Caris Abstracts and Presentation Schedule

IASLC WCLC 2025

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ORAL

#OA09.03: Real-World Assessment of TROP2-NMR by Quantitative Continuous Scoring (QCS) in Non-Small Cell Lung Carcinoma (NSCLC)

Presenter: F. Lopez-Rios

Author(s): F. Lopez-Rios, L.J. Inge, C. Blechet, D. Bryant, L. Bubendorf, N. Fusco, M. Hanna, L. Heukamp, P. Joubert, J. Mallick, A. Roden, M. Salto-Tellez, J. Boland-Froemming, O. Chijioke, B. Cody, E. Conde, D. Curto, F. Delalande, P. Desmeules, R. Dhir, A. Gagné, E. Guerini-Rocco, K. Horling, J. James, F.M. Porta, P. Maxwell, A. McGuire, C. Meroueh, P. Michenet, P. Pittman, R. Post, S. Savic-Prince, C. Solomides, K. Tiemann, C. Chun Chen, K. Kintz, M. Senior, J. Longshore, L. Moore

Key Findings:

- QCS for TROP2 expression demonstrated extremely high reproducibility across sites and pathologists.
- Despite requiring pathologist input, inter-reader and inter-site agreement remained >99%.
- QCS offers a robust and consistent approach for assessing TROP2 in real-world settings.

Session: OA09 New Advances in Pathology

Time: 3:52 – 4:02 PM CEST / UTC +2

Date: Monday, September 8, 2025

Location: Room 05

MINI ORAL

#MA07.06: Characterization of Protein Arginine Methyltransferase 5 (PRMT5) Expression in Methylthioadenosine Phosphorylase (MTAP) Deleted NSCLC

Presenter: R. Hsu

Author(s): R. Hsu, S. Deshmukh, S. Wu, J. Xiu, Z. Hao, C. Kim, A. Vanderwalde, P.C. Ma, B. Halmos, J.J. Nieva

Key Findings:

- *PRMT5-high/MTAP*-deleted tumors had worse overall survival and lower PD-L1 positivity.
- These tumors showed a less inflamed immune microenvironment and poorer outcomes when treated with immune checkpoint inhibitors.
- Combination strategies of PRMT5 inhibition with immunotherapy or targeted therapy may be warranted for *PRMT5-high/MTAP*-deleted NSCLC tumors.

Session: MA07 New Perspectives in Pathology Biomarkers

Time: 12:13 PM – 12:18 PM CEST / UTC +2

Date: Tuesday, September 9, 2025

Location: Room 09

POSTER TOUR

#PT2.14.05: Redefining Clinical Outcomes for Peritoneal Mesothelioma (PeM) in the Era of Immunotherapy

Presenter: Y. Takabe

Author(s): A.H. Nassar, E. Bou Farhat, N. Ghandi, E. Adib, M. Rakaee, K. Raghav, D.J. Kwiatkowski, Y. Takabe

Key Findings:

- PeM is biologically and clinically distinct from pleural mesothelioma (PM), with a more immunogenic tumor microenvironment.
- Patients with PeM experienced significantly better survival with immunotherapy compared to those with PM.
- These findings support the integration of immunotherapy into standard PeM treatment and underscore the need for prospective studies.

Session: PT2.14 Mesothelioma, Thymoma, and Other Thoracic Tumors

Time: 2:47 PM – 2:55 PM CEST / UTC +2

Date: Monday, September 8, 2025

Location: ePoster Lounge Station 5

POSTER

#P1.11.59: Effect of IFNG Expression Levels on Real-World Survival Outcomes in Patients With Metastatic Non-Small Cell Lung Cancer Receiving Immunotherapy

Presenter: M.R. Rossi

Author(s): M. Altoe, S. Papillon-Cavanagh, M. Poi, S. Yip, T. Oakland, M.R. Rossi

Key Findings:
- High *IFNG* expression was associated with significantly longer survival on immunotherapy, regardless of histological subtype, in metastatic NSCLC patients.
- Low *IFNG* expression predicted higher mortality risk.
- *IFNG* may serve as a potential prognostic biomarker to guide treatment decisions in metastatic NSCLC.

Session: P1.11. Metastatic Non-small Cell Lung Cancer – Immunotherapy

Time: 10:30 AM CEST / UTC +2

Date: Sunday, September 7, 2025

Location: Exhibit Hall Rows 12-20

POSTER

#P1.17.65: Age-Associated Incidence of Somatic Mutations and Survival Outcomes in Non-Small Cell Lung Cancer

Presenter: S. Sertich

Author(s): S. Sertich, N. Gandhi, A. Pruitt, J. Kusiel, A. Elliott, A. Vanderwalde, R. Hsu, B. Halmos, S. Arnold, J. Villano, R. Zinner, Z. Hao

Key Findings:
- Young adults with NSCLC had more driver mutations but fewer tumor suppressor gene and *RAS* pathway mutations than older patients.
- *GNAS* mutations were uniquely enriched in young adult patients.
- While survival generally declined with age, notable exceptions included improved outcomes in specific *EGFR* mutation subtypes, highlighting age- and mutation-specific prognostic patterns.

Session: P1.17. Global Health, Health Services, and Health Economics

Time: 10:30 AM CEST / UTC +2

Date: Sunday, September 7, 2025

Location: Exhibit Hall Rows 20-28

POSTER

#P2.06.45: A Novel Predictive Gene Signature for Liver Metastasis (LM) in NSCLC Using a Comprehensive Linked Clinical-Molecular Database

Presenter: S. Papillon-Cavanagh

Author(s): S. Papillon-Cavanagh, J. Snider, E. Murphy, L. Bouzit, C. Cho-Phan, K.M. Zimmerman Savill

Key Findings:
- A 259-gene signature predicts risk of liver metastasis in patients with advanced NSCLC and adenocarcinoma histology.
- This novel signature was specific for liver metastases and not brain metastases.
- These findings may inform surveillance and treatment strategies, though validation is needed.

Session: P2.06. Pathology and Biomarkers

Time: 10:30 AM CEST / UTC +2

Date: Monday, September 8, 2025

Location: Exhibit Hall Rows 7-17

POSTER

#P2.06.52: Survival and Mutational Differences of GPER and Estrogen Receptor (ER) in NSCLC

Presenter: R. Hsu

Author(s): R. Hsu, S. Wu, N. Kulkarni, J. Xiu, A. Vanderwalde, L. Loo, S.L. Park, W. Cozen, B. Halmos, P.C. Ma, E.T. Roussos Torres, J.J. Nieva

Key Findings:

- GPER-high tumors were enriched for *EGFR* mutations and had fewer *STK11/KEAP1* mutations.
- High GPER expression was associated with shorter overall survival in females regardless of *ESR1* expression and in males with low *ESR1* expression.
- These results suggest the potential benefit of targeting *GPER* and ER in female and *EGFR*-mutant NSCLC patients.

Session: P2.06. Pathology and Biomarkers

Time: 10:30 AM CEST / UTC +2

Date: Monday, September 8, 2025

Location: Exhibit Hall Rows 7-17

POSTER

#P3.12.03: Retrospective Analysis of Age, EGFR Mutation Type, and TP53 Co-Mutation on Survival Outcomes in EGFR-Mutant Non-Small Cell Lung Cancer

Presenter: E.K. Singhi

Author(s): E.K. Singhi, N. Gandhi, A. Elliott, A. Vanderwalde, B. Halmos, Z. Hao

Key Findings:

- Young adults with classical *EGFR* mutations had the longest survival on osimertinib.
- *TP53* co-mutations strongly influenced survival outcomes, especially in older adults.
- Age, *EGFR* mutation subtype, and *TP53* status are critical factors in guiding therapy.

Session: P3.12. Metastatic Non-small Cell Lung Cancer – Targeted Therapy

Time: 10:00 AM CEST / UTC +2

Date: Tuesday, September 9, 2025

Location: Exhibit Hall Rows 12-19

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