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FOR
HEALTH AFFAIRS COMMITTEE

Committee Meeting: 2/5/2014

Board Meeting: 2/6/2014
Austin, Texas

Robert L. Stillwell, Chairman
Ernest Aliseda
Jeffery D. Hildebrand
Brenda Pejovich
Wm. Eugene Powell

1. U. T. System Board of Regents: Discussion and appropriate action regarding Consent Agenda items, if any, referred for Committee consideration

RECOMMENDATION

The proposed Consent Agenda is located at the back of the book.

2. U. T. Health Science Center - San Antonio: Approval of preliminary authority for a Doctor of Medicine at The University of Texas Rio Grande Valley

RECOMMENDATION

The Chancellor concurs in the recommendation of the Executive Vice Chancellor for Health Affairs and President Henrich that the U. T. System Board of Regents approve

a. preliminary authority for U. T. Rio Grande Valley to include a Doctor of Medicine; and

b. notification of the proposal to the Texas Higher Education Coordinating Board.

BACKGROUND INFORMATION

The proposed Doctor of Medicine (M.D.) program will prepare physicians to be skilled clinicians, biomedical scientists, professional leaders, and innovators in the ongoing transformation of the health care system regionally and throughout Texas, as well as nationally and internationally. The program will also draw on partnering universities' well-regarded programs in nursing, physician assistants, and social work to educate young physicians in interprofessional team settings.

In addition to the numerous medical and surgical faculty that will be added, U. T. Brownsville and U. T. Pan American are jointly participating in a U. T. System initiative (ValleySTARS) to recruit new faculty to teach and to substantially address the scientific, education, and health-related problems faced by the community.

Once preliminary authority is approved, U. T. Rio Grande Valley will submit the degree proposal for approval by the U. T. System Board of Regents and notify the Coordinating Board.

3. U. T. M. D. Anderson Cancer Center: Request to a) approve engagement with an outside firm to serve as the external transformation team through Phase 1A of the Oncology Expert Advisor project; and b) approve funds and authorize expenditure of an amount not to exceed $15,000,000 from restricted gift funds

RECOMMENDATION

The Chancellor concurs in the recommendation of the Executive Vice Chancellor for Health Affairs, the Executive Vice Chancellor for Business Affairs, the Executive Vice Chancellor for External Relations, and President DePinho that the U. T. System Board of Regents

a. approve engagement with an outside firm to serve as the external transformation team through Phase 1A of the Oncology Expert Advisor project at U. T. M. D. Anderson Cancer Center; and

b. approve funds and authorize expenditure of an amount not to exceed $15,000,000 from restricted gift funds.

BACKGROUND INFORMATION

U. T. M. D. Anderson Cancer Center's Moon Shots Program (Moon Shots) is designed to accelerate the reduction in mortality, and ultimately, to cure major cancer types. To help achieve this goal, M. D. Anderson has developed a customized, cognitive clinical decision support system called M. D. Anderson's Oncology Expert Advisor™ (OEA) powered by International Business Machines Corporation Watson Service. The Watson Service technology (IBM Watson) is IBM's third-generation cognitive computing system that uses unique natural language processing and deep quality assurance skills.

To evaluate the applicability of a cognitive computing tool for clinical decision support and the feasibility of an adaptive learning environment with big data infrastructure support, M. D. Anderson embarked on a leukemia pilot project to develop an OEA for leukemia, one of the designated Moon Shots diseases. M. D. Anderson scientists and clinicians, working side-by-side with IBM Watson software developers and engineers, have designed and developed the Leukemia OEA powered by IBM Watson. The contract was approved by the U. T. System Board of Regents on February 13, 2013 (Consent Agenda). On October 1, 2013, M. D. Anderson and IBM launched the Leukemia OEA for live system testing and clinical evaluation. The testing has progressed as planned and the initial results are positive.

The ultimate goal of M. D. Anderson is to have a tool that assists physicians in their care of patients across a majority of cancers, not only in specialty cancer centers but also in community practices. OEA is one of the first tools built on cognitive computing capability. While the initial project has proven the feasibility of the tool, what will also need to be established is the willingness of physicians outside of a specialty cancer center to use the tool in their everyday practices. If successful, M. D. Anderson's specialized knowledge could be accessed by community physicians to considerably reduce the customary delay between treatment discoveries made at M. D. Anderson and adoption in other health care settings. Using the other health care providers in the M. D. Anderson Cancer network, such as Banner Health in Phoenix, the contracted transformation team will assist in integrating and testing the tool into those

delivery systems and, in doing so, establish the feasibility of a broad range, scalable application. This network infrastructure will also allow M. D. Anderson to capture data (e.g., treatment, response, and adverse events) from patients treated outside of a specialty cancer center so the clinical research can address gaps and optimize therapies for better outcomes.

It is expected that capabilities of the OEA will continually be enhanced as the core underlying IBM Watson technology improves and new functionalities are added. Importantly, it is recognized that OEA will be continually 'trained' by experts to remain up-to-date and relevant to the best practices in oncology.

In parallel with the Leukemia OEA system evaluation, M. D. Anderson is focusing on several partnership phases over the next few years, including:

- Phase 1A to establish the feasibility, know-how and infrastructure for getting M. D. Anderson oncology expertise into community practice (i.e., network democratization) using a cognitive clinical decision support system, such as OEA;

- Phase 1B to scale network democratization to include multiple oncology solutions and additional community practice partners; and

- Phase 2 to implement broad adoption into all network health care providers.

Through a Request for Proposal process, M. D. Anderson is currently working to identify an external transformation team, through the expertise of a professional services advisory firm, to execute the establishment and operation of a democratization network with limited community practice partners to assess, establish, and demonstrate the clinical, technical, financial, and regulatory feasibility of democratization using a cognitive clinical decision support system. Payment for the contracted services will be from restricted gift funds donated for this purpose.

It is anticipated that, if successful, additional contract requests will be sent to the U. T. System Board of Regents for consideration to support Phase 1B and Phase 2.

4. U. T. System: Request to reclassify the $3 million Revenue Cycle Loan Program to the Revenue Cycle Grant Program

RECOMMENDATION

The Chancellor concurs in the recommendation of the Executive Vice Chancellor for Health Affairs and the Executive Vice Chancellor for Business Affairs to reclassify the $3 million Revenue Cycle Loan Program to the Revenue Cycle Grant Program. The Revenue Cycle Grant Program is for the benefit of the six U. T. System health institutions.

BACKGROUND INFORMATION

On December 10, 2009, the U. T. System Board of Regents appropriated $5.5 million of Permanent University Fund (PUF) Bond Proceeds and created a $3 million fund for the Revenue Cycle Loan Program and a $2.5 million fund for the Revenue Cycle Grant Program.

These programs were established based on a report from a Revenue Cycle Task Force (Task Force) in 2009. The Task Force report appropriately acknowledged that small improvements in the efficiency and effectiveness of the revenue cycle operations within an environment of shrinking reimbursement and increasing operating costs can have a significant, positive impact on the financial statements.

In 2011, the Executive Vice Chancellor for Health Affairs authorized $1.25 million from the Revenue Cycle Grant Program for a computer-assisted coding software implementation. Five U. T. System health institutions have successfully implemented this software in the departments of radiology. Additional resources for implementing other coding areas (e.g., cardiology, pathology, and emergency medicine) would generate additional efficiencies in medical billing for professional fees.

In 2012, the Executive Vice Chancellor for Health Affairs authorized $1.25 million from the Revenue Cycle Grant Program for a clinical trials management system (CTMS) software implementation. Four U. T. System health institutions are actively implementing the software and additional resources for more interfaces and implementation time will allow for increased integration between this software and mission critical software systems (e.g., electronic medical records). Eventually, this CTMS software will be utilized by all U. T. System health institutions.

In November 2013, the Executive Vice Chancellor for Health Affairs received positive support from the six health presidents for the proposed reclassification and an allocation of the $3 million currently in the Revenue Cycle Loan Program to be used in these two software implementations described above. While maintaining the Revenue Cycle Loan Program could devote the same resources, experience has shown that the U. T. System health institutions are not motivated to take on additional debt, and as a result, these loan resources are not being accessed.

Per the Texas Constitution, PUF Bond Proceeds may only be used to fund capital and equipment items related to the educational mission of the U. T. System and U. T. System institutions. The $3 million proposed to be reclassified as grants would be used in a manner consistent with these restrictions.

5. U. T. M. D. Anderson Cancer Center: Introduction of recipient of the Breakthrough Prize in Life Sciences award for T-Cell Research and remarks by James Allison, Ph.D., Chair of the Department of Immunology

INTRODUCTION

President DePinho will introduce the recipient of the 2013 Breakthrough Prize in Life Sciences award, Dr. James Allison, Chair of U. T. M. D. Anderson Cancer Center's Department of Immunology, for remarks on his research in cancer immunotherapy. His presentation is set forth on the following pages.

REPORT

The Breakthrough Prize in Life Sciences is an award developed by entrepreneurs that recognizes researchers who are exceptionally advancing research that extends human life and cures deadly diseases like cancer. The award is designed to champion researchers who are seeking answers to the most puzzling questions in medicine and taking bold steps to develop cures.

On December 12, 2013, Dr. Allison was named the recipient of the 2013 Breakthrough Prize in Life Sciences award for the discovery of T-cell checkpoint blockade as an effective cancer therapy.

Immune Checkpoint Blockade in Cancer Therapy

Jim Allison, Chair, Department of Immunology
Executive Director, Immunotherapy Platform
Deputy Director, David H Koch Center for Applied Research for Genitourinary Oncology Research
Associate Director, Center for Cancer Immunology Research
U. T. M. D. Anderson Cancer Center

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U. T. System Board of Regents' Meeting
Health Affairs Committee
February 2014

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Why Immunotherapy?

Specificity

Memory

Adaptability

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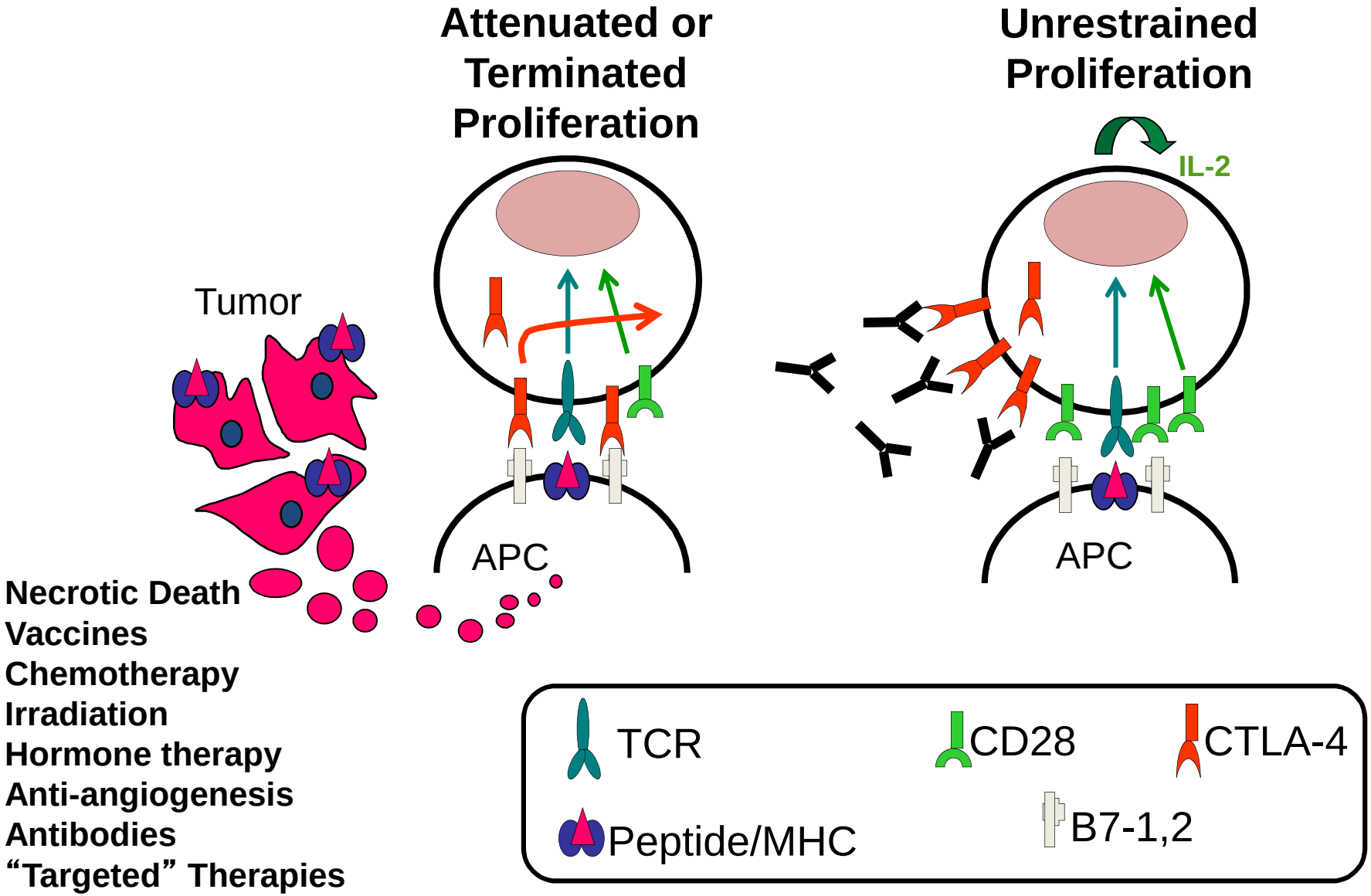
CTLA-4 Blockade Enhances Anti-tumor T cell Responses



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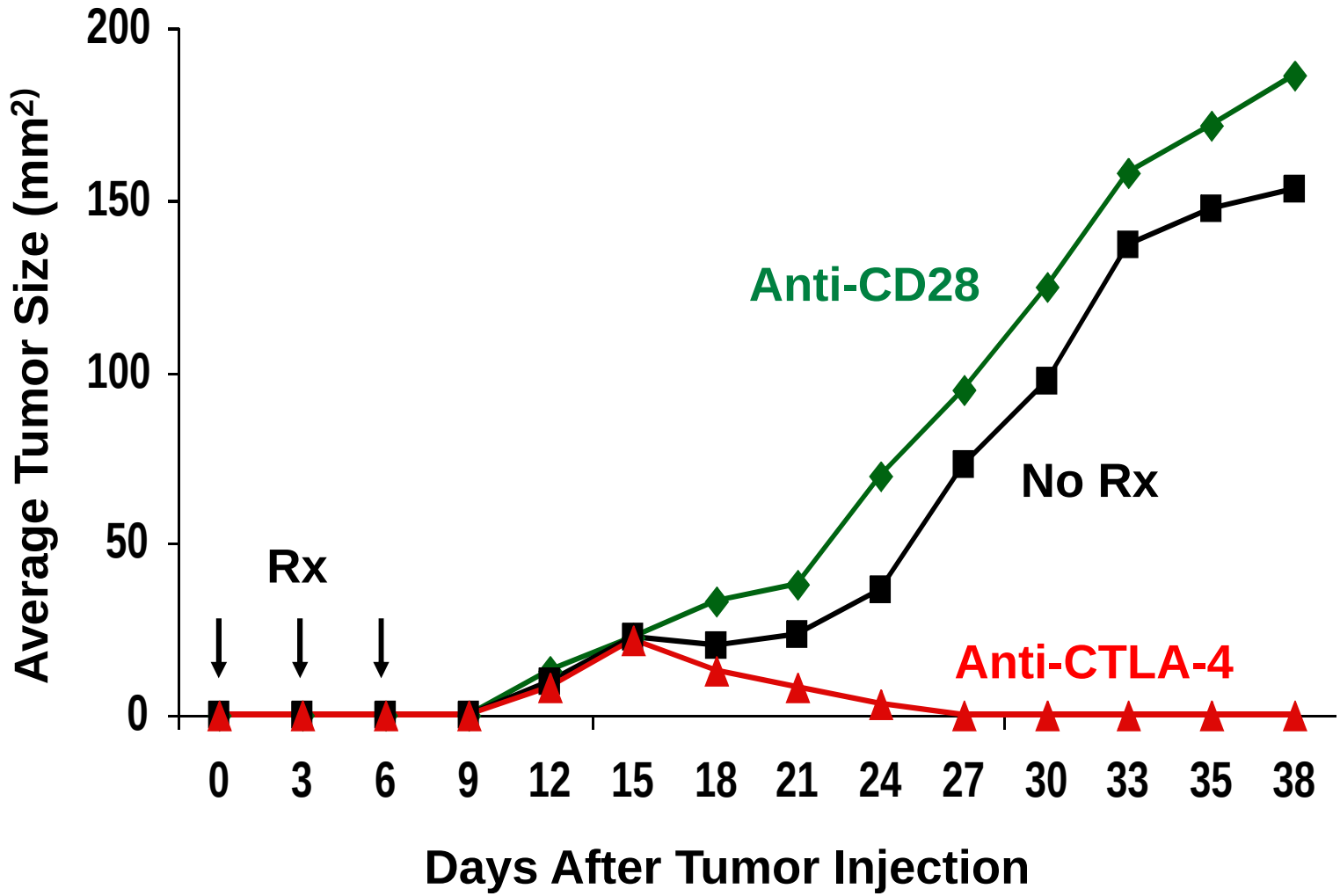
Anti-CTLA-4 Induces Regression of Tumors in Mice



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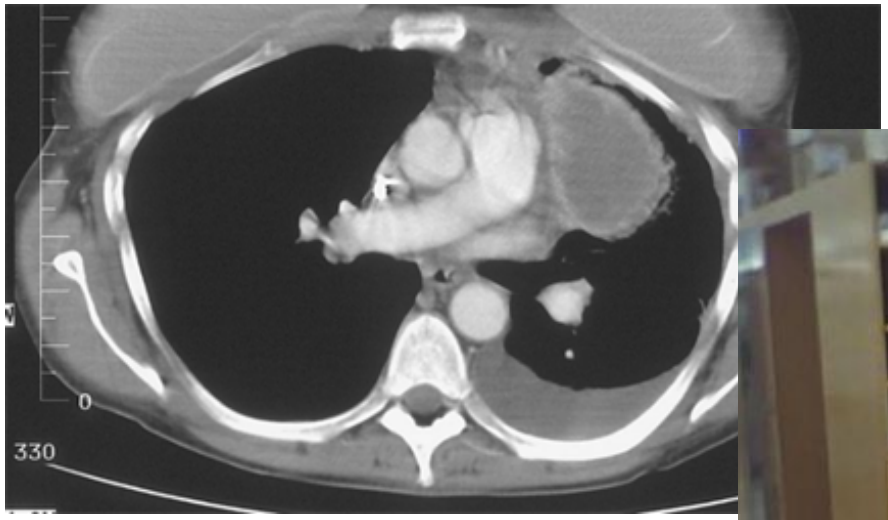
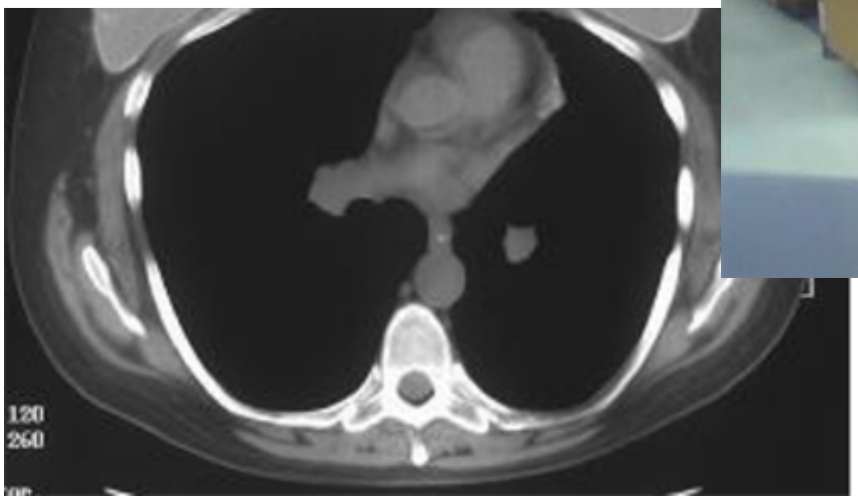
The Longest Surviving Melanoma Patient Treated with anti-CTLA-4?

May 2001, after progression on IL-2



10 years later



Ribas

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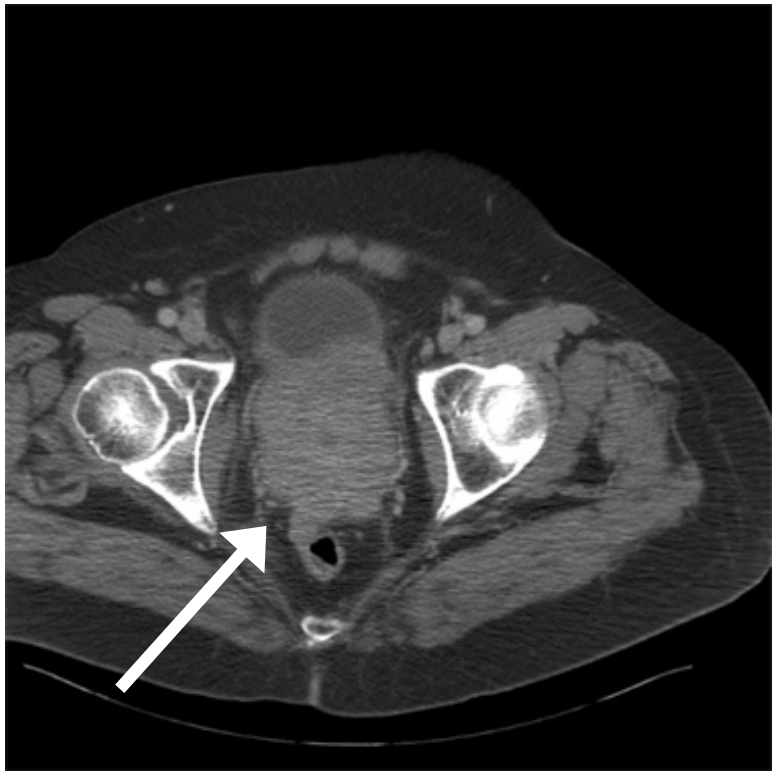
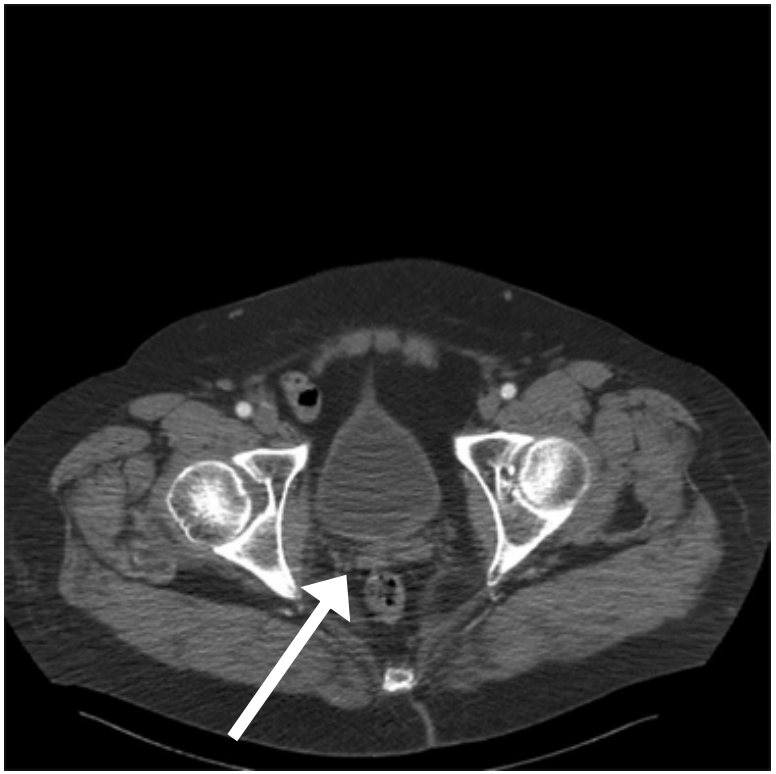
Anti-CTLA-4 can also be effective against Prostate Cancer

Screening



14 months



Phase III trials ongoing

BMS

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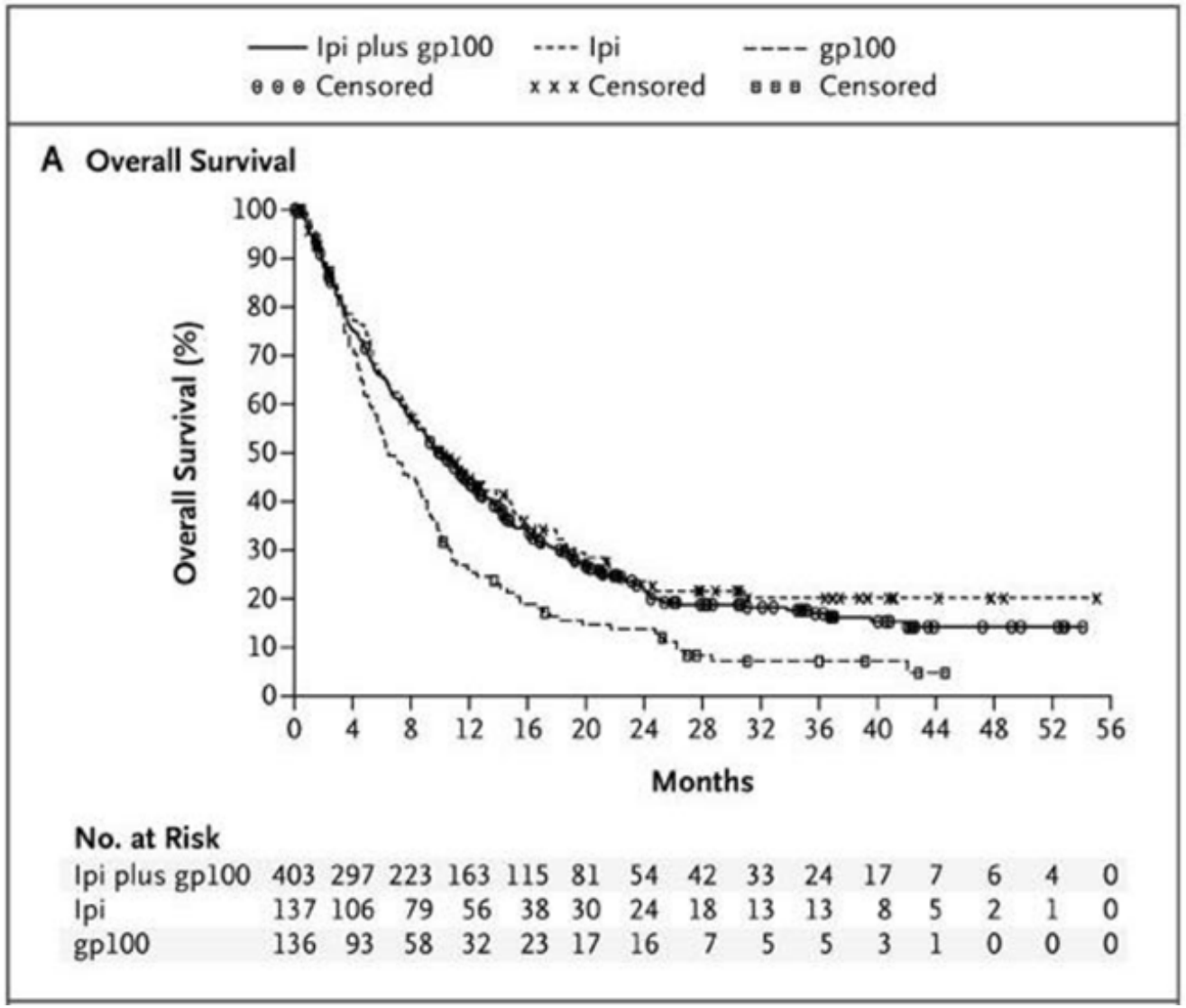
Anti-CTLA-4 Increases Survival of Patients with Metastatic Melanoma



Hodi et al. NEJM 2010

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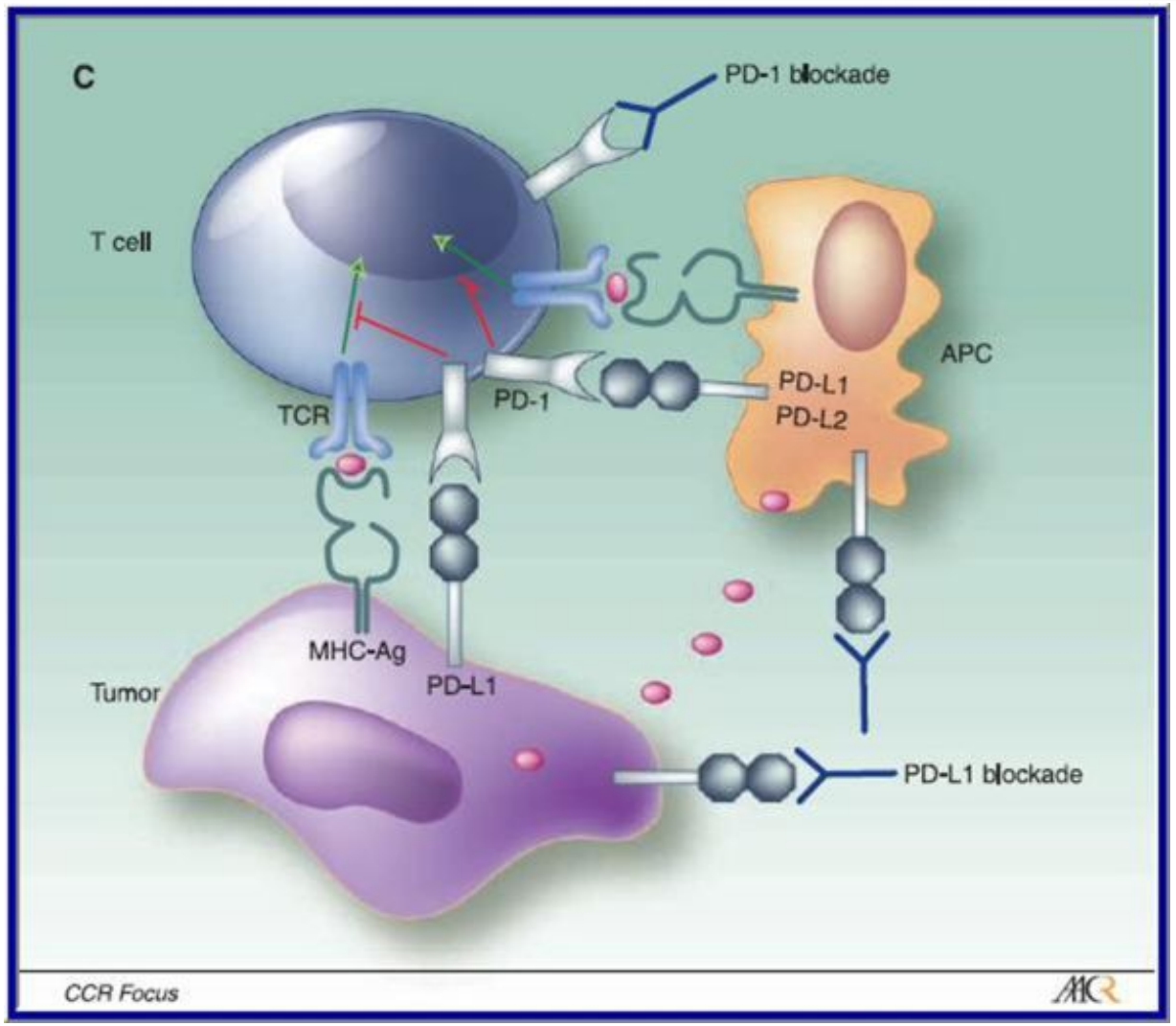
PD-1 also Inhibits T cell activation, but by a different mechanism



http://www.melanoma.org/community/mpip-melanoma-patients-information-page/video-how-anti-pd-1-therapy-works-imumne-system

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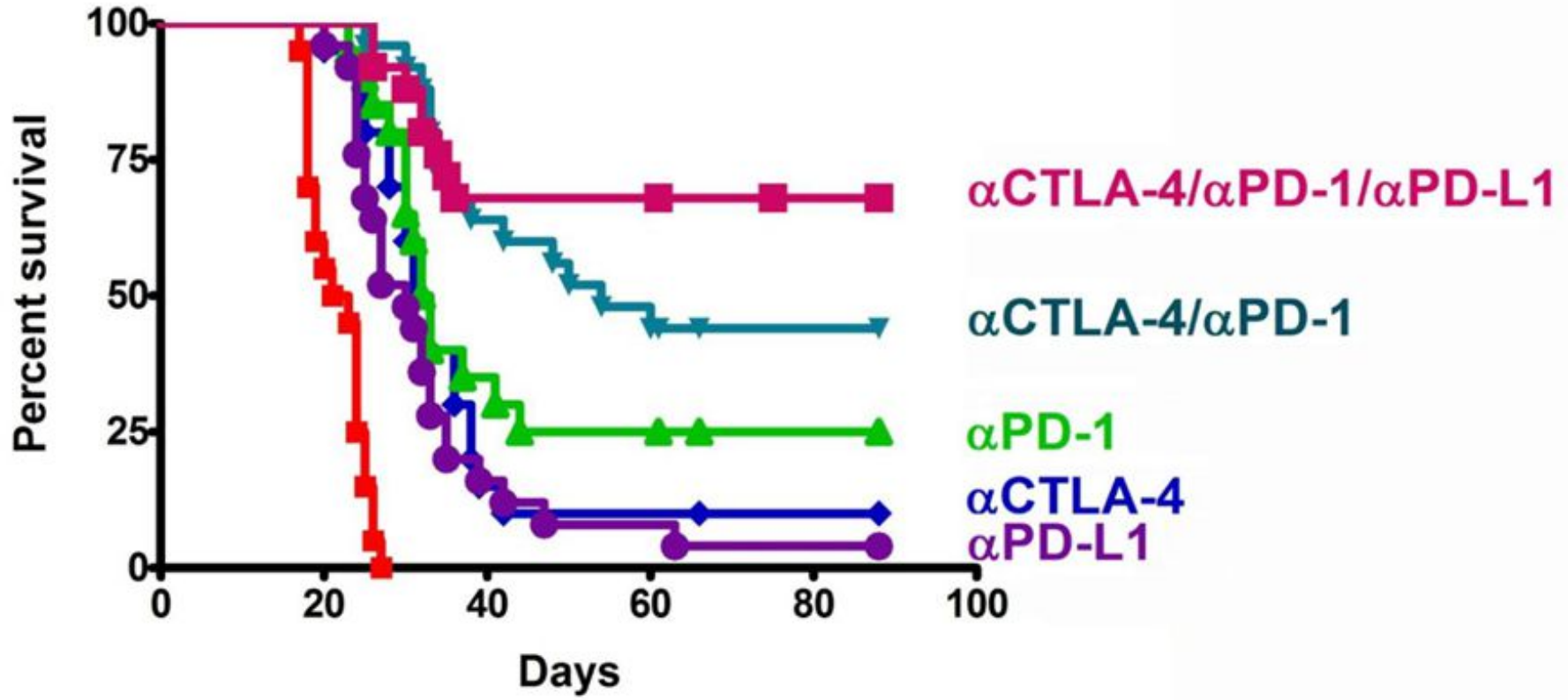
Blockade of both CTLA-4 and PD-1/PD-L1 improves anti-tumor responses in Mice



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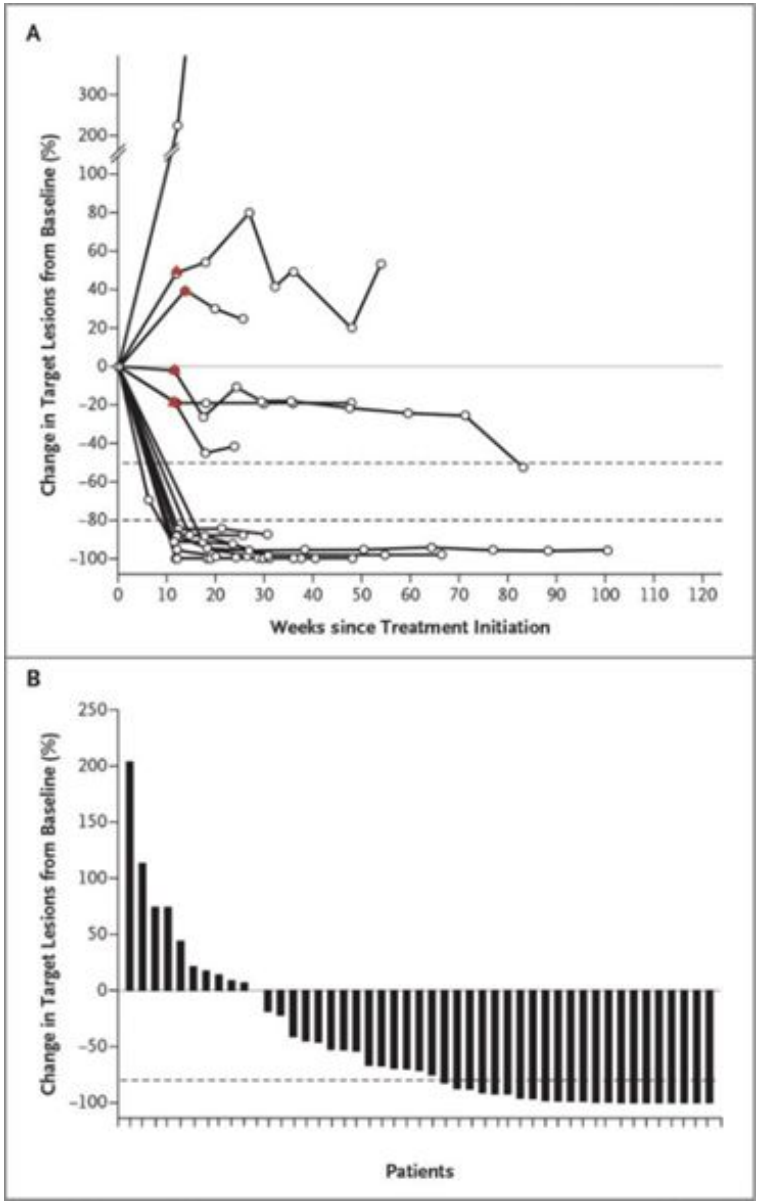
Blockade of both CTLA-4 (Ipi) and PD-1 (Nivo) improves responses in Melanoma Patients



65% Clinical Activity

~50% Objective CR+PR

ASCO 2013
NEJM
6/2/2013

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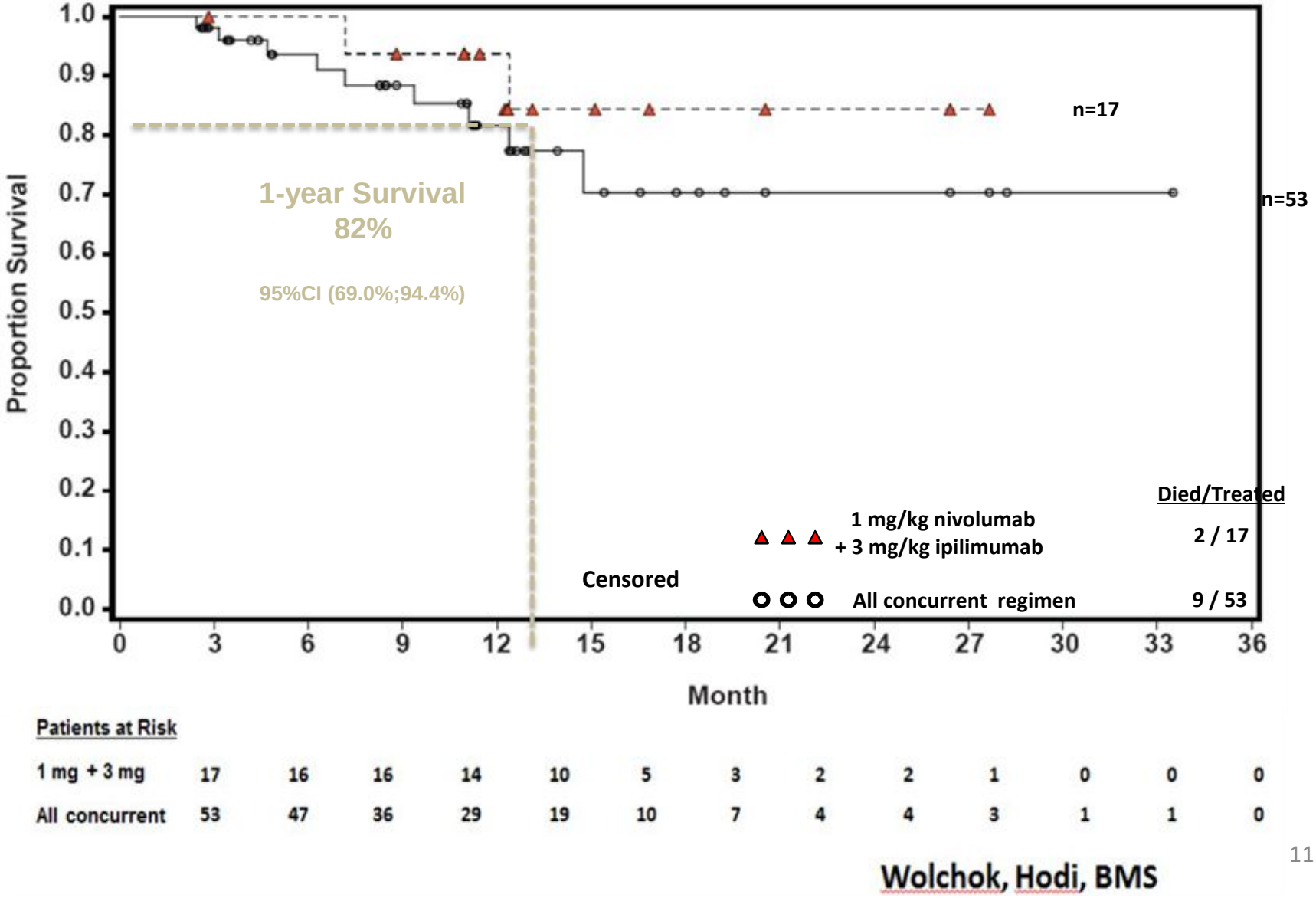
Preliminary Survival of Patients Treated with Ipilimumab + Nivolumab



Wolchok, Hodi, BMS

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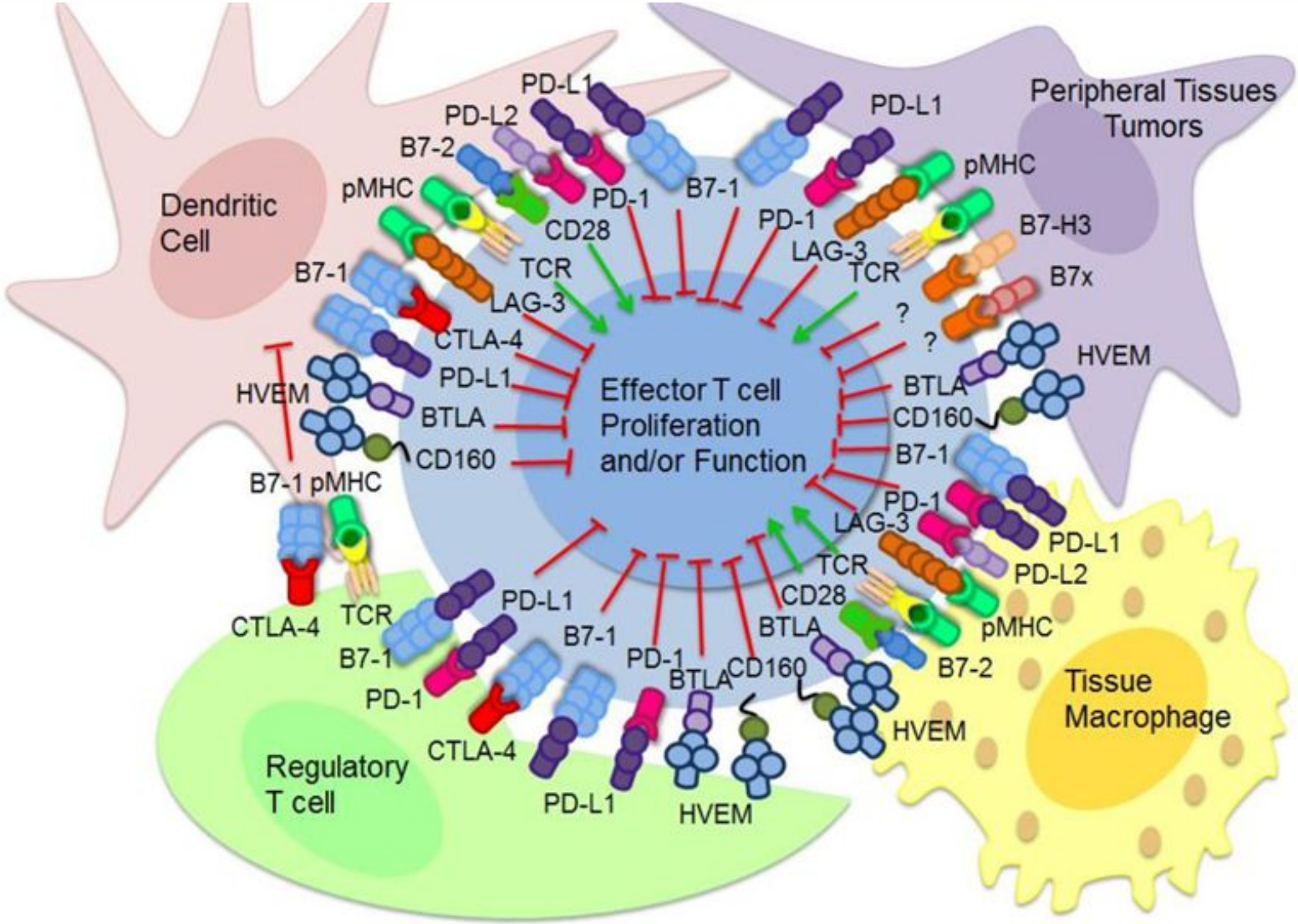
Mission of the U. T. M. D. Anderson Immunotherapy Platform

To accelerate development of immunotherapy treatments for cancer patients and to provide U. T. M. D. Anderson Cancer Center faculty access to expertise in immunotherapy and immune monitoring

- **To provide a centralized platform for immunologic studies across *all tumor types***
- **To form alliances with Pharma to ensure that U. T. M. D. Anderson gets newest drugs for our patients**
- **To provide immunologic data that can be integrated with genomics and proteomics data from other Platforms**


Dendritic Cell
Peripheral Tissues Tumors
Effector T cell Proliferation and/or Function
Regulatory T cell
Tissue Macrophage
PD-L1
PD-L2
B7-2
pMHC
PD-1
B7-1
CD28
TCR
LAG-3
CTLA-4
HVEM
BTLA
CD160
B7-H3
B7x
?
?
B7-1 pMHC

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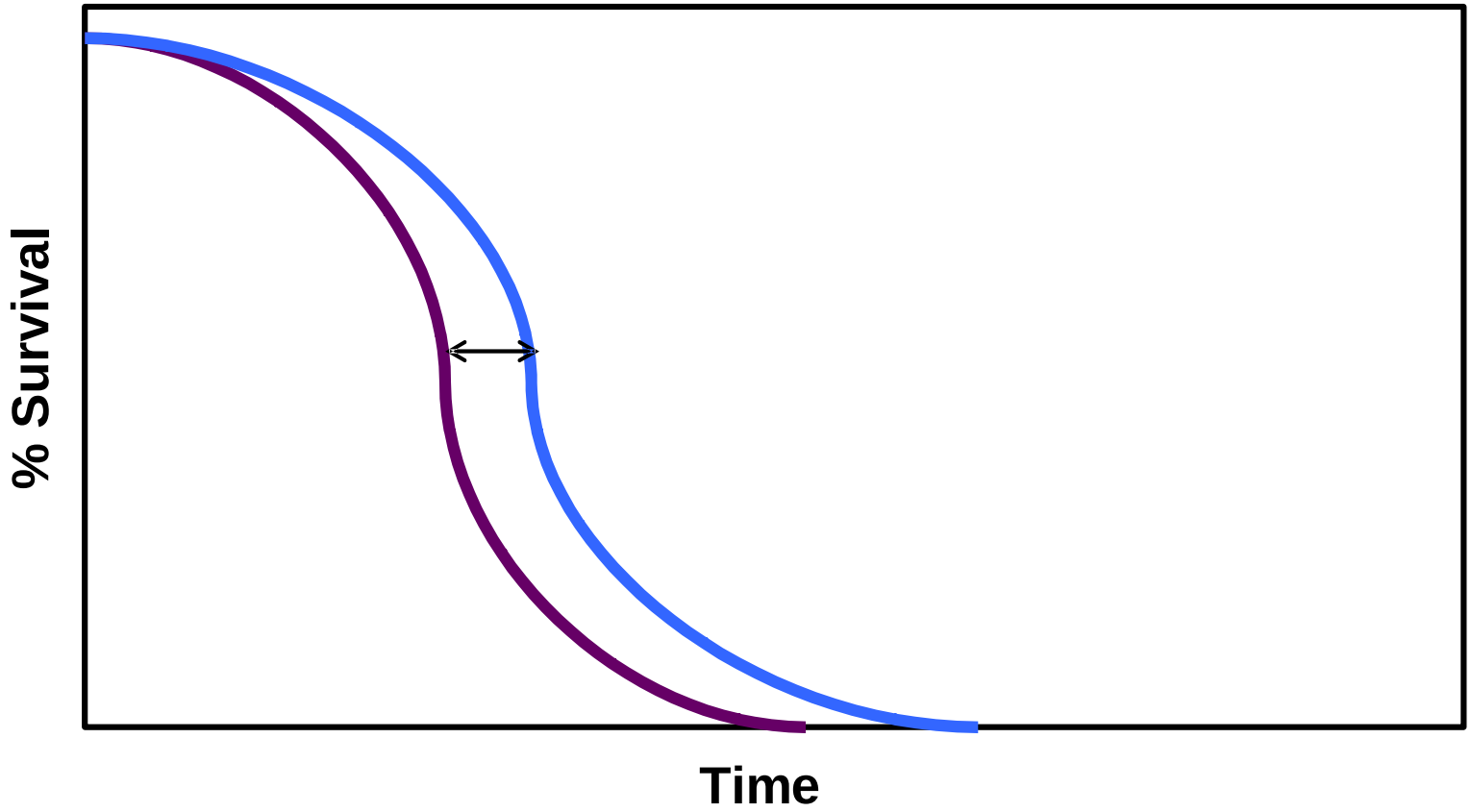
Improving Survival with Combination Therapy



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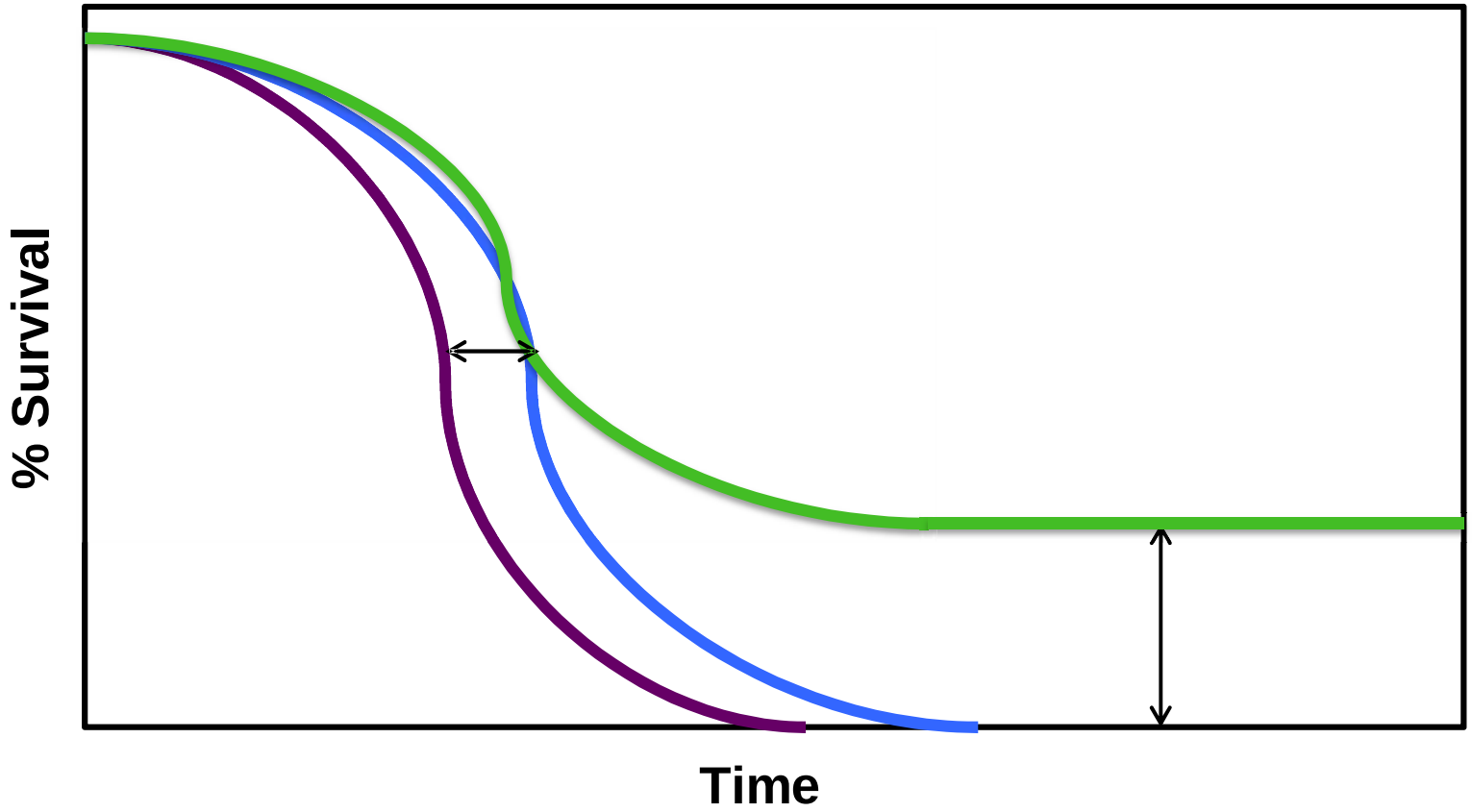
Improving Survival with Combination Therapy (cont.)



Control

Standard or Other Therapy

Immunotherapy (e.g.anti-CTLA4)

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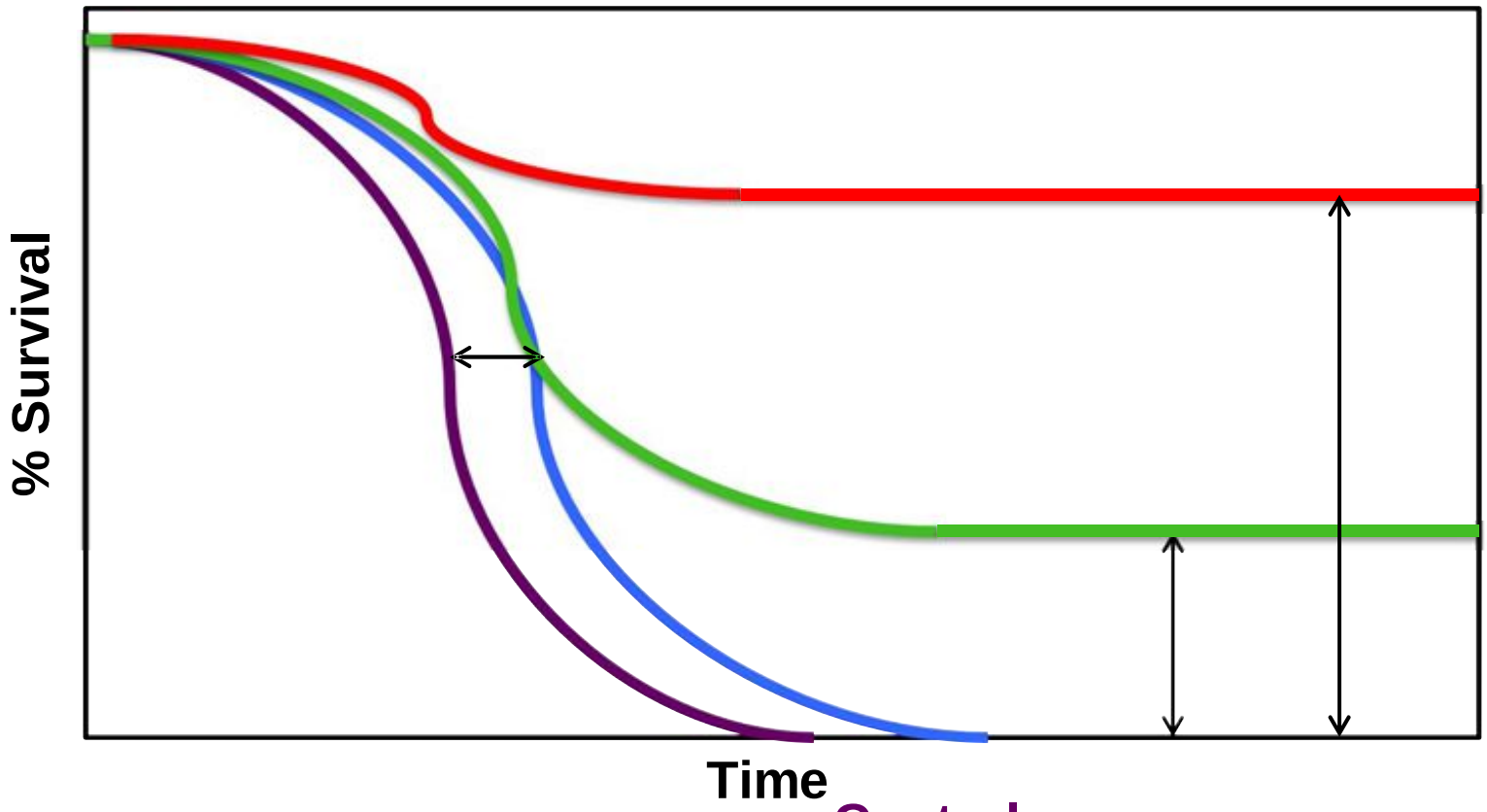
Improving Survival with Combination Therapy (cont.)



Control

Standard or Other Therapy

Immunotherapy (e.g.anti-CTLA4)

Combination