39 Chenet L, Leon D, McKee M, Vassin S. Death from alcohol and violence in Moscow: Socio-economic determinants. *Eur J Population* 1998;14: 19-37.
40 Bobak M, Pikhart H, Hertzman C, Rose R, Marmot, M Socioeconomic factors, perceived control and self-reported health in Russia. A cross-sectional survey. *Soc Sci Med* 1998;47:269-79.
41 Watson P. Marriage and mortality in eastern Europe. In: Hertzman C, Kelly S, Bobak M, eds. *East-West life expectancy gap in Europe: environmental and non-environmental determinants*. Dordrecht: Kluwer, 1996.
42 Rose R. Russia as an hour-glass society: a constitution without citizens. *East European Constitutional Review* 1995;4:34-42.
43 Hajdu P, McKee M, Bojan F. Changes in premature mortality differentials by marital status in Hungary and in England and Wales. *Eur J Public Health* 1995;5:259-64.
44 Watson P. Explaining rising mortality among men in Eastern Europe. *Soc Sci Med* 1995;41:923-34.
45 Chenet L, McKee M, Otero A, Ausin I. What happened to life expectancy in Spain in the 1980s? *J Epidemiol Community Health* 1997;51:510-4.
46 Ngongo KN, Nante N, Chenet L, McKee M. What has contributed to changing life expectancy in Italy in 1980-1992? *Health Policy* 1999;48: 1-12.
47 Leon DA. Common threads: underlying components of inequalities in mortality between and within countries. In: Leon D, Walt G, eds. *Poverty, inequality and health*. Oxford: Oxford University Press, 2001:58-87.
48 Sibai AM, Fletcher A, Hills M, Campbell O. Non-communicable disease mortality rates using the verbal autopsy in a cohort of middle aged and older populations in Beirut during wartime, 1983-93. *J Epidemiol Community Health* 2001;55:271-6.
49 Kitange HM, Machibya H, Black J, Mtasiwa DM, Masuki G, Whiting D, et al. Outlook for survivors of childhood in sub-Saharan Africa: adult mortality in Tanzania. Adult Morbidity and Mortality Project. *BMJ* 1996;312:216-20.

Effect of sex and gender on psychosocial aspects of prostate and breast cancer

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Being male or female is an important basic human variable that affects health and illness throughout life.[1] Men and women differ not only with regard to their reproductive organs and bodies but also in the way they think, feel, and behave. The physical difference is called sex, influenced by genes and biology; the psychological difference is called gender, in which environmental, cultural, and psychosocial factors also have a prominent role. Researchers are just beginning to unravel the complex interactions between sex and gender, and the roles of nature and nuture are still unclear.

In the case of cancer it is obvious that only men can get prostate cancer and breast cancer occurs predominantly in women. How gender matters is not so obvious. In this article we describe the effect of gender on psychosocial differences in men and women with prostate and breast cancer, respectively.

Methods

We reviewed the recent literature concerning psychosocial aspects of prostate and breast cancer. We also incorporated our experiences as a psycho-oncologist and a general internist practising in sex and gender medicine as well as discussions and scientific exchange with colleagues and nurses in these specialties. There are several limitations—for example, both authors are male, which means there is a gender bias; we may be unaware of some aspects of the recent gender research in the social sciences; and the space for references is limited. The cited literature therefore mainly focuses on prostate cancer.

Table 1 Biology and epidemiology

	Prostate cancer	Breast cancer
Main cancer in men/women	Yes (after skin cancer)	Yes
Lifetime risk (%)	19.8*	12.6*
Increasing frequency	Yes	Yes
Environmental factors involved	Yes	Yes
Main cause of cancer death	Yes (after lung cancer)	Yes
Living with metastasis	Frequent	Frequent
Screening possible	Yes	Yes
Screening improves survival	??	?

*Data from *Cancer Facts and Figures, 2000*. Atlanta, GA: American Cancer Society, 2000.

Summary points

Sex and gender based differences have a profound effect on health and disease

The biology and epidemiology of prostate and breast cancer share many similarities

Differences in psychosocial aspects of prostate and breast cancer are mainly based on gender issues

Gender differences are evident not only in the physical impact but also on sex, quality of life, psychosocial differences, coping, and patients' partners

Differences in doctors' attitude and behaviour in the care of men with prostate cancer and women with breast cancer seem to be based on gender

Biology and epidemiology of prostate cancer and breast cancer

The biology and epidemiology of prostate and breast cancer share many similarities (table 1). For example, the lifetime risk for both cancers is high, and the frequency of both is increasing. Environmental factors seem to affect the risk of both cancers. In contrast to other cancer types, it is common for people with breast or prostate cancer to live with metastases for months and years. Screening for both cancers is possible, although much controversy exists over whether screening improves survival. Both cancers have a large effect not only on affected individuals but on the costs to national healthcare systems.

Physical effect of treatment on patients

Men with localised prostate cancer have four treatment choices: watchful waiting, radical prostatectomy, external beam radiation, and radioactive seed implants (brachytherapy). All options other than watchful waiting may

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lead to transient or permanent impotence and incontinence. Advanced prostate cancer is primarily treated by hormonal therapy, which affects sexual desire and function. By contrast, women with early stage breast cancer are now usually treated with breast conserving surgery in combination with radiation and adjuvant systemic therapy. Treatment of localised prostate cancer is therefore likely to result in greater physical impairment.

Until recently, the only measure urologists used to evaluate the effect of prostate cancer on male sex was impotence—that is, the inability to obtain an erection that is adequate for vaginal penetration.[2] Erectile dysfunction after cancer treatment seems to be more prevalent than studies with short follow up and selected patient populations allege.[3 4] According to a recent study, over 80% of patients treated for localised prostate cancer by radical prostatectomy or external beam radiation are impotent at a mean follow up of 53 months.[2] Sildenafil has greatly changed the treatment options for erectile dysfunction, but the drug's benefit after treatment for prostate cancer is still controversial.[5 6]

Female sexual dysfunction cannot be reduced to a simple single measurement as in men. Sexual arousal disorders are complicated to measure,[7] and emotional and relational issues seem to be more important in women than in men. In a recent study of women with breast cancer, about 30% of women treated by lumpectomy and over 40% treated by mastectomy said that it had negatively affected their sex lives.[8] The effect of treatment of both cancers on sexuality is considerable, but a direct comparison is impossible.

Effect on gender

If you ask men (colleagues or patients) what masculinity means for them, most are astonished, some make jokes, and you seldom get a consistent answer. How men are socialised and act as men is seldom reflected but constantly practised in social interaction, influenced by beliefs and behaviour such as being hard and strong (box).

At first glance, the male gender identity described in the box seems stereotypical and exaggerated, but there is some evidence that these characteristics are still real.[9] However, a man's concept of his masculinity also differs greatly according to his sociocultural background and often changes during his life.

Masculinity has close links to potency, not only in the biological sense but also in the social sense. Surprisingly, however, there is little awareness of, or research into, the effect of prostate cancer on male gender identity. By contrast, the effect of surgical techniques (mastectomy versus lumpectomy) on femininity has been investigated extensively.

Male gender identity—masculinity[9]

Strong, silent type (restricted experience and expression of emotions)
Toughness and violence
Self sufficiency (no needs)
Being a stud
No sissy stuff (such as emotional sensitivity)
Be powerful and successful

Effect on quality of life

The effect of cancer treatment on quality of life is more difficult to measure than the effect on survival. Although quality of life measures have been routinely incorporated into studies of treatments for breast cancer since the late 1980s, they were rarely included in studies of prostate cancer. The much earlier research into quality of life issues in breast cancer may be partly due to public concern about breast cancer stimulated by the feminist movement in the 1970s and 1980s. Public concern about psychosocial issues in prostate cancer has emerged only in the 1990s and has been restricted mainly to North America.

The lack of information on the effect of quality of life of different treatments for prostate cancer makes it more difficult for men to decide about treatment. Studies on quality of life in prostate cancer using baseline assessment before therapy, a longitudinal research design, and standardised and valid measurements of quality of life are now being published.[10–12] However, there is no randomised trial comparing the effect on quality of life of different treatments for localised prostate cancer (surgery, brachytherapy, and external beam therapy). Although most urologists acknowledge the importance of quality of life in the treatment of prostate cancer, it can be difficult to reconcile this with surgical training.[13]

Psychological distress and coping strategies

The diagnosis of cancer is distressing, and between 20% and 30% of cancer patients continue to be depressed or anxious six months after diagnosis.[14] Disease stage, uncontrolled pain, and absence of social support correlate more with psychological distress than cancer site. Again more data are available for breast cancer than prostate cancer.[15] Being depressed is "in contradiction" with the core issues of male gender identity (box). Certain symptoms of male depression may be gender specific—for example, stress intolerance, low impulse control, alcohol misuse, and aggressive behaviour.

During stressful times most women with breast cancer want to talk about it and share their feelings with others—most men with prostate cancer would rather not. Clinicians involved in psychosocial research in cancer think that gender affects how people cope with cancer,[16] but there is little empirical research on this issue. The authors of a recent study of men after prostatectomy concluded: "Most men with prostate cancer avoided disclosure about their illness where possible and placed great importance on sustaining a normal life. Factors related to limiting disclosure included men's low perceived need for support, fear of stigmatisation, the need to minimise the threat of illness to aid coping, practical necessities in the workplace, and the desire to avoid burdening others."[17]

Support groups for patients with breast cancer have a longer tradition than those for men with prostate cancer, and more women than men attend support groups.[18] Men in support groups prefer to share information whereas women prefer to share emotion. These gender differences are even found in internet cancer support groups.[19] Support groups for men are

more common in North America than the rest of the world.[20 21] More is known about the efficacy of group intervention in breast cancer than in prostate cancer.[22–24]

Effect on partners

Partners are the most important emotional and social support for cancer patients.[25] To support and care for others is a core feature of female but not male gender identity. A recent study found that female partners possessed a more accurate understanding of their husband's experience with prostate cancer than male partners had of women's breast cancer experience.[26] In the few studies comparing psychological distress of patients with prostate cancer and their wives, the wives were more distressed than the husbands.[27–29]

Doctors' attitudes and behaviour

Most patients with prostate cancer want to share decision making with the doctor[30] and also consult their partner.[31] Twenty three per cent of men treated for metastatic prostate cancer express regrets about their original treatment choice.[32] Sophisticated tools to help decision making, such as interactive CD ROMs, are available.[33] Little is known about the attitudes of urologists concerning shared decision making, and we do not know how urologists really behave in the decision making process.[34]

A simple decision board has been developed to help women to make informed choices between mastectomy or lumpectomy. In contrast to expectations, the rate of breast conserving surgery decreased when the decision board was introduced.[35] Data are available on the prediction of surgeons' practice styles for breast cancer treatment in older women and what influences oncologists' decision making in chemotherapy for advanced breast cancer.[36 37] However, patients' decision making preferences and doctors' perception of these preferences have not been prospectively studied in breast cancer. A study in patients with different types of cancer in a palliative care setting found poor agreement between patients' preferences and doctors' perceptions of treatment decisions.[38]

Although psychological distress in cancer patients is high, doctors are poor at detecting psychiatric morbidity.[39 40] Psychological distress is often discounted as a normal consequence of having cancer. This lack of recognition of psychological distress means that many patients do not receive treatment. Nevertheless, treatments such as antidepressant drugs, counselling, and supportive intervention are effective in cancer patients.[41] A study published over 20 years ago found that training specialist nurses to recognise and refer patients who developed psychiatric problems after mastectomy substantially reduced psychological morbidity.[42] However, a recent study found that radio-oncologists' recommendation for supportive counselling did not correlate with patient distress or the amount of perceived social support by patients but rather with progressive disease and less denial behaviour.[43] Oncologists increasingly realise the importance of communication skills, and training has been shown to improve their ability to detect and treat psychological distress.[44] However, many urologists are not aware that there is a problem, and training has been lacking.

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Correcting the balance

As men's health and sex and gender specific medicine get a higher priority for research in coming years, psychosocial aspects of prostate cancer will get more attention. Only a few studies have directly compared psychosocial aspects of prostate and breast cancer, and most issues highlighted in this article are based on indirect comparisons. Therefore it would be a breakthrough if researchers at major cancer centres designed studies looking at major psychobiological issues in men and women simultaneously. Hopefully, more funding for prostate cancer research in the future will close the gap in knowledge and skills regarding psychosocial aspects of prostate and breast cancer.

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1 Witzemann TM, Pardue ML. *Exploring the biological contributions to human health: does sex matter?* Washington, DC: Institute of Medicine, National Academy Press, 2001.
2 Siegel T, Moul JW, Spevak M, Alvord WG, Costabile RA. The development of erectile dysfunction in men treated for prostate cancer. *J Urol* 2001;165:430-5.
3 Walsh PC. Radical prostatectomy for localized prostate cancer provides durable cancer control with excellent quality of life: a structured debate. *J Urol* 2000;163:1802-7.
4 Stanford JL, Feng Z, Hamilton AS, Gilliland FD, Stephenson RA, Eley JW, et al. Urinary and sexual function after radical prostatectomy for clinically localized prostate cancer: the prostate cancer outcomes study. *JAMA* 2000;283:354-60.
5 Zippe CD, Kedia S, Kedia AW, Pasqualotto F. Sildenafil citrate (Viagra) after radical retropubic prostatectomy: pro. *Urology* 1999;54:583-6.
6 Nehra A, Goldstein I. Sildenafil citrate (Viagra) after radical retropubic prostatectomy: con. *Urology* 1999;54:587-9.
7 Berman JR, Berman LA, Werbin TJ, Goldstein I. Female sexual dysfunction: anatomy, physiology, evaluation and treatment options. *Curr Opin Urol* 1999;9:563-8.
8 Rowland JH, Desmond KA, Meyerowitz BE, Belin TR, Wyatt GE, Ganz PA. Role of breast reconstructive surgery in physical and emotional outcomes among breast cancer survivors. *J Natl Cancer Inst* 2000;92:1422-9.
9 Good GE, Sherrod NB. The psychology of men and masculinity: research status and future directions. In: Unger RK, ed. *Handbook of the psychology of women and gender*. New York: Wiley, 2001.

10 Brandeis JM, Litwin MS, Burnison CM, Reiter RE. Quality of life outcomes after brachytherapy for early stage prostate cancer. *J Urol* 2000;163:851-7.
11 Herr HW, O'Sullivan M. Quality of life of asymptomatic men with non-metastatic prostate cancer on androgen deprivation therapy. *J Urol* 2000;163:1743-6.
12 Litwin MS, Lubeck DP, Stoddard ML, Pasta DJ, Flanders SC, Henning JM. Quality of life before death for men with prostate cancer: results from the CaPSURE database. *J Urol* 2001;165:871-5.
13 Steiner MS. Quality of life after prostatectomy. *J Urol* 2000;163:870-1.
14 Nordin K, Berglund G, Glimelius B, Sjoden PO. Predicting anxiety and depression among cancer patients: a clinical model. *Eur J Cancer* 2001;37:376-84.
15 Roth AJ, Kornblith AB, Batel-Copel L, Peabody E, Scher HI, Holland JC. Rapid screening for psychologic distress in men with prostate carcinoma: a pilot study. *Cancer* 1998;82:1904-8.
16 Volkers N. In coping with cancer, gender matters. *J Natl Cancer Inst* 1999;91:1712-4.
17 Gray RE, Fitch M, Phillips C, Labrecque M, Fergus K. To tell or not to tell: patterns of disclosure among men with prostate cancer. *Psychooncology* 2000;9:273-82.
18 Krizek C, Roberts C, Ragan R, Ferrara JJ, Lord B. Gender and cancer support group participation. *Cancer Pract* 1999;7:86-92.
19 Klemm P, Hurst M, Dearholt SL, Trone SR. Gender differences on internet cancer support groups. *Comput Nurs* 1999;17:65-72.
20 Coreil J, Behal R. Man to man prostate cancer support groups. *Cancer Pract* 1999;7:122-9.
21 Visser A, Riemens E, Van der Jagt T, Vingerhoets S, Voerman B. Social support for prostate cancer patients. *Psychooncology* 2001;10:S32-3.
22 Edelman S, Craig A, Kidman AD. Group interventions with cancer patients: efficacy of psychoeducational versus supportive groups. *J Psychosocial Oncol* 2000;18:67-85.
23 Helgeson VS, Cohen S, Schulz R, Yasko J. Education and peer discussion group interventions and adjustment to breast cancer. *Arch Gen Psychiatry* 1999;56:340-7.
24 Classen C, Butler LD, Koopman C, Miller E, DiMiceli S, Giese-Davis J, et al. Supportive-expressive group therapy and distress in patients with metastatic breast cancer: a randomized clinical intervention trial. *Arch Gen Psychiatry* 2001;58:494-501.
25 Baider L, Kaplan De-Nour A. *Cancer and the family*. Chichester: Wiley, 1996.
26 Carlson LE, Ottenbreit N, St Pierre M, Bultz BD. Partner understanding of the breast and prostate cancer experience. *Cancer Nurs* 2001;24:231-9.
27 Kornblith AB, Herr HW, Ofman US, Scher HI, Holland JC. Quality of life of patients with prostate cancer and their spouses. The value of a data base in clinical care. *Cancer* 1994;73:2791-802.
28 Cliff AM, MacDonagh RP. Psychosocial morbidity in prostate cancer: II. A comparison of patients and partners. *BJU Int* 2000;86:834-9.
29 Dorval M, Maunsell E, Taylor-Brown J, Kilpatrick M. Marital stability after breast cancer. *J Natl Cancer Inst* 1999;91:54-9.
30 Wong F, Stewart DE, Dancey J, Meana M, McAndrews MP, Bunston T, et al. Men with prostate cancer: influence of psychological factors on informational needs and decision making. *J Psychosom Res* 2000;49:13-9.
31 Boehmer U, Clark JA. Married couples' perspectives on prostate cancer diagnosis and treatment decision-making. *Psychooncology* 2001;10:147-55.
32 Clark JA, Wray NP, Ashton CM. Living with treatment decisions: regrets and quality of life among men treated for metastatic prostate cancer. *J Clin Oncol* 2001;19:72-80.
33 DePalma A. Prostate cancer shared decision: a CD-ROM educational and decision-assisting tool for men with prostate cancer. *Semin Urol Oncol* 2000;18:178-81.
34 Feldman-Stewart D, Brundage MD, McConnell BA, MacKillop WJ. Practical issues in assisting shared decision-making. *Health Expect* 2000;3:46-54.
35 Whelan T, Levine M, Gafni A, Sanders K, Willan A, Mirsky D, et al. Mastectomy or lumpectomy? Helping women make informed choices. *J Clin Oncol* 1999;17:1727-35.
36 Mandelblatt JS, Berg CD, Meropol NJ, Edge SB, Gold K, Hwang YT, et al. Measuring and predicting surgeons' practice styles for breast cancer treatment in older women. *Med Care* 2001;39:228-42.
37 Grunfeld EA, Ramirez AJ, Maher EJ, Peach D, Young T, Albery IP, et al. Chemotherapy for advanced breast cancer: what influences oncologists' decision-making? *Br J Cancer* 2001;84:1172-8.
38 Bruera E, Sweeney C, Calder K, Palmer L, Benisch-Tolley S. Patient preferences versus physician perceptions of treatment decisions in cancer care. *J Clin Oncol* 2001;19:2883-5.
39 Fallowfield L, Ratcliffe D, Jenkins V, Saul J. Psychiatric morbidity and its recognition by doctors in patients with cancer. *Br J Cancer* 2001;84:1011-5.
40 Passik SD, Dugan W, McDonald MV, Rosenfeld B, Theobald DE, Edgerton S. Oncologists' recognition of depression in their patients with cancer. *J Clin Oncol* 1998;16:1594-600.
41 Maguire P. Managing psychological morbidity in cancer patients. *Eur J Cancer* 2000;36:556-8.
42 Maguire P, Tait A, Brooke M, Thomas C, Sellwood R. Effect of counselling on the psychiatric morbidity associated with mastectomy. *BMJ* 1980;281:1454-6.
43 Sollner W, DeVries A, Steixner E, Lukas P, Sprinzl G, Rumpold G, et al. How successful are oncologists in identifying patient distress, perceived social support, and need for psychosocial counselling? *Br J Cancer* 2001;84:179-85.
44 Maguire P, Faulkner A, Booth K, Elliott C, Hillier V. Helping cancer patients disclose their concerns. *Eur J Cancer* 1996;32A:78-81.

No man's land: men, illness, and the NHS

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An important obstacle to improving men's health is their apparent reluctance to consult a doctor. US research shows that men with health problems are more likely than women to have had no recent contact with a doctor regardless of income or ethnicity.[1] This reluctance means that men often do not seek help until a disease has progressed.[2] Late presentation can have serious consequences. For example, deaths from melanoma are 50% higher in men than women despite a 50% lower incidence of the disease. So why do men delay seeking help, and what can be done to overcome the problem?

Summary points

Men do care about health issues but often find it difficult to expresses their fears

Men tend to attend their general practitioner later in the course of a condition than women and this phenomenon is exacerbated by social class inequalities

Uptake of health information and health services can be improved by making them male friendly, anonymous, and more convenient

Better use should be made of services such as NHS Direct, pharmacists, occupational health, and online advice

The nature of medical school education and medical training may contribute to potential problems in consultations between male doctors and patients

What are the difficulties?

Suicide is now the single greatest cause of death among young men in most of the United Kingdom. One reason that more men die from suicide than women is that men are more likely to choose methods such as hanging or shooting that leave little room for medical intervention. Even so, men are less likely to talk about their problems with their peers or health professionals. Although the Samaritans claim that a large proportion of men have visited their general practitioner in the months before they take their own lives,[3] a report by the Men's Health Forum concludes the opposite. A multidisciplinary approach is therefore more likely to reduce rates of male suicide. Suicide rates fell by around half after such an approach was introduced in Dorset.[4]