



THE AGA KHAN UNIVERSITY

eCommons@AKU

Department of Surgery

Department of Surgery

July 2010

Modification and implementation of NCCN guidelines on prostate cancer in the Middle East and North Africa region.

Waleed A. Hassen

Department of Urology, Johns Hopkins Medical Institutions, Bethesda, Maryland, USA

Farrok A. Karsan

Department of Urology, Johns Hopkins Medical Institutions, Bethesda, Maryland, USA

Farhat Abbas

Aga Khan University, farhat.abbas@aku.edu

Follow this and additional works at: http://ecommons.aku.edu/pakistan_fhs_mc_surg_surg

 Part of the [Surgery Commons](#), and the [Urology Commons](#)

Recommended Citation

Hassen, W., Karsan, F., Abbas, F. (2010). Modification and implementation of NCCN guidelines on prostate cancer in the Middle East and North Africa region.. *J Natl Compr Canc Netw*, 8(3), S26-S28.

Available at: http://ecommons.aku.edu/pakistan_fhs_mc_surg_surg/195

Modification and Implementation of NCCN Guidelines™ on Prostate Cancer in the Middle East and North Africa Region

Waleed A. Hassen, MD;^{a,b} Farrok A. Karsan, MD;^c Farhat Abbas, MD;^d Yasar Beduk, MD;^e Ahmed El-Khodary, MD;^f Marwan Ghosn, MD, MBA;^g Jamal Khader, MD;^h Raja Khauli, MD;ⁱ Danny M. Rabah, MD;^j Ali Shamseddine, MD;^k and Sandy Srinivas, MD;^l *Bethesda, Maryland; Al Ain, United Arab Emirates; Karachi, Pakistan; Ankara Turkey; Kuwait City, Kuwait; Beirut, Lebanon; Amman, Jordan; Riyadh, Kingdom of Saudi Arabia; and Stanford, California*

Key Words

NCCN Clinical Practice Guidelines in Oncology, NCCN Guidelines, Middle East and North Africa, prostate cancer

Abstract

A prostate cancer committee was established to modify the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines) on Prostate Cancer for adaptation and implementation in the Middle East and North Africa (MENA) region. The objective was to enhance the multidisciplinary approach to the treatment of prostate cancer. The committee, comprising regional experts in the fields of urologic, medical, and radiation oncology, reviewed the 2009 version of the NCCN Guidelines on Prostate Cancer and suggested modifications based on the unique needs of the regions determined through published evidence and local expertise. The committee identified several areas in the NCCN Guidelines that they believed required modification, which are presented in this article. The treatment of

prostate cancer in the MENA region has numerous challenges. The hope is that this effort to modify the NCCN Guidelines on Prostate Cancer for practical use in the MENA region will improve regional awareness and patient care. (*JNCCN* 2010;8[Suppl 3]:S26–S28)

Prostate cancer is a significant source of morbidity and mortality in the West, and remains the second leading cause of death from a solid malignancy in men in the United States.¹ However, its effect on populations in the Middle East and North Africa (MENA) region is not completely known. A prostate cancer committee was established to modify the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines) on Prostate Cancer for adaptation and implementation in the MENA region. The objective was to enhance the multidisciplinary approach to the treatment of prostate cancer. The committee, comprising regional experts in the fields of urologic, medical, and radiation oncology, reviewed the 2009 version of the NCCN Guidelines on Prostate Cancer and suggested modifications based on the unique needs of the region determined through published evidence and local expertise. The committee identified several areas in the NCCN Guidelines that they believed required modification, which are presented in this article. The treatment of prostate cancer in the MENA region has numerous challenges. The hope is that this effort to modify the NCCN Guidelines on Prostate Cancer for practical use in the MENA region will improve regional awareness and patient care.

From the ^aDepartment of Urology, Johns Hopkins Medical Institutions, Bethesda, Maryland; ^bDepartment of Urology, Tawam Hospital, Al Ain, United Arab Emirates; ^cDepartment of Radiation Oncology, Aga Khan University Hospital, Karachi, Pakistan; ^dDepartment of Urology, Aga Khan University Hospital, Karachi, Pakistan; ^eDepartment of Urology, Ankara University, Ankara, Turkey; ^fDepartment of Oncology, Kuwait Cancer Control Center, Kuwait City, Kuwait; ^gDepartment of Urology, Hotel Dieu Hospital, Beirut, Lebanon; ^hDepartment of Radiation Oncology, King Hussein Cancer Center, Amman, Jordan; ⁱDepartment of Urology, American University of Beirut, Beirut, Lebanon; ^jDivision of Urology, Department of Surgery, College of Medicine, King Saud University, Riyadh, Kingdom of Saudi Arabia; ^kDepartment of Hematology-Oncology, American University of Beirut, Beirut, Lebanon; and ^lStanford University School of Medicine, Stanford, California.

The authors have disclosed that they have no financial interests, arrangements, or affiliations with the manufacturers of any products discussed in the article or their competitors.

Correspondence: Waleed A. Hassen, MD, Department of Urology, Tawam Hospital, P.O. Box 15258, Al Ain, United Arab Emirates. E-mail: whassen@tawamhospital.ae

The Region

For the purposes of this section, the MENA region refers to Afghanistan, Algeria, Armenia, Egypt, Ethiopia, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Oman, Pakistan, Qatar, Kingdom of Saudi Arabia (KSA), Somalia, Sudan, Syria, Tunisia, Turkey, United Arab Emirates (UAE), and Yemen. This collection of countries is obviously extremely heterogeneous in terms of economic resources and health care infrastructure. Although generalizations are difficult, some pertinent issues and challenges are broadly applicable to this region.

Incidence

Although the exact incidence of prostate cancer in the MENA region is unknown, the reported incidence is approximately 5.8 cases per 100,000, with a mortality rate of 4.9 cases per 100,000.² The accuracy of these data is not clear, however, because they are derived from unweighted averages from other regions. In general, prostate-specific antigen (PSA) screening is not routine, and therefore whether the lower incidence rate is secondary to the absence of screening or from a truly lower prevalence in the population is unknown. Smaller regional cancer databases, however, suggest that the true impact of this disease may be more significant than generally perceived. Young³ reported on regional cancer databases from 8 countries in the MENA region (Jordan, Egypt, Bahrain, KSA, Kuwait, Qatar, Oman, and UAE), and found that prostate cancer ranked among the top 4 malignancies in terms of frequency in 5 countries.³ Shamseddine et al.⁴ reported that prostate cancer represented the most frequently reported malignancy in Lebanese men.

In general it is the committee's perception that most patients present with late-stage disease because of the lack of PSA screening. It is also important to consider that the MENA region population is approximately 750 million.⁵

Because 65% of the population is currently younger than 30 years, even if the incidence of prostate cancer is lower than that of the West, the scope of the problem will only become more significant over the next 20 years as the population ages and presumably has access to improved medical care.

Diagnosis and Staging

Because PSA screening is not routine in the MENA region, patients tend to present with more advanced disease. A general lack of primary care exists in the health systems of the region, which represents a challenge to timely diagnosis. Transrectal sonography is not routinely available except in regional centers, and experience with transrectal sonographic biopsy of the prostate also seems to be limited to regional centers. Similarly, experience with the pathologic diagnosis of prostate cancer (including the nuances of grading) is also limited to referral centers. Although CT and nuclear bone scans are generally available, MRI has more limited availability.

Treatment

The definitive and palliative treatment of prostate cancer has multiple regional challenges. Definitive treatment typically involves either surgery or radiotherapy, and experience in the management of this disease is generally lacking. A brief poll of urologists, for example, found that awareness of the existence of NCCN Guidelines on Prostate Cancer varied between 5% and 86%.

Adequate experience in the surgical management of prostate cancer has been shown to improve outcomes.⁶ A lack of surgical experience in the localized management of prostate cancer generally exists, even in referral centers, and radiation therapy has similar issues. According to the International Atomic Energy Agency (IAEA), only 93 machines are capable of delivering greater than 10 mV of energy in a region of 730 million people.⁷ More importantly, 70 machines are clustered in 3 countries (Turkey, Egypt, and KSA), leaving 23 machines to service the needs of 19 countries. Only 30 of 93 machines are capable of delivering CT dosimetry and planning. Furthermore, the costs of neoadjuvant hormonal therapy in combination with radiation therapy are also challenging, and experience with brachytherapy is limited.

Similar issues arise when addressing the management of advanced disease. Although the cost of hormonal ablation is prohibitive, bilateral orchiectomy is a viable option and available. Access to systemic chemotherapy is limited, palliative care specialists are few, and the availability of narcotics tends to be limited.

Hassen et al.

Recommendations

Based on these challenges, the committee recommended the following modifications to the NCCN Guidelines on Prostate Cancer.

Staging Workup

Staging with CT/MRI seems restrictive for stage 1 to 2, which limits these imaging modalities to those patients with a 20% or more probability of lymph node involvement. Given that expertise in treatment is limited, a diagnosis of metastatic disease would potentially avoid needless definitive intervention. Therefore, the committee believed that a cutoff of 10% would be more appropriate.

Expected Patient Survival

Life expectancy estimates from data obtained in the developed world may not be representative of the MENA region. Morbidity and mortality from the same illness may be more severe because of genetic factors, access to health care facilities, and availability of technology, socioeconomic, and education. Barring the availability of country-specific life expectancy tables, the committee recommends a combination of factors, including performance status, comorbid conditions, disease stage, and physician judgment based on local experience.

Initial Therapy

Although data show that a certain percentage of patients with locally advanced disease (T3b–T4) may be treated with surgery, the availability of surgical expertise for treating this patient population is extremely limited. Surgery is not recommended as an option, except in the rare institutions with a high level of surgical expertise.

Primary Salvage Therapy

Because experience with cryotherapy or brachytherapy is extremely limited, the management of post-radiation recurrence with either of these modalities should be restricted to a research setting.

Systemic Salvage Therapy

As stated in the NCCN guidelines, the clinical benefit of antiandrogens in hormone-refractory disease is limited. Given that the cost of these medications is prohibitive for a significant segment of the popula-

tion, the committee suggests the daily use of diethylstilbestrol in low doses (1–3 mg) in combination with warfarin as an affordable second-line alternative. Diethylstilbestrol has been shown to result in PSA declines in up to 42% of patients with rising PSA.⁸

Principles of Radiation Therapy

Although the NCCN guidelines do not mention high-dose-rate brachytherapy in the principles of radiation therapy, the committee believes that guidelines for the use of this technology should be incorporated.

Summary

The treatment of prostate cancer in the MENA region is a challenge and numerous obstacles hinder the delivery of what would be deemed appropriate care in the West. Although the incidence of prostate cancer seems to be less than in the West, the true incidence probably is at least partially understated. Physician awareness of appropriate treatment guidelines may not be sufficient; the hope is that this initial effort in tailoring guidelines to the region will lead to improved patient care.

References

1. Jemal A, Siegel R, Ward E, et al. Cancer statistics, 2009. *CA Cancer J Clin* 2009;59:225–249.
2. Parkin DM, Bray F, Ferlay J, Pisani P. Global Cancer Statistics, 2002. *CA Cancer J Clin* 2005;55:74–108.
3. Young JL. Cancer incidence in the Middle East and Gulf Cooperation Council countries. Presented at the Middle East Cancer Consortium Steering Committee Meeting; January 20, 2003; Lyon, France.
4. Shamseddine A, Sibai AM, Gehchan N, et al. Cancer incidence in postwar Lebanon: findings from the first national population-based registry, 1998. *Ann Epidemiol* 2004;14:663–668.
5. Unicef Regional Statistics, 2009.
6. Bianco FJ Jr, Riedel ER, Begg CB, et al. Variations among high volume surgeons in the rate of complications after radical prostatectomy: further evidence that technique matters. *J Urol* 2005;173:2099–2103.
7. International Atomic Energy Agency. Directory of Radiotherapy Centres. Available at: <http://www.naweb.iaea.org/nahu/dirac/default.asp>. Accessed March 31, 2010.
8. Smith DC, Redman BG, Flaherty LE, et al. A phase II trial of oral diethylstilbestrol as a second-line hormonal agent in advanced prostate cancer. *Urology* 1998;52:257–260.