Clinical Trials in cancer

Tania Crombet Ramos, MD, PhD
Medical Director
Center of Molecular Immunology
December 2024

Center of Molecular Immunology: Leading biotech companies

Integrated with Ministry of Health

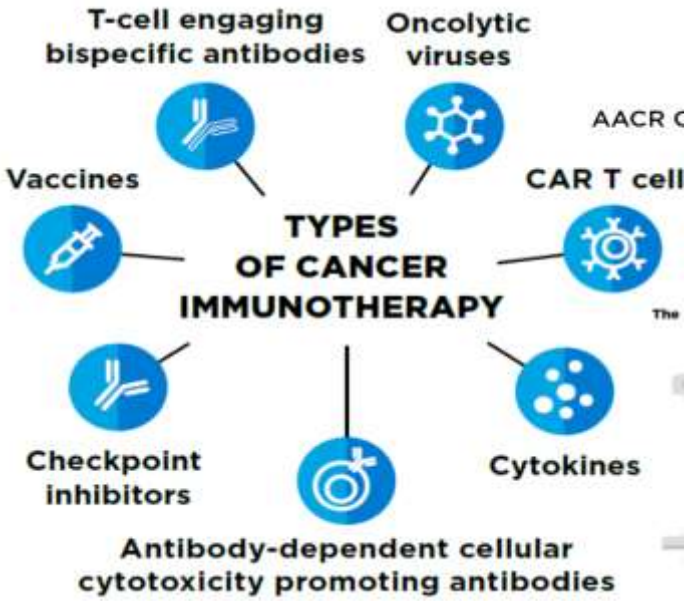
Mammalian Cell Fermentation

cencec

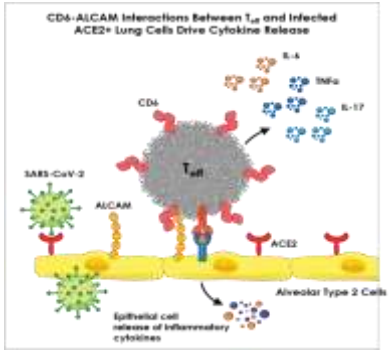
CENTRO NACIONAL COORDINADOR DE ENSAYOS CLINICOS

> 1000 employees

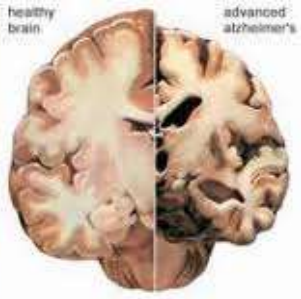
Cancer Immunotherapy



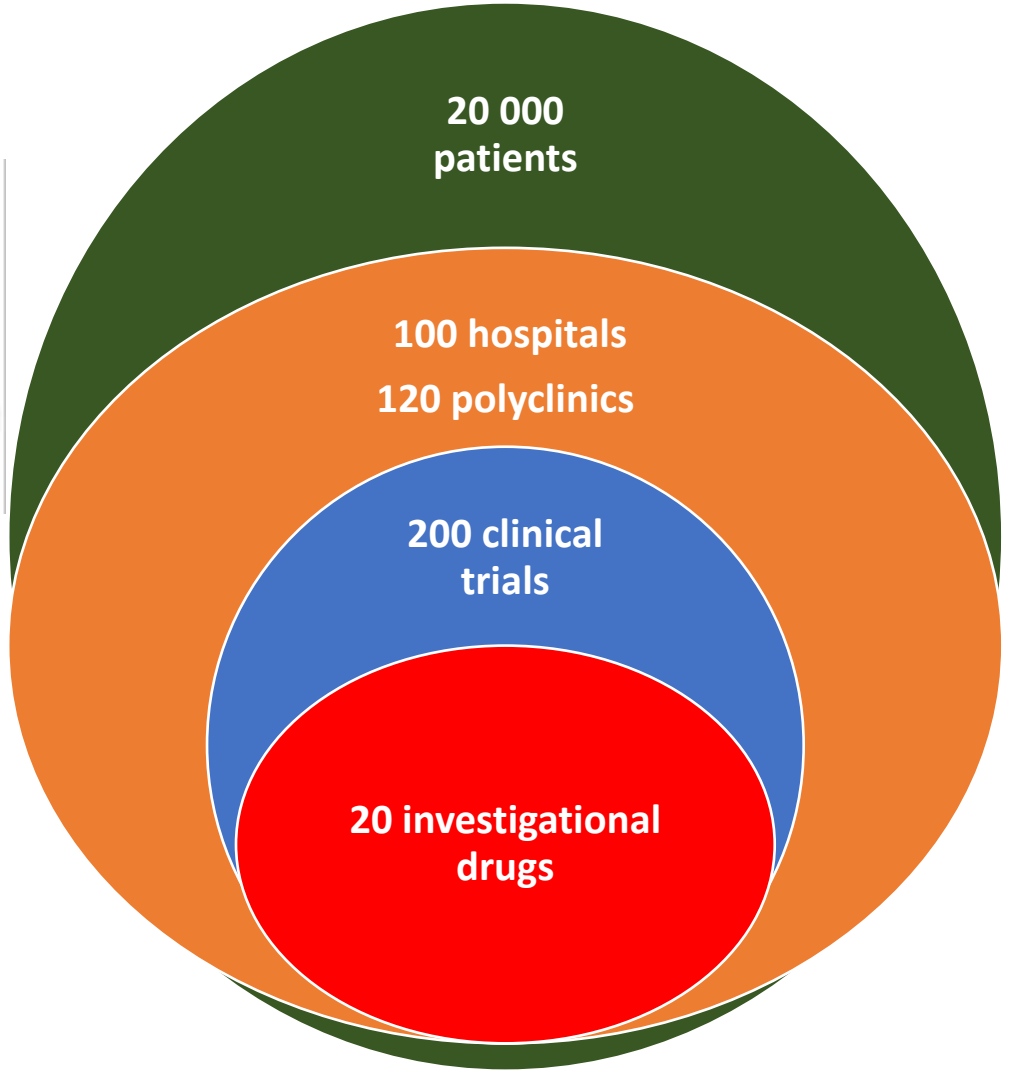
Autoimmunity and inflammation



Neurodegenerative Disorders



CIM: 30 years of clinical trials in Cuba



CIM
Centro de Inmunología Molecular

30 AÑOS
COMPROMETIDOS POR LA SALUD

World Clinical Development

Nimotuzumab: 200
Itolizumab: 27
Cimavax-EGF: 17
Racotumomab: 10
Neuroepo: 10

International Clinical Trials Registry Platform Search Portal

http://apps.who.int/trialsearch/default.aspx

innovative immunotherapy alliance

ROSWELL PARK COMPREHENSIVE CANCER CENTER
Unleashing the Healing Power of Hope™

The first US center to specifically focus on cancer research (1898)

BIOCUBAFARMA

Global Biotechnology & Cancer Therapeutics (GBCT) Roswell Park affiliate.

+

CIM Centro de Inmunología Molecular

Centro de Inmunología Molecular

Innovative Immunotherapy Alliance was officially established in September 2018 and is authorized to research, develop, manufacture, and commercialize Cuban-origin medicines for the benefit of U.S. cancer patients, according to the United States government approved and issued OFAC license CU-2016-327263-4.

CIMAVax

IL2m Mutein

VSSP & GlycoVaxGM3

3 clinical trials ongoing at the RPCCC with Cimavax-EGF

RECRUITING

NCT06011772

EGF-Depleting Therapy CIMAvax-EGF in Combination With Standard Therapy for RAS- and BRAF Wild-Type Metastatic Colorectal Cancer

Conditions

Colo-rectal Cancer

Locations

Buffalo, New York, United States

RECRUITING

NCT04298606

A Vaccine (CIMAvax-EGF) for the Prevention of Lung Cancer Development or Recurrence

Conditions

Chronic Obstructive Pulmonary Disease | Lung Non-Small Cell Carcinoma | Pneumonia | Stage IB Lung Cancer AJCC v8 | Show 4 more conditions

Locations

Buffalo, New York, United States

RECRUITING

NCT02955290

CIMAvax Vaccine, Nivolumab, and Pembrolizumab in Treating Patients With Advanced Non-small Cell Lung Cancer or Squamous Head and Neck Cancer

Conditions

Advanced Head and Neck Squamous Cell Carcinoma | Advanced Squamous Non-Small Cell Lung Carcinoma | Lung Non-Small Cell Carcinoma | Metastatic Lung Non-Small Cell Carcinoma | Show 12 more conditions

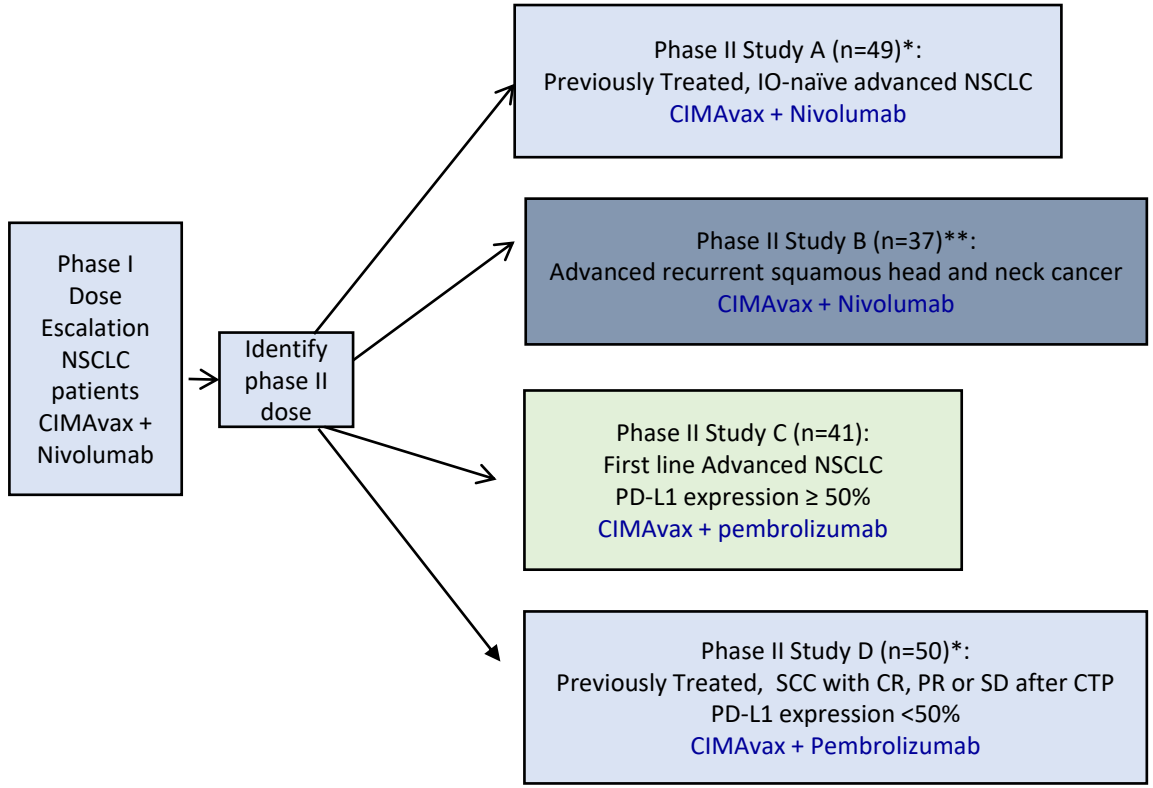
Locations

Indianapolis, Indiana, United States
Buffalo, New York, United States
Roslyn, New York, United States
West Islip, New York, United States

NIH National Library of Medicine
National Center for Biotechnology Information

ClinicalTrials.gov

A Phase I/II Basket Trial of the EGF Vaccine CIMAvax in Combination with Anti-PD1 Therapy in Patients with Advanced NSCLC or Squamous Head and Neck Cancer



innovative immunotherapy alliance

Augmenting antibody response to EGF-depleting immunotherapy: Findings from a phase I trial of CIMAvax-EGF in combination with nivolumab in advanced stage NSCLC

Rachel Evans[1], Kelvin Lee[2], Paul K. Wallace[1], Mary Reid[1], Jason Muhitch[1], Askia Dozier[1], Circe Mesa[3], Patricia L. Luaces[3], Orestes Santos-Morales[3], Adrienne Groman[1], Carlos Cedeno[1], Aileen Cinquino[1], Daniel T. Fisher[1], Igor Puzanov[1], Mateusz Opyrchal[2], Christos Fountzilas[1], Tong Dai[1], Marc Ernstoff[4], Kristopher Attwood[1], Alan Hutson[1], Candace Johnson[1], Zaima Mazorra[3], Danay Saavedra[3], Kalet Leon[3], Agustin Lage[3], Tania Crombet[3] and Grace K. Dy[1*]

Faster immune response after Cimavax-EGF and nivolumab

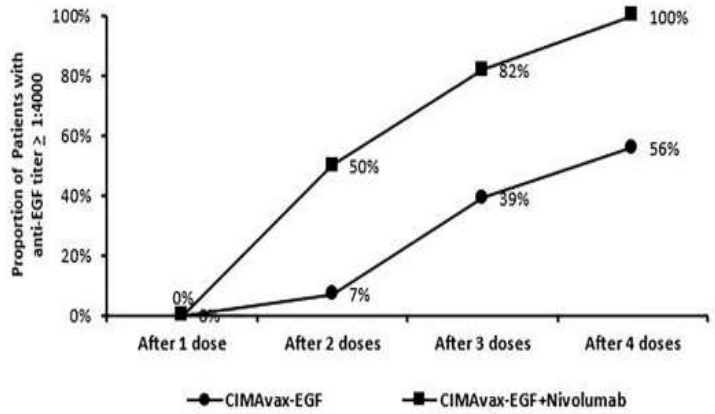


FIGURE 1
Trend of patients dosing and achieving anti-EGF titer ≥1:4,000. Good anti-EGF antibody response (≥1:4,000) elicited at earlier time points in more patients receiving CIMAvax-EGF in combination with nivolumab compared to historical controls.

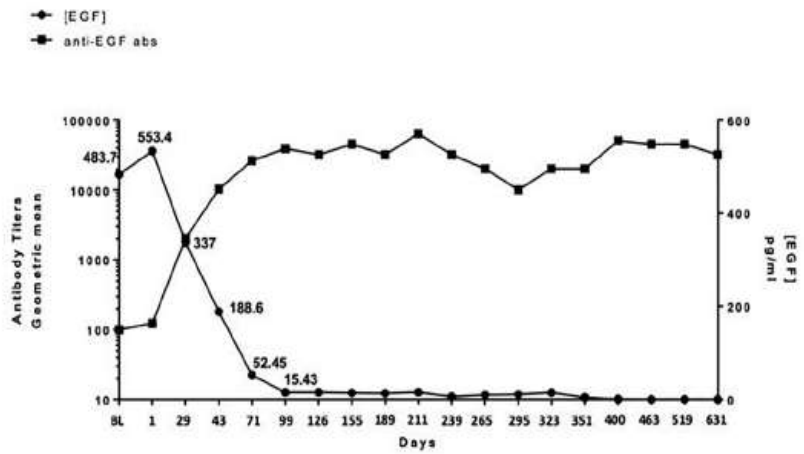


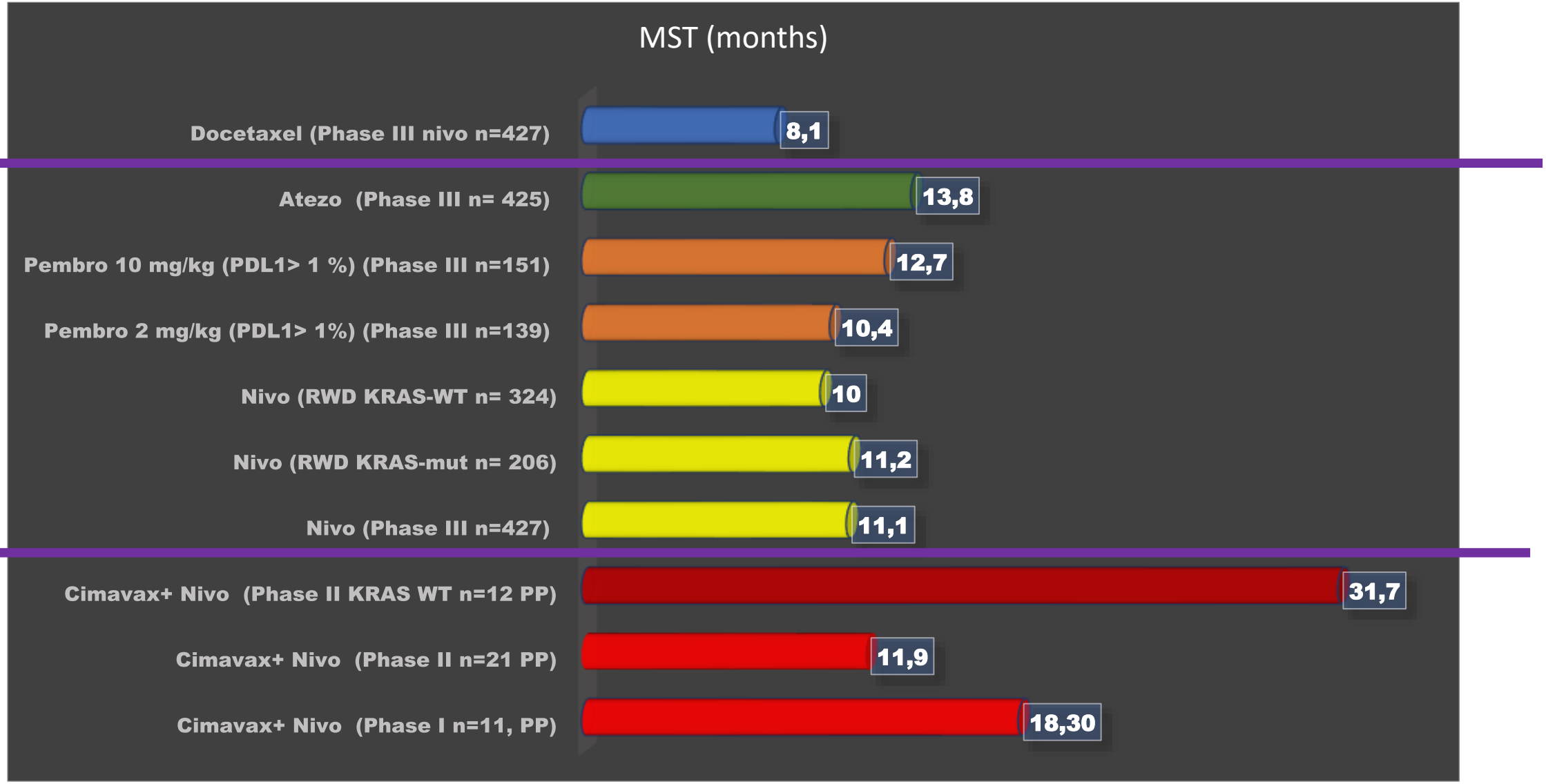
FIGURE 2
Relationship between anti-EGF antibody titers and serum EGF. There is a significant inverse correlation between circulating serum EGF and antibody titers in patients receiving CIMAvax-EGF in combination with nivolumab.

- MOS= 18,3 months (95 % CI: 6,8–NR) for patients completing vaccine induction
- MOS= 21,7 months (95 % CI: 1,8–NR) for KRAS wildtype patients.

frontiers | Frontiers in Oncology

TYPE Original Research
PUBLISHED 03 August 2022
DOI 10.3389/fonc.2022.958043

Overall survival of patients with NSCLC (second line therapy)



Journal of Thoracic Oncology
IASLC INTERNATIONAL ASSOCIATION FOR THE STUDY OF LUNG CANCER
Articles Publish Topics About Contact

IASLC
https://education.iaslc.org › EP-12... · Traducir esta página

2024 World Conference on Lung Cancer (WCLC)

EP.12A METASTATIC NON-SMALL CELL LUNG CANCER - TARGETED THERAPY - EGFR · Volume 19, Issue 10, Supplement , S634-S635, October 2024

EP.12A.35 A Phase I Open-label Study Ofnimotuzumab with Nivolumab in Advanced Non-Small Cell Lung Cancer or Head and Neck Squamous Cell Cancer

A.H. Syed [1] · M. Reid [1] · R. Frascati [1] · A. Groman [1] · A. Macias [2] · P.L. Luaces [2] · O. Santos-Morales [2] · K. Leon [2] · T. Crombet [2] · G.K. Dy [1]
Show less

Abstract CT126: A Phase 0 Study of EGF-Depleting Therapy CIMAvax-EGF in Combination With Standard Therapy for RAS-and BRAF Wild-Type Metastatic Colorectal Cancer

Autores Deepak Vadehra, Cayla Janes, Rachel Frascati, Mary Reid, Tania C Ramos, Sarbajit Mukherjee, Kalet L Monzón, Patricia L Alvárez, Orestes S Morales, Circe M Pardillo, Christos Fountzilas

Fecha de publicación 2024/4/5
Revista Cancer Research
Volumen 84
Número 7_Supplement
Páginas CT126-CT126
Editor The American Association for Cancer Research

AACR ANNUAL MEETING 2024
April 5 - 10, 2024
San Diego Convention Center
San Diego, California

Cimavax-EGF: ASCO-2023

ASCO AMERICAN SOCIETY OF CLINICAL ONCOLOGY

ABSTRACTS & PRESENTATIONS

2023 ASCO Annual Meeting - Poster Session

Presenter:
Prantesh Jain MD, FACP

Phase 2 trial of epidermal growth factor (EGF) vaccine CIMAvax in combination with pembrolizumab in first line and maintenance setting in advanced non–small cell lung cancer patients.

CIMAvax-EGF is a novel growth-factor depleting immunotherapy consisting of human recombinant EGF conjugated to recombinant P64k derived from Neisseria meningitidis, that elicits an anti-EGF antibody response, resulting in reduction of circulating EGF levels. A randomized phase 3 study of CIMAvax-EGF administered as switch maintenance therapy after first-line platinum-based...

Abstract: TPS2677 | Poster Bd #: 512a

Abstracts
Posters

ABSTRACTS & PRESENTATIONS

2023 ASCO Annual Meeting - Poster Session

Presenter:
Rachel Frascati PhD

Final results from a phase II trial of CIMAvax-EGF and nivolumab as second-line (2L) therapy after platinum-based chemotherapy in advanced non-small cell lung cancer (NSCLC).

CIMAvax-EGF (C-E) is a recombinant anti-human epidermal growth factor (EGF) depleting immunotherapy which has previously shown increased survival as maintenance after platinum-based chemotherapy in patients (pts) with advanced NSCLC. The primary objective of this single-arm phase II trial was to evaluate the 12-month overall survival (OS) in pts receiving C-E in combination...

Abstract: 9135 | Poster Bd #: 123

Abstracts
Posters

AACR ANNUAL MEETING 2020

June 22 - 24, 2020
Virtual Meeting II, Sessions Available Online

Abstract CT130: Evidence for synergistic immune responses in the first-in-human (FIH) combination of B cell-activating immunotherapy (IO) with anti-PD1 immune checkpoint ...

Autores: Tania Crombet, Jason Muhitch, Circe Mesa, Rachel Evans, Danay S Hernandez, Patricia L Luaces, Zaima Mazorra, Orestes Morales, Carlos Cedeno, Aileen Cinquino, Daniel T Fisher, Kelvin Lee, Mary Reid, Grace Dy

Fecha de publicación: 2020/8/15

Revista: Cancer Research

AACR MEETINGS: 2019

Final results of the Phase I study of nivolumab in combination with CIMAvax, an epidermal growth factor (EGF)-depleting immunotherapy in patients (pts) with advanced non-small ...

Autores: Grace K Dy, Kelvin Lee, Adrienne Groman, Aileen Cinquino, Carlos Cedeno, Hans Minderman, Alan Hutson, Paul Wallace, Candace Johnson, Zaima Mazorra, Danay Saavedra Hernandez, Kalet Leon, Agustin Lage, Tania Crombet

Fecha de publicación: 2019/7/1

Conferencia: CANCER RESEARCH

IASLC 2019 World Conference on Lung Cancer

IASLC 19th World Conference on Lung Cancer (WCLC)

Metro Toronto Convention Centre North Building
255 Front Street West
Toronto, Canada

Ep1. 04-23 Ongoing Phase II Trial of Anti-PD1 Therapy in Combination With CIMAvax-EGF in Patients With Advanced NSCLC or Squamous Cell Head and Neck Cancer

Autores: G Dy, T Crombet, K Leon, Z Mazzora, D Hernandez, A Lage, A Dozier, H Chen, A Hutson, DJJOTO Plessinger, C Johnson

Fecha de publicación: 2019/10/1

Revista: Journal of Thoracic Oncology

Volumen: 14

Número: 10

Páginas: S970

Editor: Elsevier

Journal of Thoracic Oncology

IASLC INTERNATIONAL ASSOCIATION FOR THE STUDY OF LUNG CANCER

P2. 04-26 interim results from a phase I/Ii trial of nivolumab in combination with cimavax-egf as second-line therapy in advanced nsclc

Autores: G Dy, A Dozier, M Reid, K Lee, A Miller, P Wallace, I Puzanov, M Opyrchal, M Ernstoff, C Johnson, Z Mazorra, D Saavedra, K Leon, A Lage, T Crombet

Fecha de publicación: 2018/10/1

Revista: Journal of Thoracic Oncology

Volumen: 13

Número: 10

Publication of joint manuscripts

frontiers in Oncology

REVIEW
published: 15 June 2021
doi: 10.3389/fonc.2021.639745

The Position of EGF Deprivation in the Management of Advanced Non-Small Cell Lung Cancer

Tania Crombet Ramos[1]*, *Orestes Santos Morales*[1], *Grace K. Dy*[2], *Kalet León Monzón*[1] *and Agustín Lage Dávila*[1]

[1] *Research Direction, Center of Molecular Immunology, Havana, Cuba,* [2] *Department of Medicine, Roswell Park Comprehensive Cancer Center, Buffalo, NY, United States*

frontiers | Frontiers in Oncology

TYPE Original Research
PUBLISHED 03 August 2022
DOI 10.3389/fonc.2022.958043

Augmenting antibody response to EGF-depleting immunotherapy: Findings from a phase I trial of CIMAvax-EGF in combination with nivolumab in advanced stage NSCLC

Rachel Evans[1], Kelvin Lee[2], Paul K. Wallace[1], Mary Reid[1], Jason Muhitch[1], Askia Dozier[1], Circe Mesa[3], Patricia L. Luaces[3], Orestes Santos-Morales[3], Adrienne Groman[1], Carlos Cedeno[1], Aileen Cinquino[1], Daniel T. Fisher[1], Igor Puzanov[1], Mateusz Opyrchal[2], Christos Fountzilas[1], Tong Dai[1], Marc Ernstoff[4], Kristopher Attwood[1], Alan Hutson[1], Candace Johnson[1], Zaima Mazorra[3], Danay Saavedra[3], Kalet Leon[3], Agustin Lage[3], Tania Crombet[3] and Grace K. Dy[1]*

New joint patents

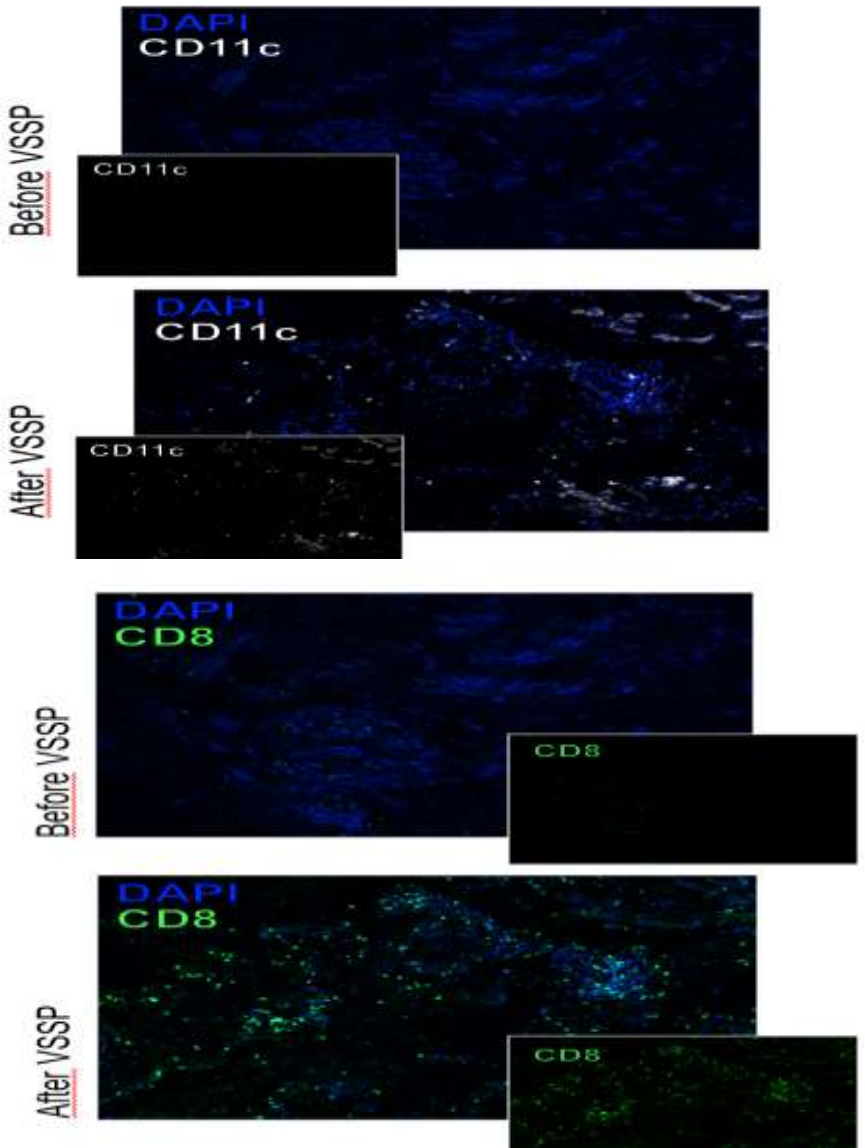
Use of therapeutic compositions for the treatment of patients with tumors of epithelial origin

Inventores	Tania Crombet Ramos, Circe Mesa Pardillo, Kalet León Monzón, Zaima Mazorra Herrera, Danay Saavedra Hernández, Patricia Lorenzo Luaces Álvarez, Grace Dy, Mary Reid, Rachel Evans, Jason Muhitch, Kelvin Lee, Alan Hutson, Candace Johnson
Fecha de publicación	2024/5/30
Oficina de patentes	US
Número de solicitud	17789888
Descripción	The present invention relates to the branches of Biotechnology and Medicine. It describes the use of therapeutic compositions comprising a compound that blocks epidermal growth factor and an antibody that blocks the PD-1/PD-1 ligand signaling pathway in the treatment of tumors of epithelial origin, particularly those that express the native form for human KRAS protein. In patients with cancer of epithelial origin expressing native KRAS treated with said therapeutic compositions, an increase in their survival was observed.

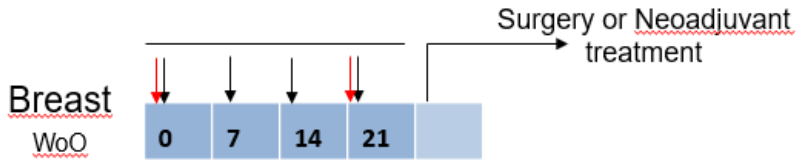
Use of epidermal growth factor depleting agents in the treatment of chronic obstructive pulmonary disease

Inventores	Amparo Emilia Macias Abraham, Tania Crombet Ramos, Kalet León Monzón, Danay Saavedra Hernández, Orestes Santos Morales, Elia Neninger Vinageras, Pedro Pablo Pino Alfonso, Jenysbel de la Caridad Hernandez Reyes, Mary Reid, Kelvin Lee
Fecha de publicación	2023/8/17
Oficina de patentes	US
Número de solicitud	18018156
Descripción	The present invention is related to the fields of Biotechnology and Medicine. Particularly, it describes the use of epidermal growth factor (EGF) deprivation agents that contribute to lowering and/or depleting serum epidermal growth factor levels, which has implications in the treatment of the chronic obstructive pulmonary disease. These agents can be vaccine compositions comprising as active principle the conjugate between recombinant human EGF and a carrier protein.

Evaluation of Cuban samples in the US



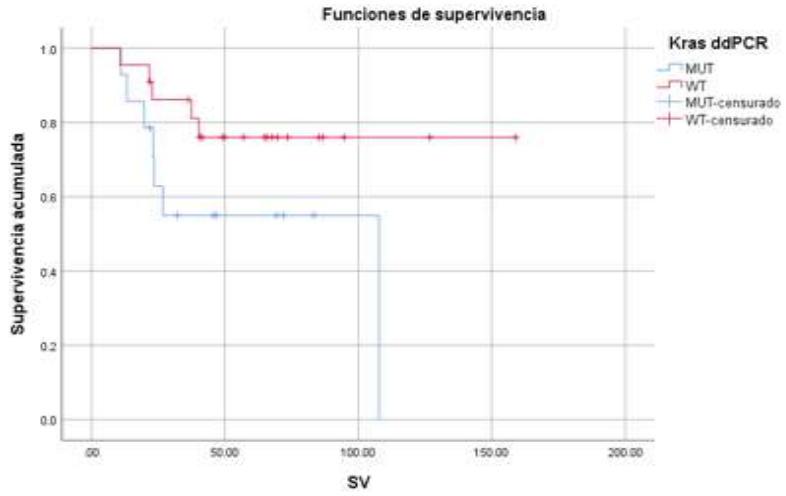
VSSP



21 breast cancer patients

Evaluation of patients with long term survival (Retrospective study, liquid biopsy)

Droplet-Based Digital PCR: Application in Cancer Research



Meeting with researchers in the US

Scientific workshops with doctors and researchers in Havana.

Donation of bronchoscopes, disposable supplies and medications.
Joint training sessions between RPCCC, HHA and CNCMA

innovative immunotherapy alliance






Celebration of the 5th Anniversary of I2A
December 2023

Concluding remarks

- Very fruitful scientific collaboration
- 3 clinical trials using “the state of the art therapy”. Preliminary positive results.
- Preparation of the 4th clinical trial with a second Cuban drug (IL-2 mutein). Pre-IND with FDA (2025).
- Periodic scientific exchange. Access to RPCCC Literature Databases
- Joint Publications & Patents
- Joint presentation of results at the most important cancer conferences.
- Evaluation of Cuban samples in the US, accessing to new technology. Validation on new biomarkers (predictive & mechanism of action)
- Donation of equipment (training sessions in Cuba, medicines, supplies) directly benefiting the Cuban population.

THANKS!!!