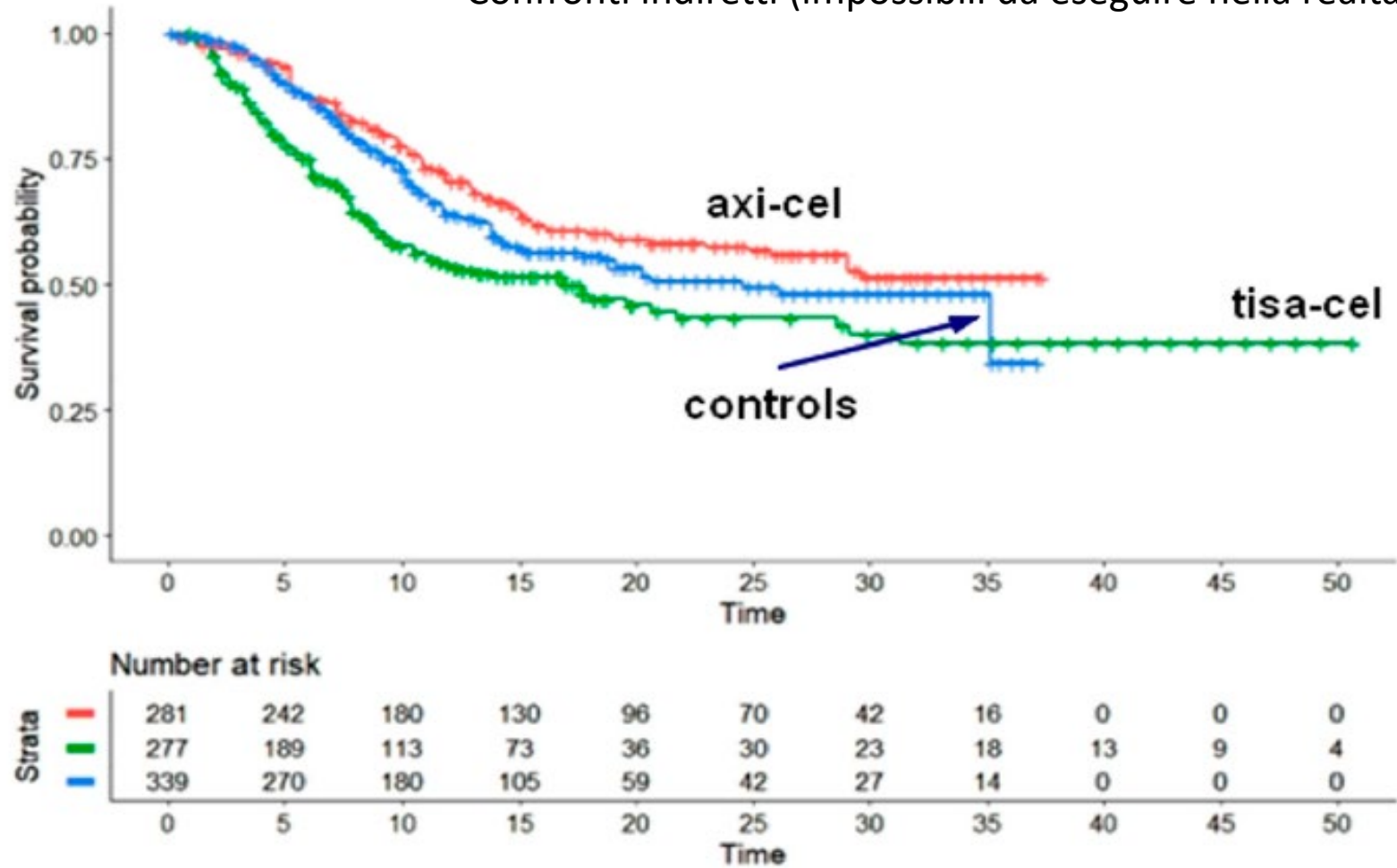


Figure 6. Large B-cell lymphoma. Survival curves from the reconstru

one-to-many analysis

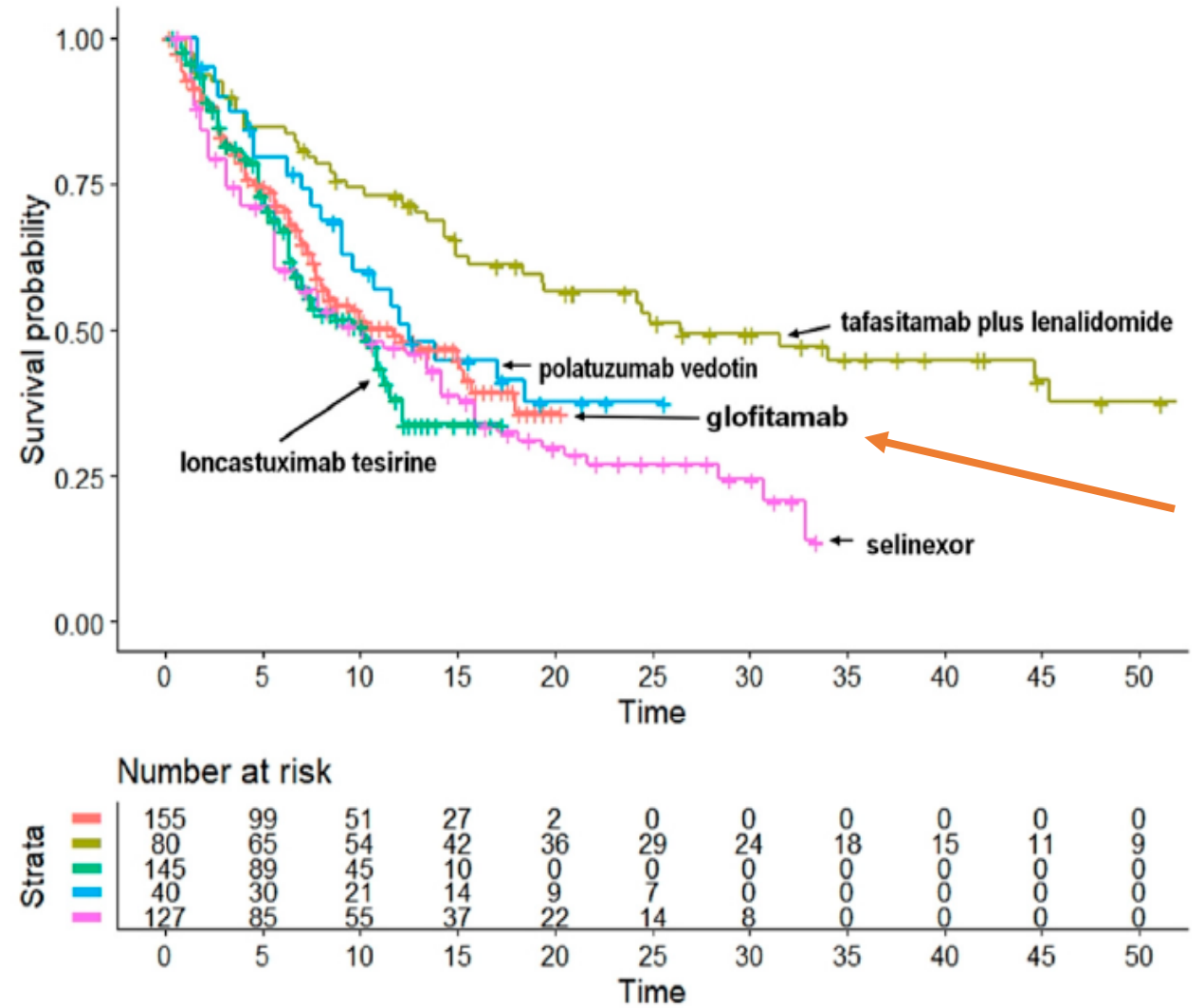
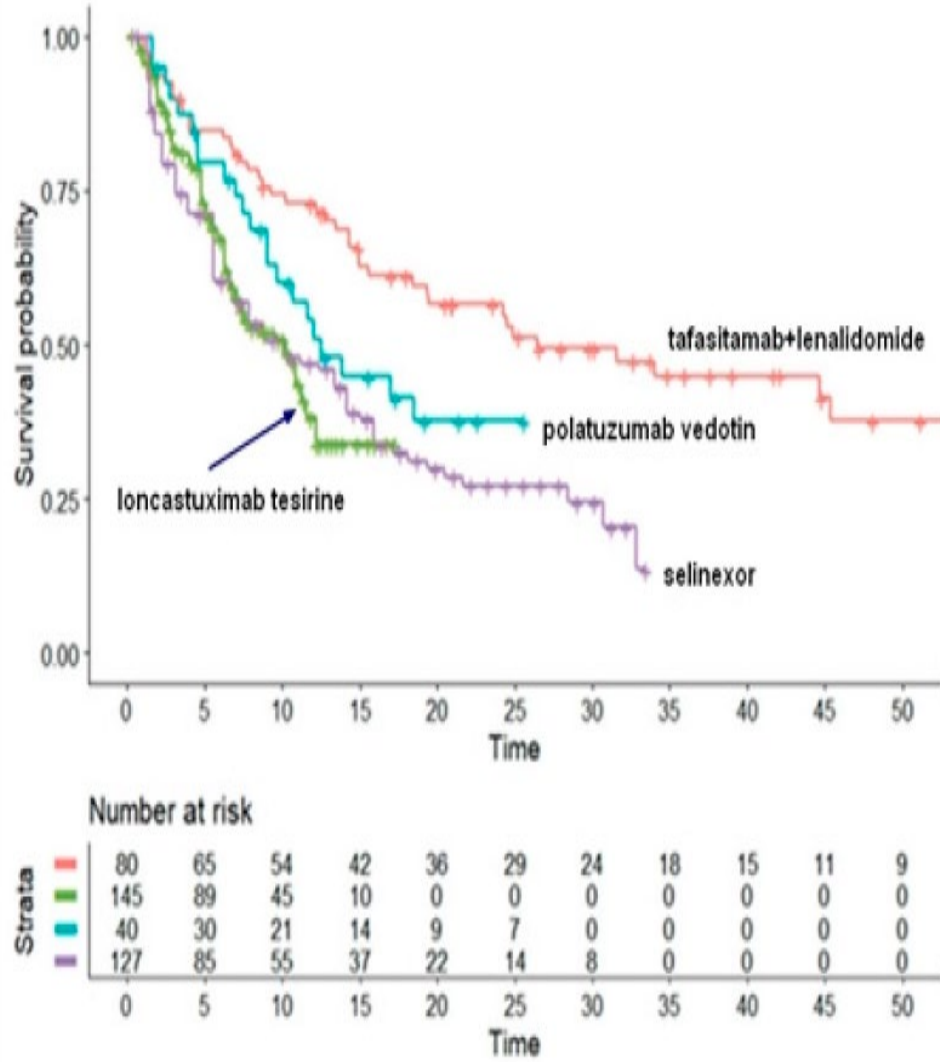


Figure 7. Relapsed-refractory diffuse large B-cell lymphoma. Survival curves from t

one-to-many analysis

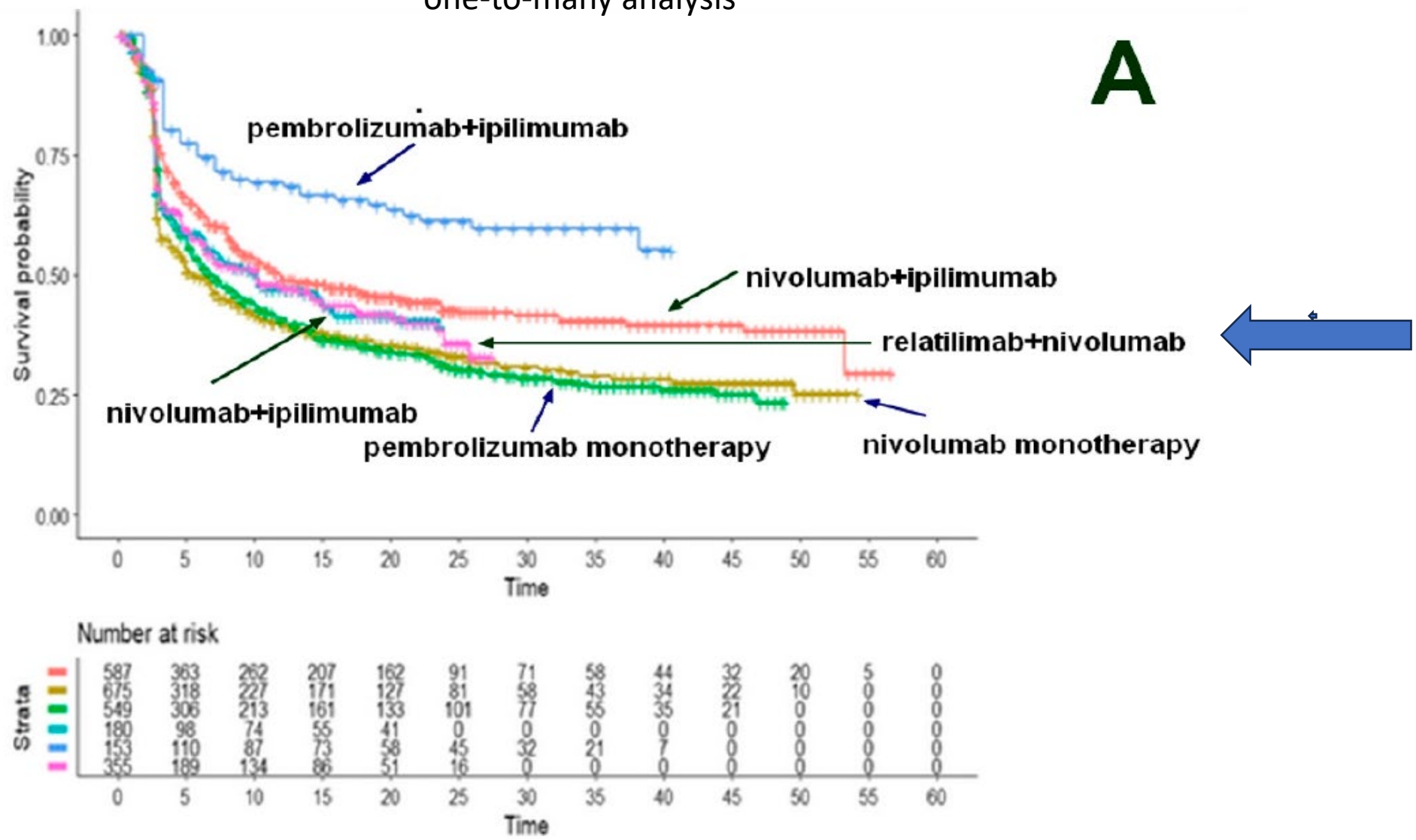


Figure 9. Advanced melanoma.

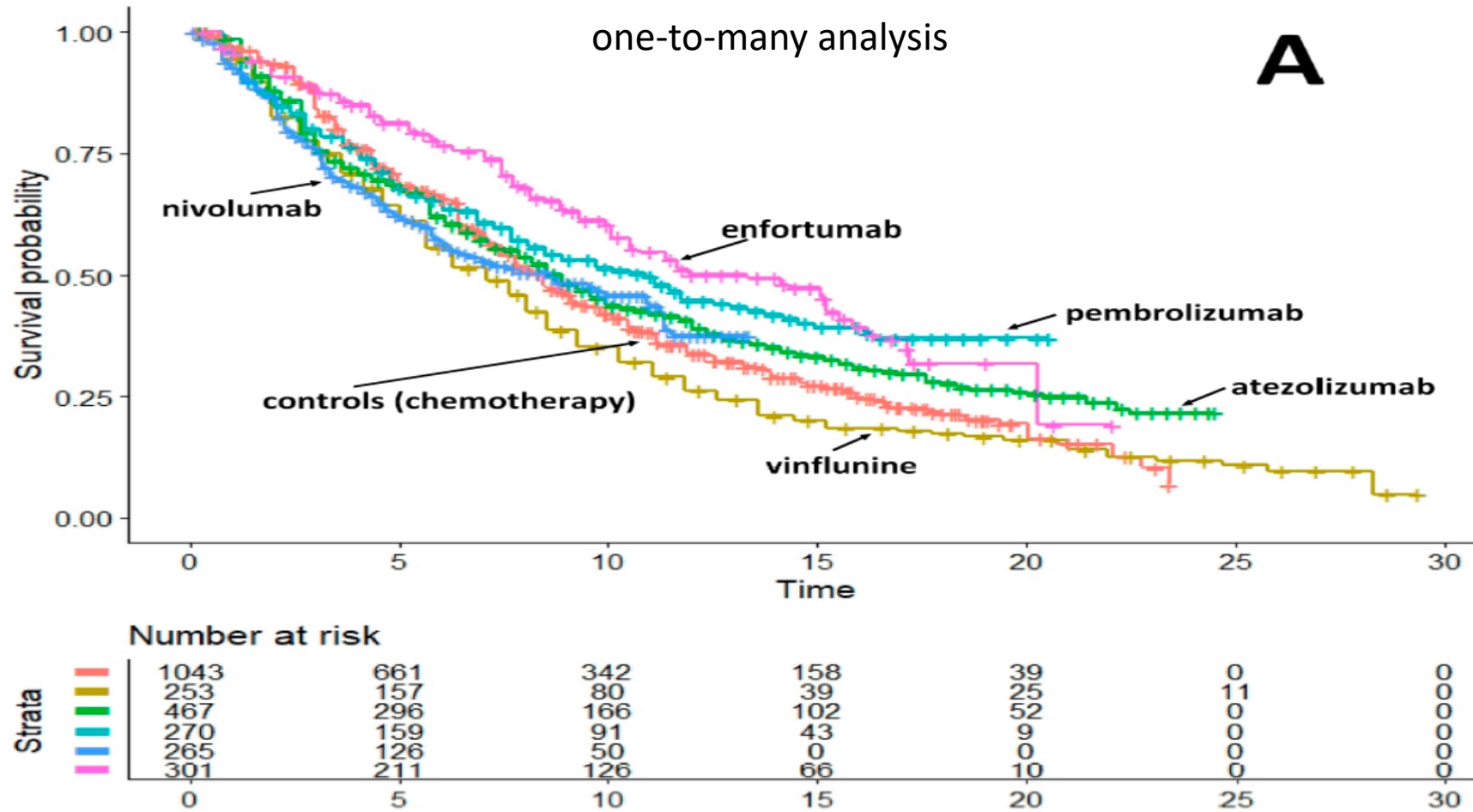
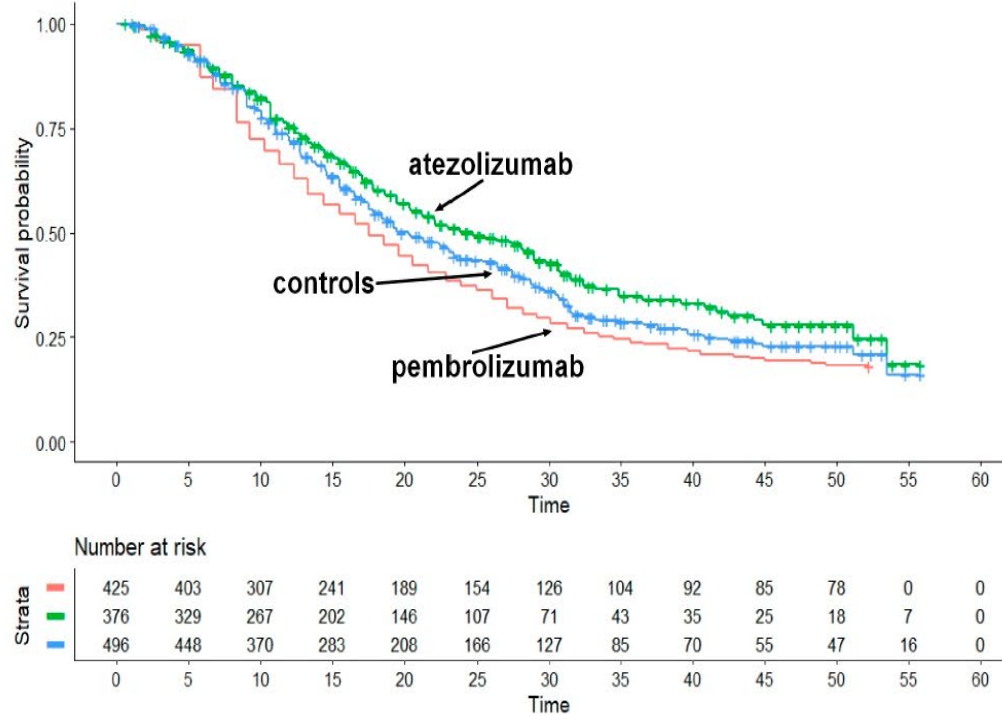
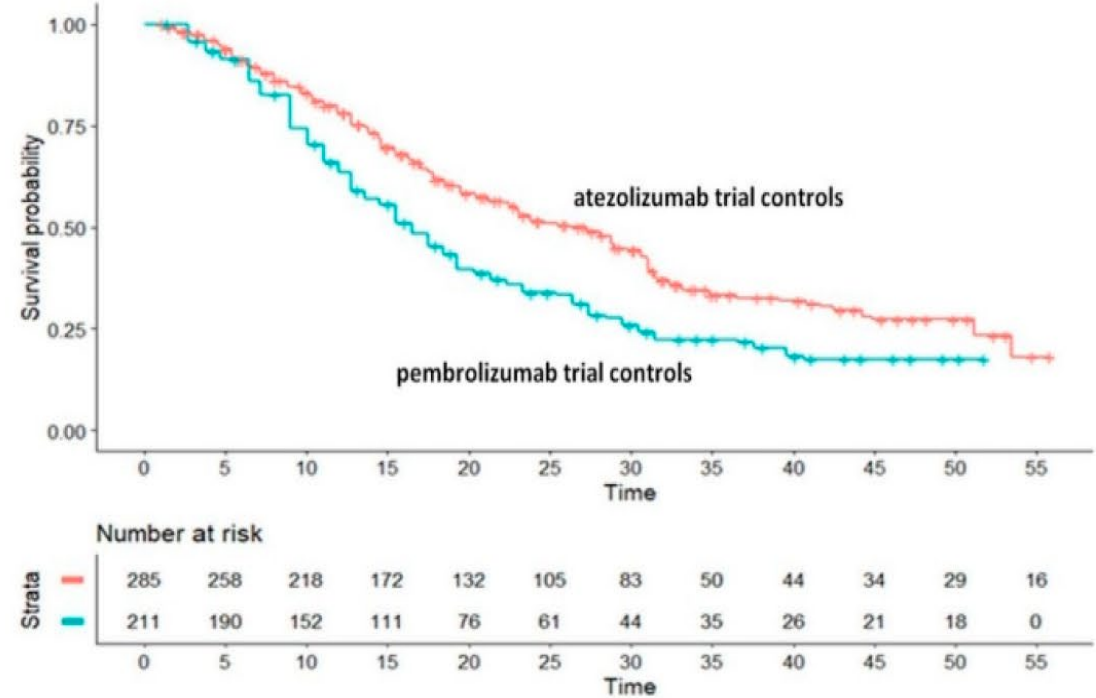


Figure 11. Advanced or Metastatic Urothelial Carcinoma

identificare gli artefatti.....

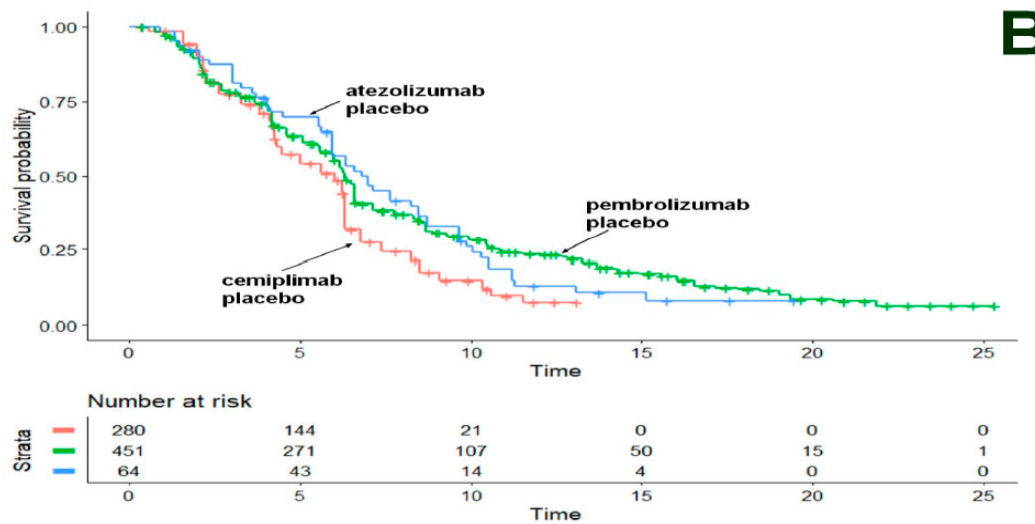
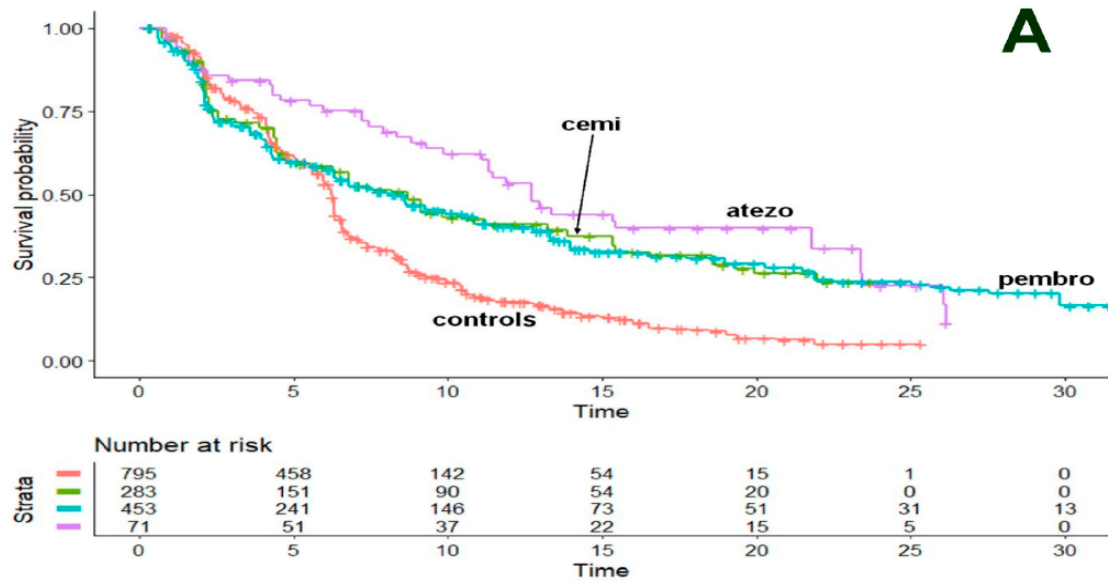


(A)



(B)

Figure 12. Triple-Negative Breast Cancer. Survival curves from the reconstruction of IPD from 3 trials.



Documentare l'affidabilità di un confronto indiretto dimostrando l'omogeneità dei controlli arruolati nei diversi trial

Figure 15. First-line immunotherapy in patients with non-small cell lung cancer and PD(L) expression >50%. Panel (A): progression-free survival in the three experimental patient groups; three placebo