

The Role of the Urologist in Treating Patients with Hormone-Refractory Prostate Cancer

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Objectives: *To ascertain what percentage of urologists' oncology practice is dedicated to the care of prostate cancer patients and to determine urologists' attitudes towards the treatment of patients with metastatic and hormone-refractory prostate cancer (HRPC). An additional objective is to determine urologists' interest in administering various types of chemotherapy in HRPC patients.*

Materials and Methods: *The American Urological Association (AUA) directory of practicing urologists was obtained, and 3000 randomly selected members of the AUA, as well as the complete list of 168 Society of Urologic Oncology (SUO) members, were chosen for the mailing of a 16-item questionnaire. The urologists were asked about how many of their patients have prostate cancer, how many have metastatic disease, and how many have HRPC and are currently receiving intravenous (IV) chemotherapy. In addition, the urologists were queried regarding their level of interest in learning about chemotherapy options as well as learning how to administer chemotherapy.*

Results: *A total of 654 survey questionnaires were completed and returned for tabulation, resulting in a 21% effective response rate. Sixty-four percent of the responding urologists' cancer patients had prostate cancer, 21% had metastatic disease, and 19% had HRPC; only 4% of the urologists currently administer IV chemotherapy themselves. When asked to describe their interest in learning how to deliver and be reimbursed for IV chemotherapy, 26% expressed an extremely low level of interest, 23% a low level of interest, 31% a high level of interest, and 17% an extremely high level of interest. The results of other questions are presented and correlated with the number of years the urologists have been in practice and other demographic data.*

Conclusions: *The management of prostate cancer comprises a major portion of urologists' practices. Almost one half (48%) of the urologists in this survey were interested in administering and being reimbursed for IV chemotherapy. Several chemotherapy regimens have been shown to improve quality of life in patients with HRPC, yet only about 30% of these patients were referred for chemotherapy. If more urologists were able to deliver these drugs, then the number of patients referred for chemotherapy would likely increase, as would accrual to important clinical trials in HRPC. The results of this survey suggest that methods to implement the training and reimbursement of urologists in the use of chemotherapy regimens should be investigated.*

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Prostate cancer is the most common solid tumor in men. In 2003, it is predicted that 220,900 new cases will be diagnosed. About one fifth of these patients will present with metastatic disease at the time of the diagnosis,¹ and one fifth of the metastatic prostate cancer patients will be hormone-refractory.

Table 1
Strategies Used by Urologists before Trying Chemotherapy in Patients with Hormone-Refractory Prostate Cancer

Strategy	% of Urologists Who Use Strategy
Antiandrogen withdrawal	83.8
Adding an antiandrogen to LHRH monotherapy	71.9
Ketoconazole (Nizoral)	38.7
Prednisone or other steroids	32.0
Estramustine (Emcyt)	29.2
Switching from one antiandrogen to another	9.9
Aminoglutethamide (Cytadren)	3.8
Other hormone manipulation	9.0

LHRH, luteinizing hormone-releasing hormone.

The care patients with prostate cancer receive can be as diverse as the disease itself. The multidisciplinary approach has improved quality-of-life issues for these patients, initially with both diagnosis and early management of the disease, as well as

for patients with prostate cancer; 3) to learn about the extent to which cytotoxic chemotherapy is currently administered to these patients in urologists' offices; and 4) to assess the extent to which American Urological Association (AUA) and Society of

Survey results showed that 21% of the prostate cancer patients had metastatic prostate cancer, and 19% of the metastatic prostate cancers were refractory to hormone treatment.

later in the management of disease complications. The new chemotherapy regimens in the management of hormone-refractory prostate cancer (HRPC) are promising.²⁻⁶ In addition, mitoxantrone (Novantrone®, Serono, Inc., Geneva, Switzerland), combined with prednisone recently received U.S. Food and Drug Administration approval for the treatment of HRPC.

Objectives

The objectives of the current study were the following: 1) to quantify the number of patients with metastatic prostate cancer managed by community-based urologists; 2) to gain an understanding of the current management approaches used by urologists

Urologic Oncology (SUO) members would be interested in formal training that would allow them to administer cytotoxic chemotherapy in their offices.

Materials and Methods

In order to meet the objectives described above, a questionnaire was designed by an independent polling group. In September 1999, the final questionnaire was duplicated and mailed to 3000 randomly-selected members of the AUA and the complete list of 168 SUO members. The questionnaires were sent by first-class mail through the U.S. Post Office. The mailing also contained a self-addressed stamped return envelope

Table 2
Urologists' Level of Interest in Training to Administer Combination Chemotherapy Regimens

Level of Interest	% of Urologists
Extremely high	17
High	31
Low	23
Extremely low	26

and a cover letter describing the study and requesting participation. A stamped return postcard was also included for respondents to request a copy of the survey results.

Of the 3168 questionnaires mailed in September 1999, a total of 723 responses were received, for an overall response rate of 23%. Nine questionnaires were undeliverable and were returned because of incorrect addresses. Another 32 questionnaires were received but were incomplete, and 37 surveys were returned after the deadline for the tabulation of data (November 1999). A total of 654 questionnaires were completed and returned for tabulation, resulting in an effective response rate of 21%.

Results

Survey results showed that 36% of patients managed by the urologists participating in this study have cancer. The urologists reported that, on average, 64% of their cancer patients had prostate cancer, 21% had bladder cancer, 8% had renal cancer, 3% had testicular cancer, and 5% had another type of cancer. Twenty-one percent of the prostate cancer patients had metastatic prostate cancer, and 19% of the metastatic prostate cancers were refractory to hormone treatment.

The large majority (95%) of the urologists in this survey did not give

intravenous (IV) chemotherapy to HRPC patients. The 4% of urologists who did administer IV chemotherapy indicated that they had given their patients mitoxantrone, docetaxel (Taxotere®, Aventis Pharmaceuticals, Bridgewater, NJ), paclitaxel (Taxol®, Bristol-Myers Squibb Company, New York), doxorubicin (Adriamycin®, Pharmacia and Upjohn, Kalamazoo, MI), cisplatin (Platinol®, Bristol-Myers Squibb Company, New York), estramustine (Emcyt®, Pharmacia and Upjohn, Kalamazoo, MI), and vinblastine (Velbe®, Eli Lilly Australia, West Ryde, New South Wales). When managing their HRPC patients, 2% of the urologists indicated that they administered IV chemotherapy themselves, whereas 38% of the urologists reported that they had neither referred HRPC patients for chemotherapy nor administered chemotherapy themselves. The large majority of the respondents attempt antiandrogen withdrawal or adding an antiandrogen to luteinizing hormone-releasing hormone (LHRH) monotherapy before administering chemotherapy or before referring a HRPC patient for chemotherapy. Table 1 lists the strategies that urologists used before trying chemotherapy and the percentage of urologists who typically employed these strategies. Stilphostrol (diethylstilbestrol [DES]) and Megace (megestrol acetate) were the most common other medications used by the urologists before they administered chemotherapy.

Interest in Training in the Administration of Chemotherapy

About one half (48%) of the urologists reported a high level of interest in a training course that would educate them about chemotherapeutic regimens, including methods of delivering these regimens in their office and the reimbursement process. Table 2 shows the level of interest the uro-

Table 3
Urologists' Level of Interest in Training to Administer Single-Agent Chemotherapy

Level of Interest	% of Urologists
Extremely high	19
High	33
Low	20
Extremely low	26

Table 4
Urologists' Level of Interest in Training to Administer Interleukin-2 (IL-2) to Patients with Renal Cell Carcinoma

Level of Interest	% of Urologists
Extremely high	10
High	18
Low	25
Extremely low	42

Table 5
Respondents' Type of Practice Overall and Number of Years in Practice

Years in Practice	% in Academic Practice	% in Solo Practice	% in Single-Specialty Group Practice	% in Multi-Specialty Group Practice
1-4	16	19	52	13
15-24	11	34	43	13
≥ 25	13	33	47	9
Overall	13	28	47	12

gists had in a training course to administer combination chemotherapy regimens.

As shown in Table 3, slightly over one half (52%) of the urologists indicated a high level of interest in participating in a training course that would educate them about single-agent chemotherapy regimens (with or without oral chemotherapy), including methods of delivering such regimens in their office and the reimbursement process.

The survey results also showed that the urologists had a relatively lower level of interest in a training course that would educate them about the administration of interleukin-2 (IL-2) in patients with renal cell carcinoma.

Table 4 shows the level of interest in such a training course.

Overall, 67% of the urologists reported they would be willing to devote time to a training program to learn about options for chemotherapeutic treatments. Among the urologists who indicated a willingness to participate in a training program, the average amount of time they were willing to give to such a program was 55 hours. For urologists who were not interested in administering chemotherapy, the primary obstacles were lack of knowledge/ trained personnel (45%), logistical issues (31%), patient safety concerns (20%), costs (14%), obstacles within the medical community (10%), and the lack of

appropriate patients (2%).

Respondent Characteristics

Overall, about one half (47%) of the respondents practice in a single-specialty group, whereas the remaining urologists are in solo practices (28%),

those in solo practices (4%). Only 2% of the urologists who do not have a medical oncologist in their practice anticipated hiring a medical oncologist in the future. Ten percent of the urologists had received fellowship training in uro-oncology. Of the

a medical oncologist reported a higher percentage of their practice devoted to cancer treatment (46%) compared to those who did not employ a medical oncologist (34%) ($P < .05$).

The survey results showed that urologists who have been in practice for longer periods of time were the least likely to refer patients to an internal oncologist. As many as 32% of the urologists who were in practice between 1 and 14 years referred patients to an internal oncologist, compared with 30% of respondents practicing between 15 and 24 years, and 19% of respondents in practice 25 years or more ($P < .05$).

Eighteen percent of the urologists surveyed employ a medical oncologist within their practice or group.

multi-specialty groups (12%), or academia (13%). The respondents have been in practice for a median of 19 years. Table 5 shows the respondents' type of practice overall and by the number of years in practice.

On average, 27% of the urologists' patients are members of health maintenance organizations (HMOs), 25% are members of preferred provider organizations (PPOs), 5% are capitated care patients, and 42% fall into another category. Eighteen percent of the urologists employ a medical oncologist within their practice or group. Urologists in multi-specialty groups were most likely to employ a medical oncologist (76%), followed by those in academia (64%), and

urologists with fellowships in uro-oncology, 25% reported that their training had involved the administration of chemotherapy.

Academic urologists had the highest average percentage of their practice devoted to the treatment of cancer (64%) compared with urologists in

Discussion

Prostate cancer is the most common type of tumor managed by urologists.

Among the urologists who indicated a willingness to participate in a training program, the average amount of time they were willing to give to such a program was 55 hours.

single-specialty group practices (33%), multi-specialty group practices (32%), and solo practices (29%) ($P < .05$). Respondents who employed

When faced with a patient with HRPC, the large majority of urologists in the survey reported that they refer the patient to a medical oncologist, either

Main Points

- A 16-item survey questionnaire was mailed to 3000 randomly-selected members of the American Urological Association (AUA) and to the complete list of 168 Society of Urologic Oncology (SUO) members.
- Respondents were asked about the types of prostate cancer their patients have and how many are currently receiving intravenous (IV) chemotherapy. In addition, the urologists were queried regarding their level of interest in becoming educated about chemotherapy options as well as learning how to administer chemotherapy.
- Respondents returned a total of 654 completed questionnaires for tabulation, resulting in a 21% effective response rate. Results showed that 64% of the urologists' cancer patients had prostate cancer, 21% had metastatic disease, and 19% had HRPC; only 4% of the urologists currently administer IV chemotherapy themselves.
- Almost one half (48%) of the urologists in this survey were interested in learning how to administer and be reimbursed for IV chemotherapy.
- Several chemotherapy regimens have been shown to improve the quality of life in patients with hormone-refractory prostate cancer (HRPC), yet only about 30% of these patients were referred by the urologists for chemotherapy.
- The results of this survey suggest that methods to implement the training and reimbursement of urologists in the use of chemotherapy regimens for HRPC patients should be investigated.

within or external to their group, for evaluation. Urologists play a pivotal role in the development and implementation of new treatment regimens for HRPC. However, chemotherapeutic regimens that have the potential for serious toxicity and, therefore, require frequent monitoring of the patient, are generally not easily accommodated. For this reason, many urologists do not consider these to be desirable treatment options for their patients.

In this survey, about one half of the urologists indicated an interest in taking courses designed to educate them about the administration and reimbursement of chemotherapeutic therapy options, including combination therapy and single-agent IV chemotherapy. So that urologists may remain primary players in managing HRPC, urology group practices

may become more prevalent in order for services to be more diversified. These practices may also include subspecialists who are specifically trained in the administration of chemotherapy. Urologists and medical oncologists can also cooperate to bring different perspectives to treatment decisions. By working together, they can provide the best disease management for their patients.

Conclusions

Several chemotherapy regimens have been shown to improve the quality of life in patients with HRPC, yet only about 30% of these patients are referred for these therapies. If more urologists were able to deliver these drugs, then the number of patients referred for chemotherapy would likely increase, as would accrual to important clinical trials in HRPC. The

results of this survey suggest that methods to implement the training and reimbursement of urologists in the use of chemotherapy regimens for HRPC patients should be investigated. ■

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