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### Bevacizumab, Autologous Tumor/DC Vaccine, IL-2 and IFN $\alpha$ -2b in Metastatic Renal Cell Carcinoma (RCC) Patients

**This study is currently recruiting participants.**

*Verified October 2011 by Dartmouth-Hitchcock Medical Center*

**Sponsor:**

Dartmouth-Hitchcock Medical Center

**Collaborator:**

National Cancer Institute (NCI)

**Information provided by (Responsible Party):**

Dartmouth-Hitchcock Medical Center

**ClinicalTrials.gov Identifier:**

NCT00913913

First received: June 2, 2009

Last updated: August 13, 2012

Last verified: October 2011

[History of Changes](#)

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[No Study Results Posted](#)

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#### Purpose

Immune therapies, such as a IL-2, for metastatic renal cell carcinoma (mRCC) are designed to mobilize immune effector cells that recognize a destroy cancer. The investigators have recently observed a 50% objective response rate (16% CR) in mRCC patients treated with autologou tumor lysate -dendritic cell (DC)-vaccine, IL-2 and interferon alfa (IFN). New agents inhibiting vascular endothelial growth factor (VEGF) pathw have demonstrated significant benefit in mRCC patients as well, but rarely induce CRs. High blood VEGF is associated with poor response to and can cause tumor specific immune dysregulation. To test whether complementary mechanisms of immune activation and disruption of regul pathways enhance outcome the investigators plan to treat 24 mRCC patients in a phase II trial using bevacizumab, DC vaccine, IL-2, and IFN. Observations from this project will be used in the development of novel cancer therapies which, if successful, will decrease the burden of can the public.

The investigators propose to determine 1) the objective clinical response rate to treatment and progression free survival, 2) the clinical and autoimmune related toxicity profile of therapy, and 3) the treatment related tumor-specific immune response and the relationship of tumor-spec immune response and objective clinical response.

Condition	Intervention	Phase
Metastatic Renal Cell Carcinoma	Biological: DC vaccine Drug: Bevacizumab Biological: IL-2 Biological: IFN	Phase 2

Study Type: **Interventional**

Study Design: **Endpoint Classification: Efficacy Study**

**Intervention Model: Single Group Assignment**

**Masking: Open Label**

**Primary Purpose: Treatment**

Official Title: **A Phase II Study of VEGF Blockade With Bevacizumab Combined With Autologous Tumor/Dendritic Cell Vaccine (DC Vaccine Interleukin-2 (IL-2) and Interferon- $\alpha$ -2b (IFN $\alpha$ -2b) in Patients With Metastatic Renal Cell Carcinoma (RCC)**

**Resource links provided by NLM:**

MedlinePlus related topics: [Cancer](#)

Drug Information available for: [Bevacizumab](#)

[U.S. FDA Resources](#)

**Further study details as provided by Dartmouth-Hitchcock Medical Center:**

Primary Outcome Measures:

- To determine the objective clinical response rate and progression free survival (PFS) to this combined treatment regimen. [ Time Frame: 3 years ] [ Designated as safety issue: No ]
- To characterize the clinical and autoimmune related toxicity profile of the combined treatment regimen. [ Time Frame: 3 years ] [ Designated as safety issue: Yes ]

Secondary Outcome Measures:

- In relevant immune pathways, to measure treatment-related tumor-specific immune responses and to examine the relationship between tumor specific immune response and objective clinical response in RCC patients treated with this regimen [ Time Frame: 3 years ] [ Designated as safety issue: No ]

Estimated Enrollment: 24  
 Study Start Date: February 2009  
 Estimated Study Completion Date: January 2016  
 Estimated Primary Completion Date: January 2015 (Final data collection date for primary outcome measure)

Arms	Assigned Interventions
Experimental: bevacizumab,IL-2, IFN, DC vaccine	Biological: DC vaccine DC Vaccine therapy 10E7 intranodally every cycle Drug: Bevacizumab Bevacizumab 10mg/kg iv every 2 weeks Biological: IL-2 IL-2 18 MiU/m <sup>2</sup> CI 5 days Biological: IFN IFN 6 MiU subc TIW

**▶ Eligibility**

Ages Eligible for Study: 18 Years and older  
 Genders Eligible for Study: Both  
 Accepts Healthy Volunteers: No

**Criteria**

Inclusion Criteria:

1. Histologically confirmed metastatic renal cell carcinoma with measurable disease.
2. Adequate tumor tissue properly stored and available to produce lysate for a minimum of three vaccine preparations.
3. Patients must be at least 4 weeks from their last therapy (tyrosine kinase inhibitors, immunotherapy, radiation, surgery or chemotherapy; weeks for nitrosureas) and recovered from all ill effects.
4. Have measurable disease.
5. Patients must be at least 4 weeks from major surgery, 1 week from minor surgery, and recovered from all ill effects.
6. Karnofsky Performance Status  $\geq$ 80%.
7. Adequate end organ function:
  - Hematologic: ANC  $\geq$  1000cells/mcL, platelets  $\geq$  100,000/mcL, hemoglobin  $\geq$  9g/dl (pre transfusion values used for prognostic factor be transfused or use recombinant erythropoietin growth factors but must not have active bleeding).
  - Liver: AST < 2 x ULN (upper limit of normal) unless due to metastases then < 5 x ULN, serum total bilirubin < 2 x ULN (except for pa

with Gilbert's Syndrome).

- o Renal: serum creatinine < 1.5 mg/dL or creatinine clearance > 60cc/min.
  - o Pulmonary: FEV1 > 2.0 liters or > 75% of predicted for height and age. (PFTs are required for patients over 50 or with significant pulmonary or smoking history)
  - o Cardiac: No evidence of congestive heart failure, symptoms of coronary artery disease, myocardial infarction less than 6 months prior entry, serious cardiac arrhythmias, or unstable angina. Patients who are over 40 or have had previous myocardial infarction greater than 6 months prior to entry will be required to have a negative or low probability cardiac stress test for cardiac ischemia.
  - o CNS: No history of cerebrovascular accident, transient ischemic attacks, central nervous system or brain metastases.
8. Women should not be lactating and, if of childbearing age, have a negative pregnancy test within two weeks of entry to the study.
  9. Appropriate contraception in both genders.
  10. The patient must be competent and have signed informed consent.
  11. Patients may have received one prior therapy with targeted therapies (e.g. sorafenib and sunitinib).

#### Exclusion Criteria:

1. Patients who have previously received bevacizumab or IL-2 are not eligible.
2. Concomitant second malignancy except for non-melanoma skin cancer, and non-invasive cancer such as cervical CIS, superficial bladder cancer without local recurrence or breast CIS.
3. In patients with a prior history of invasive malignancy, less than five years in complete remission.
4. Positive serology for HIV, hepatitis B or hepatitis C which should be confirmed with antigenemia.
5. Significant co-morbid illness such as uncontrolled diabetes or active infection that would preclude treatment on this regimen.
6. Use of corticosteroids or other immunosuppression (if patient had been taking steroids, at least 2 weeks must have passed since the last dose). Inhaled steroids > 1000mcg beclomethasone per day or its equivalent.
7. History of inflammatory bowel disease or other serious autoimmune disease. (Not including thyroiditis and rheumatoid arthritis).
8. Patients with organ allografts.
9. Uncontrolled hypertension (BP >150/100 mmHg).
10. Proteinuria dipstick > 3+ or > 2gm/24 hours, or a urine protein:creatinine ratio > 1.0 at screening.
11. Major surgery, open biopsy, significant traumatic injury within 28 days of starting treatment or anticipation of need for major surgical procedure during the course of the study.
12. Minor surgical procedures, fine needle aspirations or core biopsies within 7 days prior to starting treatment. Central venous catheter placements are permitted.
13. History of abdominal fistula, gastrointestinal perforation, or intraabdominal abscess within 6 months prior to starting treatment.
14. Serious, non-healing wound, ulcer, or bone fracture.
15. History of tumor-related or other serious hemorrhage, bleeding diathesis, or underlying coagulopathy.
16. History of deep venous thrombosis, or other thrombotic event within the past six months or clinically significant peripheral vascular disease.
17. Inability to comply with study and/or follow-up procedures.

## ▶ Contacts and Locations

Please refer to this study by its ClinicalTrials.gov identifier: NCT00913913

### Contacts

Contact: Eryn M Bagley, BS      603 650 5534    [Eryn.M.Bagley@Hitchcock.ORG](mailto:Eryn.M.Bagley@Hitchcock.ORG)  
 Contact: Nancy A Crosby, AOCN    603 650 5534    [Nancy.A.Crosby@Hitchcock.ORG](mailto:Nancy.A.Crosby@Hitchcock.ORG)

### Locations

#### United States, New Hampshire

Dartmouth-Hitchcock Medical Center

**Recruiting**

Lebanon, New Hampshire, United States, 03756

Contact: Eryn M Bagley, BS    603-650-5534    [Eryn.M.Bagley@Hitchcock.ORG](mailto:Eryn.M.Bagley@Hitchcock.ORG)

Contact: Nancy A Crosby, AOCN    603 650 5534    [Nancy.A.Crosby@Hitchcock.org](mailto:Nancy.A.Crosby@Hitchcock.org)

### Sponsors and Collaborators

Dartmouth-Hitchcock Medical Center

[National Cancer Institute \(NCI\)](#)

### Investigators

Principal Investigator: Marc S Ernstoff, MD Dartmouth-Hitchcock Medical Center

### More Information

Additional Information:

[Related Info](#) 

[Related Info](#) 

Publications:

Ernstoff MS, Crocenzi TS, Seigne JD, Crosby NA, Cole BF, Fisher JL, Uhlenhake JC, Mellinger D, Foster C, Farnham CJ, Mackay K, Szczepiorkowski ZM, Webber SM, Schned AR, Harris RD, Barth RJ Jr, Heaney JA, Noelle RJ. Developing a rational tumor vaccine therapy for cell carcinoma: immune yin and yang. *Clin Cancer Res*. 2007 Jan 15;13(2 Pt 2):733s-740s. Review.

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Keywords provided by Dartmouth-Hitchcock Medical Center:  
 Renal Cell Carcinoma

Additional relevant MeSH terms:

Carcinoma	Antineoplastic Agents
Carcinoma, Renal Cell	Therapeutic Uses
Neoplasms, Glandular and Epithelial	Pharmacologic Actions
Neoplasms by Histologic Type	Analgesics, Non-Narcotic
Neoplasms	Analgesics
Adenocarcinoma	Sensory System Agents
Kidney Neoplasms	Peripheral Nervous System Agents
Urologic Neoplasms	Physiological Effects of Drugs
Urogenital Neoplasms	Central Nervous System Agents
Neoplasms by Site	Angiogenesis Inhibitors
Kidney Diseases	Angiogenesis Modulating Agents
Urologic Diseases	Growth Substances
Bevacizumab	Growth Inhibitors
Interleukin-2	

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