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**NAME OF SPONSOR/COMPANY:**

Genzyme Corporation, 500 Kendall Street, Cambridge, MA 02142  
Bone Care International, Inc., Middleton, WI 53652 (Bone Care was acquired by Genzyme Corporation July 2005)

**TITLE OF STUDY:**

**Protocol BCI-CH-125:** Phase 2 Study of 1 $\alpha$ -hydroxyvitamin D<sub>2</sub> (1 $\alpha$ -OH-D<sub>2</sub>) in the Treatment of Advanced Androgen Independent Prostate Cancer

**INVESTIGATORS AND STUDY CENTER(S):**

This study was conducted at a single center in the United States.

**STUDIED PERIOD:**

First patient enrolled: 25 January 1999  
Last patient completed: 10 October 2002

**PHASE OF DEVELOPMENT:**

Phase 2

**OBJECTIVES:**

The objectives of the study included:

- Evaluation of the efficacy and safety of Hectorol in patients with androgen independent prostate cancer (AIPC);
- Monitoring levels of 1 $\alpha$ ,25-dihydroxyvitamin D<sub>2</sub>, 1 $\alpha$ ,25-dihydroxyvitamin D<sub>3</sub>, and 1 $\alpha$ ,24(S)-dihydroxyvitamin D<sub>2</sub> after administration of Hectorol Capsules;
- Assessment of the value of PSA (prostate specific antigen) as a marker of clinical benefit.

**METHODOLOGY:**

This was a Phase 2, single-center, open-label, 12 weeks treatment with Hectorol and an optional treatment extension period.

**NUMBER OF PATIENTS (PLANNED AND ANALYZED):**

No. Enrolled: 26  
No. Treated: 26  
No. Completed: 17

**DIAGNOSIS AND MAIN CRITERIA FOR INCLUSION:**

Patients included in this study were at least 18 years of age, had progressive metastatic or regional nodal cancer following hormonal therapy, had evaluable or measurable disease, or bone scan abnormalities attributable to prostate cancer and a PSA > 10 ng/mL; and evidence of progressive prostate cancer.

#### **TEST PRODUCT, DOSE, AND MODE OF ADMINISTRATION:**

Hectorol: 2.5 mcg soft gelatin capsules  
The initial dose was 12.5 mcg  
Doses were taken orally before breakfast.

#### **DURATION OF TREATMENT:**

Up to 12 weeks with an option to continue in the absence of disease progression.

#### **REFERENCE THERAPY, DOSE AND MODE OF ADMINISTRATION:**

No applicable.

#### **CRITERIA FOR EVALUATION:**

##### **Criteria for Evaluation - Efficacy:**

Radiographic disease assessments were used as measures of efficacy. The primary endpoint of this trial was the rate of stable disease at 6 months. A stable disease rate of 30% or greater at six months was considered to be of clinical interest. The overall response rate was also evaluated.

##### **Criteria for Evaluation - Safety:**

Safety was evaluated based on toxicity assessments, vital signs, physical examinations, and laboratory parameters.

#### **STATISTICAL METHODS:**

##### **Statistical Methods - Efficacy:**

No formal analyses were performed. Data were summarized descriptively.

##### **Statistical Methods – Safety:**

No formal analyses were performed. Data were summarized descriptively.

#### **SUMMARY / CONCLUSIONS**

##### **Summary / Conclusions - Demographics:**

Twenty-six Caucasian male patients with androgen independent prostate cancer were enrolled in this study. The mean age of the patients at enrollment was 71 years (range, 57 to 85 years). The mean number of years since initial diagnosis of disease was 6.4 (range, 0.9 to 15.8 years). Five patients had received prior chemotherapy, and 14 patients had received prior radiotherapy.

##### **Summary / Conclusions – Efficacy:**

Of the 26 patients enrolled, six failed to complete at least eight weeks of therapy and were therefore not evaluable for response. Of the remaining 20 patients, no objective responses were seen despite eight patients having measurable disease. One of those patients had lung metastases and mediastinal lymph node involvement at enrollment and maintained stable disease for over two years. The remaining 19 patients had stable disease for an average of 19 weeks (median 12 weeks, range 8 to 44 weeks). Of those, all but two patients had radiographic evidence of disease progression. Those two patients had clinical deterioration with increased bone pain. In total, six patients achieved stable disease for more than six months meeting the initial criteria for drug activity.

##### **Summary / Conclusions – Safety Results:**

Hypercalcemia was reported in 16 subjects and was the most commonly reported adverse event. There was frequent dose reduction for grade 1 hypercalcemia, as required by the protocol. Other commonly occurring adverse events included arthralgia, back pain, and constipation.

Eleven serious adverse events were reported in eight patients during the study. None were assessed as related to the study drug by the Investigator.

**Based on report prepared on:** 01 September 2005

**Synopsis prepared on:** 10 November 2006