

## Tamoxifen and Antidepressants: Be Careful!

By Danica Lister, B.Sc.Pharm, ACPR, BCOP  
Clinical Pharmacist, Provincial Oncology Drug Program, CCMB

### The Big Picture

Concurrent use of antidepressants and tamoxifen is relatively common in breast cancer patients. Up to 25% of these patients will experience depression, for which SSRI antidepressants are commonly prescribed, and many patients receiving tamoxifen experience hot flashes, which can also be treated with antidepressants. Certain antidepressants strongly inhibit the hepatic isoenzyme CYP2D6 and may decrease metabolism of tamoxifen to its active metabolites. This interferes with the protective effect of tamoxifen and may increase the risk of breast cancer recurrence and death. While data is largely from retrospective analyses, the interaction between tamoxifen and certain antidepressants should be considered clinically significant and antidepressant drug therapy should be adjusted accordingly.

### Proposed Risk of Decreased Metabolism of Tamoxifen by Antidepressants Inhibiting the CYP2D6 Enzyme

(from Desmarais JE et al. *J Clin Psychiatry* 2009; 70(12):1688-97.)

Antidepressant	Effect on tamoxifen metabolism	Recommendation for Use	Pharmacare Coverage
Venlafaxine (Effexor®)	Minimal	Preferred	Part 1
Desvenlafaxine (Pristiq®)	Minimal*	Consider use on risk-benefit assessment	Not listed
Mirtazapine (Remeron®)	Minimal*		Part 1
Citalopram (Celexa®)	Mild	Avoid use	Part 1
Escitalopram (Ciprallex®)	Mild		Not listed
Sertraline (Zoloft®)	Moderate		Part 1
Fluvoxamine (Luvox®)	Moderate*	Avoid use	Part 1
Duloxetine (Cymbalta®)	Moderate*		Part 3
Paroxetine (Paxil®)	Severe		Part 1
Fluoxetine (Prozac®)	Severe	Avoid use	Part 1
Bupropion (Wellbutrin®)	Severe		Part 1

\* Direct studies with tamoxifen lacking



### Metabolism of Tamoxifen:

Tamoxifen is a prodrug that is converted to two active metabolites by the hepatic cytochrome P450 enzyme system. Both metabolites have an affinity for the estrogen receptor that is 100-fold that of tamoxifen. Endoxifen is considered the most important metabolite.

Conversion of tamoxifen to endoxifen is primarily via the 2D6 isoenzyme (CYP2D6). CYP2D6 is known to be genetically polymorphic, with up to 7-10% of Caucasians, 2% of African Americans, and 1% of Asians having a polymorphism associated with poor metabolism. Patients with loss-of-function (i.e. "poor metabolizers") at the 2D6 isoenzyme have demonstrated lower endoxifen concentrations and a shorter time to breast cancer recurrence during tamoxifen therapy. Additionally, concurrent use of agents that strongly inhibit the CYP2D6 enzyme, such as SSRIs, also have the potential to affect tamoxifen's efficacy through reduced endoxifen concentrations.

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# Announcements

## Save the Date... Cancer CME January 2011

CancerDay for Primary Care will be held in conjunction with the U of M-CME Dept on January 14, 2011 in Lecture Theatre A. Watch [www.cancercare.mb.ca/healthcareprofessionals](http://www.cancercare.mb.ca/healthcareprofessionals) for further info.

## ColonCheck Manitoba needs one or more Family Physicians...

Are you interested in working with physicians to increase colon cancer screening rates in Manitoba? Then we could use your help! ColonCheck Manitoba needs one or more Family Physicians to assist with special projects and events such as CME sessions. If you are interested or want to know more, please call Jean Sander, Program Manager at 788-8636.

## Got Patients?

CancerCare Manitoba's Patient Navigation Program is looking for volunteers to participate in a research study mapping the cancer patient experience, *Manitoba's Cancer-Related Journey: Chart Review and One-On-One Consultation*. If you have a patient who is currently undergoing diagnostic tests for cancer suspicion or has been recently diagnosed, we want to hear their story. To find out more, contact Tara Carpenter-Kellett at (204) 788-8447 or by email at [tara.carpenterkellett@cancercare.mb.ca](mailto:tara.carpenterkellett@cancercare.mb.ca). This study has been approved by the University of Manitoba Office of Research Ethics.

### Editor

Jeff Sisler, MD MClSc FCFP  
Director, Primary Care Oncology  
CancerCare Manitoba  
Phone 204-787-3595

[jeff.sisler@cancercare.mb.ca](mailto:jeff.sisler@cancercare.mb.ca)

## Cancer Residency Program for FPs Launched

A new Enhanced Skills Program in Family Practice Oncology opened its doors this summer. This "third year" program for family medicine residents is jointly offered by the Department of Family Medicine and CancerCare Manitoba and is led by program directors Drs. Chris Ogaranko and Jeff Sisler. The program is 6-12 months in duration, and will give residents the special expertise needed to work as a "FPO" (family physician in oncology) in urban or rural cancer clinics. Residents will do rotations with medical and radiation oncologists, with FPOs in Winnipeg

and in the Community Cancer Program Network in rural Manitoba, and in palliative care amongst others.

The program's first resident, Dr. Rizwan Qureshi, is a graduate of Kildonan Medical Centre at Seven Oaks General Hospital and hails from Calgary. Riz is enjoying the challenge of working with cancer patients and is excited about the year ahead. "Family practice oncology has reawakened that emotional and mindful connection not just with the patient, but with life." Applications for the 2011-12 program will open later this fall.

## The 2010-2011 Scholarship Competition is now open!

The CancerCare Manitoba Foundation is pleased to offer scholarships designed for all health professionals affiliated with Community Cancer Programs (CCPs) and to family physicians and primary care pediatricians interested in cancer care or blood disorders. Scholars will pursue up to **two weeks of individualized training / study** that is eligible for Mainpro-C credits.

Applicants may also apply for funding toward an Oncology course.

Scholarship winners will receive salary compensation and other expenses may be funded with prior approval.

For more information, please contact Evelyn Leferink at 787-1347 or [evelyn.leferink@cancercare.mb.ca](mailto:evelyn.leferink@cancercare.mb.ca)

Applications close November 26, 2010.

Dr. Trina Mathison, Dauphin, CCP physician and UPCON leader had this to say, "I was able to design an educational experience that was tailored to my needs and schedule. Everyone was very accommodating and friendly!"

Go to [www.cancercare.mb.ca/healthcareprofessionals/educationandtraining](http://www.cancercare.mb.ca/healthcareprofessionals/educationandtraining) and download the application.



Scholarship winner Dr. Trina Mathison

**"The Community Cancer Care Scholarship was an opportunity for me to renew my relationships with oncologists and update my knowledge."**

# Helping patients with cancer-related fatigue

By Rachel Clark (R), and Annaka Vermeylen (L),  
Student Occupational Therapists

Fatigue affects up to 96% of individuals with cancer and it can persist for years following cancer treatment. Cancer-related fatigue is pervasive and is helped very little by sleeping or rest. Fatigue can result from various factors including the cancer itself, cancer medications and treatments, lack of exercise, sleep

disorders, anxiety, poor appetite/nutrition, dehydration, anemia, and other co-morbidities such as renal or cardiac failure.

## The impact of fatigue

Fatigue can cause difficulties in performing activities of daily living and affect mobility and endurance. It impairs concentration and sleep and can lead to depression and lack of motivation. The duration of cancer-related fatigue cannot be predicted or cured, but it can be managed through patient education.

## The energy “bank account”

Patients are often aware of their fatigue but often don't understand where their energy is being expended each day. FPs and NPs can help patients manage their fatigue by using the analogy of a **bank account**. Each of us has a defined amount of energy in our “account” and different activities add or subtract from that balance. Here are five steps that your patients can use to manage the energy in their account:

### Five Steps to Manage Cancer Fatigue

- 1. Prioritizing:** Determine which daily activities are most important
- 2. Planning:** Schedule high-energy activities for when energy levels are highest
- 3. Pacing:** Break activities into smaller tasks and incorporate rest breaks
- 4. Body Position:** Use the most efficient posture and avoid straining joints during activities
- 5. Equipment:** Use tools that make an activity easier

## What else can patients do?

The energy in their account can be “increased” through rest, nutrition, and exercise. When patients feel they need to nap, research shows that the ideal amount is **15 to 30 minutes** up to twice a day. More than this can disrupt their sleep at night.

Research also shows that regular amounts of **light exercise** (walking, gardening etc.) can help increase energy levels, although this may seem counterintuitive to some. It is important to encourage our patients to exercise when there are no contraindications.

Fatigue has a significant impact on cancer patients' quality of life, regardless of their stage of cancer or treatment. It is important to discuss fatigue and the impact it is having on their lives. Helping patients to manage their “energy accounts” will help them to engage in meaningful activities throughout their cancer journey.



## Ask the Cancer Expert

Dr. James Lau  
Medical Oncologist  
Physician Scientist  
at CancerCare Manitoba

### Question:

I have a patient with a history of breast cancer on anastrozole (Arimidex). She complains of aches and pains, and wants to go off of it. How should I manage this?

### Answer:

Aromatase inhibitors (AIs) are used for the adjuvant (post-surgical) treatment of hormone-responsive breast cancer. However, musculoskeletal side effects, such as joint pain and stiffness, are not uncommon in women receiving AI therapy (anastrozole, exemestane and letrozole). In the Arimidex, Tamoxifen Alone or in Combination (ATAC) trial, anastrozole treatment was associated with a modest increase in the incidence of arthralgia as compared to tamoxifen. Symptoms appeared within the first two years of AI therapy with a peak incidence at 6 months. These symptoms are usually transient: half of the patients who recovered were symptom-free within 6 months of onset, and in 75% of patients, symptoms resolved within 18 months. The three most common sites of arthralgia are knees, hands and wrists and shoulders.

There are no well-established risk factors for AI-associated MSK side effects. In the ATAC trial, prior use of hormone replacement therapy, hormone receptor positivity, obesity, and prior chemotherapy were associated with a higher risk of joint symptoms on anastrozole. The etiology of these arthralgias remains unknown, but it has been proposed that decreased estrogen levels are responsible.

After ruling other possible causes of MSK complaints, the most appropriate intervention for AI-associated arthralgias is a combination of an exercise prescription with an NSAID, either alone or in combination with mild analgesics such as acetaminophen with codeine or oxycodone. Topical medications such as capsaicin, diclofenac and methylsalicylate (A535 rub) may provide pain relief. In addition, antidepressants may be useful in the event of comorbid depression associated with chronic pain.



# cancer transitions

## Moving Beyond Treatment

A Program of The Wellness Community  
and the Lance Armstrong Foundation

***Cancer Transitions* is a 6 week program for cancer survivors who have completed treatment within the last two years designed to help participants transition from active treatment to life after treatment.**



Topics include nutrition, exercise, emotional health and well being, what to expect in follow up care and more! Every session includes at least 30 minutes of exercise at your own pace.



**For more information and to pre-register,  
call Patient & Family Support Services  
204-787-2109.**

**There is no charge for this program.**



Generously supported by:



This project has been approved by the University of Manitoba Research Ethics Board. Date: August 16, 2010

## Cervical Screening Program Reaching Manitoba's Most At-Risk

The Manitoba Cervical Cancer Screening Program (MCCSP) has been helping facilitate access to Pap test services since the launch of their first annual Pap Week campaign back in 2003.

While this year's campaign will host nearly 100 walk-in Pap clinics, the MCCSP encourages their partners to open up their clinic doors year round, outside of Pap Week.

With the start of the MCCSP's invitation letters, the program has the opportunity to notify women that they are overdue for a Pap test and simultaneously advertise local, walk-in Pap test services.

"Being able to offer walk-in Pap test clinics to women who are most at risk for cervical cancer is one less barrier women have to face to reduce their risk of developing cervical cancer," explains Lesley Dyck, Health Promotion Specialist for the MCCSP.

To register for Manitoba Pap Test Week (October 25<sup>th</sup> – 30<sup>th</sup>) or to host a Pap clinic outside of the campaign, contact Lesley at (204) 788-8627.



## Engaging under-screened women

A new resource called *Engaging Seldom or Never Screened Women in Cancer Screening* is now available at [www.srchc.com/engagingwomenincancerscreening](http://www.srchc.com/engagingwomenincancerscreening). It features a wide range of innovative promising or best practices from across Canada including the one below.

The Dr. C.W. Wiebe Medical Centre in Winkler has a database system that can identify under-screened women ages 50 to 69 that have not had a mammogram in 2 or more years. The clinic reserves weekly appointments at the Manitoba Breast Screening Program (MBSP). At the time of a medical appointment, the clinic physicians check the computer reminder flag that identifies under-screened women and sends them to the clinic receptionist to ensure an appointment is booked. From January

1, 2009 until December 31, 2009 the MBSP provided the clinic with 171 mammogram appointments;

- 97% were overdue for their appointments; 68 (40%) of the women had not had a mammogram in the previous 5 years or longer
- 105 women (61%) were new to the MBSP, compared to the MBSP province wide rate of about 21% for first appointments
- 25 women (15%) did not show for their appointments; the MBSP

provincial no-show rate is about 8%

- 55 women (32%) were born outside Canada; the MBSP provincial rate is about 15%
- Clinic breast screening rates improved as did the MBSP participation rates for Winkler.

Clinics who have the ability to flag under-screened women can contact Katie Watters at 788-8630 or [katie.watters@cancercare.mb.ca](mailto:katie.watters@cancercare.mb.ca) to further discuss how the MBSP can support your prevention efforts.



UPCON

Got a Cancer Question?

Call the UPCON HelpLine  
**226-2262** (CCM-CCMB)  
8:30-4:30 Monday-Friday

### Don't get left out... be a leader in Primary Care Oncology

It has been said that 80% of all cancer care takes place in the primary care setting. If you are a busy family physician or nurse practitioner, we can help! The Uniting Primary Care and Oncology Network (UPCON) will support you to enhance your knowledge, skills, and ability to navigate across the cancer continuum.

UPCON supports you in three ways: by providing direct on-line access to your cancer patient's e-charts at CancerCare Manitoba; through a program of high quality CME, including four (4) Mainpro-C sessions yearly; and by providing up to date info on the latest evidence based practice in cancer care. All of this is FREE to you through the support of the CancerCare Manitoba Foundation. There are currently 34 clinics in the Network, 22 in Winnipeg and 12 rural sites, supporting more than 40% of all family physicians in Manitoba.

Please contact Pat McCormack-Speak, UPCON Program Manager at (204) 787-1225 for further information.

# Where to find us

## CCMB Referral Centre

(204) 787-2176  
Fax: (204) 786-0621  
M-F, 0830-1630, closed Stat Holidays  
Emergency Referrals:  
HSC paging: (204) 787-2071  
St Boniface paging: (204)237-2053  
<http://www.cancercare.mb.ca>

## CancerCare Manitoba

Toll Free: 1-866-561-1026  
Inquiry & Reception  
MacCharles Unit (204) 787-2197  
St. Boniface Unit (204) 237-2559  
Health Records - Medico legal  
Correspondent:  
(204) 787-2266 Fax: (204) 786-0185  
Pharmacy: (204) 787-1902

## UPCON Helpline (204) 226-2262

## Breast Cancer Centre of Hope

691 Wolseley Street (204) 788-8080  
Winnipeg, Manitoba R3C 1C3  
Toll Free: 1-888-660-4866

## CCMB Screening Programs

25 Sherbrook Street, Unit #5  
Winnipeg, Manitoba R3C 2B1

## Manitoba Breast Screening

(204) 788-8000  
Toll Free: 1-800-903-9290

## Manitoba Cervical Screening

(204) 788-8626  
Toll Free: 1-866-616-8805

## ColonCheck Manitoba

(formerly Colorectal Screening Program)

(204) 788-8635  
Toll Free: 1-866-744-8961

## Community Cancer Programs Network (CCPN)

(204) 787-5159  
Toll Free: 1-866-561-1026

## Manitoba Prostate Centre

(204) 787 - 4461  
Fax: (204) 786-0637

## Patient and Family Information and Resource Centre

(204) 787-4357  
Toll Free: 1-866-561-1026

## Patient and Family Support Services

(204) 787-2109  
Toll Free: 1-866-561-1026

## Patient Representative

(204) 787-2065  
Pager: (204) 931-2579  
Toll Free: 1-866-561-1026

## Other Numbers:

### CancerCare Manitoba Foundation

Donations & Inquiries (204) 787-4143  
Toll Free: 1-877-407-2223  
Fax: (204) 786-0627

### Canadian Cancer Society

Volunteer Drivers 787-4121  
Toll Free: 1-888-532-6982

### Cancer Information Service

Toll Free: 1-888-939-3333

### Lennox Bell Lodge

(204) 787-4271  
60 Pearl Street

## Tamoxifen from P. 1

### Clinical Significance of the Inhibition of Tamoxifen Metabolism:

Despite the theoretical understanding of the interaction between tamoxifen and CYP2D6 inhibitors, there is little data available to quantify the clinical significance of this interaction. Prospective data is lacking and most retrospective data are from small cohorts of patients. A recent publication with a larger cohort reported on a population-based retrospective review of 2,430 Ontario patients over 65 years old. Patients who were prescribed concurrent tamoxifen and SSRIs were evaluated for the risk of death from breast cancer based on the proportion of time that an SSRI was taken concurrently during tamoxifen therapy (e.g. "co-treatment"). The study concluded that, for patients who received paroxetine and tamoxifen co-treatment for at least 25% of the duration of tamoxifen, there was a relative increase in breast cancer death of 24%. If co-treatment occurred for at least 75% of the duration tamoxifen therapy, this increased to 91%. No significant increase in breast cancer death was noted with any other antidepressant that was evaluated (e.g. fluoxetine, sertraline, fluvoxamine, citalopram, venlafaxine).

### References/Further Reading:

Kelly CM, Juurlink DN, et al. "Selective serotonin reuptake inhibitors and breast cancer mortality in women receiving tamoxifen: a population based cohort study. *BMJ* 2010; 340:c693.

Desmarais JE and Looper KJ. "Interactions between tamoxifen and antidepressants via cytochrome P450 2D6." *J Clin Psychiatry* 2009; 70(12):1688-97.

Lash TL, Cronin-Fenton D et al. "Breast cancer recurrence risk related to concurrent use of SSRI antidepressants and tamoxifen." *Acta Oncologica* 2010; 49:305-312.



# UPCON

Uniting Primary Care and Oncology