Supplementary Tables

Supplementary Table 1. Evidence-based information on commonly used CM therapies included in study reminder emails sent to participants

Date sent	Topic	Content	References
June 18, 2018	Milk Thistle	Milk thistle is purported to have hepatoprotective effects (Chen et al., 2011). Animal studies have shown that silymarin, a component of milk thistle, can reduce cisplatin-induced kidney damage without diminishing anti-tumor activity (Kohno et al., 2002). Bench research has also demonstrated milk thistle's potential for decreasing metastases of breast cancer (Kim et al., 2011) as well as inhibiting the growth of hepatocellular carcinoma cells (Zhang et al., 2013), pancreatic ductal adenocarcinoma (Shukla et al., 2015). It is important to note that components of milk thistle can elevate bilirubin and liver enzymes (Flaig et al., 2006).	Chen, I., Chen, Y., Chou, C., Chuang, R., Sheen, L., & Chiu, C. (2011). Hepatoprotection of silymarin against thioacetamide-induced chronic liver fibrosis. *Journal of the Science of Food and Agriculture,92*(7), 1441-1447. doi:10.1002/jsfa.4723 Flaig, T. W., Gustafson, D. L., Su, L., Zirrolli, J. A., Crighton, F., Harrison, G. S., . . . Glodé, L. M. (2006). A phase I and pharmacokinetic study of silybin-phytosome in prostate cancer patients. *Investigational New Drugs,25*(2), 139-146. doi:10.1007/s10637-006-9019-2 Kim, S., Han, J., Kim, J. S., Kim, J. H., Choe, J. H., Yang, J. H., . . . Lee, J. E. (2011). Silibinin suppresses EGFR ligand-induced CD44 expression through inhibition of EGFR activity in breast cancer cells. [Abstract]. *International Journal of Cancer Research and Treatment,31*(11). Retrieved June 9, 2018, from https://www.ncbi.nlm.nih.gov/pubmed/22110198. Kohno, H., Tanaka, T., Kawabata, K., Hirose, Y., Sugie, S., Tsuda, H., & Mori, H. (2002). Silymarin, a naturally occurring polyphenolic antioxidant flavonoid, inhibits azoxymethane-induced colon carcinogenesis in male F344 rats. *International Journal of Cancer,101*(5), 461-468. doi:10.1002/ijc.10625 Zhang, S., Yang, Y., Liang, Z., Duan, W., Yang, J., Yan, J., . . . Jin, Z. (2013). Silybin-Mediated Inhibition of Notch Signaling Exerts Antitumor Activity in Human Hepatocellular Carcinoma Cells. *PLoS ONE,8*(12). doi:10.1371/journal.pone.0083699
July 16, 2018	St. John's Wort	St. John's Wort is a natural health product that has been shown in clinical trials to help patients with mild to moderate depression. However, research has shown that a component of St. John's Wort, Hyperforin, plays an important role in the induction of cytochrome P450 enzymes (CYP) and P-glycoprotein transporter (P-gp), and therefore, affects the pharmacokinetics of various drugs,	Ng, QX et al. (2017). Clinical use of Hypericum perforatum (St John's wort) in depression: A meta-analysis. *J Affect Disord*, 210:211-221. doi: 10.1016/j.jad.2016.12.048. Soleymani, S et al. (2017). Clinical risks of St John's Word (Hypericum perforatum) co-administration. *Expert Opin Drug Meta Toxicol*, 13(10): 1047-1062. doi: 10.1080/17425255.2017.1378342

		including anti-cancer medication. It is important to know if patients you are caring for are taking this therapy alongside other medication in order to keep them safe.	
July 23, 2018	Chaga Mushroom	Chaga mushroom, a fungi that is found growing on birch trees in Manitoba, is a powerful anti-oxidant that is purported to prevent and treat cancer, stimulate the immune system, reduce inflammation and pain, and protect the liver. Chaga is typically ground up and consumed as a tea. In vitro studies have shown chaga to have antitumor, immunomodulating, anti-inflammatory and analgesic effects. Human studies on the anticancer and immunostimulating effects of chaga mushroom are needed. Chaga may interact with some drugs, including anti-coagulant and hypoglycemic agents, and is high in oxalates, which be toxic in high doses.	Glamoclija J, Ciric A, Nikolic M, et al. Chemical characterization and biological activity of Chaga (*Inonotus obliquus*), a medicinal "mushroom". *J Ethnopharmacol.* Mar 13 2015;162:323-332. Ko SK, Jin M, Pyo MY. *Inonotus obliquus* extracts suppress antigen-specific IgE production through the modulation of Th1/Th2 cytokines in ovalbumin-sensitized mice. *J Ethnopharmacol.* Oct 11 2011;137(3):1077-1082. Ning X, Luo Q, Li C, et al. Inhibitory effects of a polysaccharide extract from the Chaga medicinal mushroom, *Inonotus obliquus* (higher Basidiomycetes), on the proliferation of human neurogliocytoma cells. *Int J Med Mushrooms.* 2014;16(1):29-36.
August 7, 2018	Acupuncture	Acupuncture given alongside conventional cancer treatment has been shown to significantly reduce adverse symptoms caused by chemotherapy and radiation therapy. Studies have demonstrated that acupuncture can be used to alleviate xerostomia following radiation therapy (Meng et al., 2012), chemotherapy-induced nausea and vomiting (Rithirangsriroj et al., 2015), and may reduce cachexia and unintentional weight loss in palliative care patients (Yoon et al., 2015). Acupuncture is an increasingly popular complementary therapy and has been shown to decrease pain, fatigue, and alleviate symptoms associated with peripheral neuropathy (Cheng et al., 2017; Zhi et al., 2018). Acupuncture is generally safe when performed by trained, and in many provinces/territories in Canada, regulated practitioners.	Cheng, C. S., Chen, L. Y., Ning, Z. Y., Zhang, C. Y., Chen, H., Chen, Z., . . . Xie, J. (2017). Acupuncture for cancer-related fatigue in lung cancer patients: A randomized, double blind, placebo-controlled pilot trial. Support Cancer Care,25(12), 3807-3814. doi:10.1007/s00520-017-3812-7 Meng, Z., Garcia, M. K., Hu, C., Chiang, J., Chambers, M., Rosenthal, D. I., . . . Cohen, L. (2011). Randomized controlled trial of acupuncture for prevention of radiation-induced xerostomia among patients with nasopharyngeal carcinoma. Cancer,118(13), 3337-3344. doi:10.1002/cncr.26550 Rithirangsriroj, K., Manchana, T., & Akkayagorn, L. (2015). Efficacy of acupuncture in prevention of delayed chemotherapy induced nausea and vomiting in gynecologic cancer patients. Gynecologic Oncology,136(1), 82-86. doi:10.1016/j.ygyno.2014.10.025 Yoon, S., Grundmann, O., Williams, J., & Carriere, G. (2015). Novel Intervention With Acupuncture for Anorexia and Cachexia in Patients With Gastrointestinal Tract Cancers: A Feasibility Study. Oncology Nursing Forum,42(2). doi:10.1188/15.onf.e102-e109 Zhi, W. I., Ingram, E., Li, S. Q., Chen, P., Piulson, L., & Bao, T. (2018). Acupuncture for Bortezomib-Induced Peripheral Neuropathy: Not Just for

			Pain. Integrative Cancer Therapies,153473541878866. doi:10.1177/1534735418788667
August 30, 2018	Vitamin C	Vitamin C (ascorbate) is purported as an anticancer therapy, but its role as such has been disputed for decades. *In-vivo* and *in-vitro* studies suggest that vitamin C has potential anti-tumor effects and can induce oxidative stress in cancer cells (Park, 2013). However, evidence is lacking with only a few small clinical studies being conducted with cancer patients (Hoffer et al., 2015; Stephenson et al., 2013). As such, the tolerability of pharmacological doses of vitamin C still need to be determined (Vissers & Das, 2018). Studies have also demonstrated that vitamin C may reduce the effectiveness of some antineoplastic agents including vincristine, doxorubicin, methotextrate, cisplatin, and imatinib (Heaney et al., 2008). Some cancer patients choose to use intravenous vitamin C as a complementary medicine and may use their central line to administer this therapy. It is important to discuss patients' use of these therapies, especially if they are choosing to use their chemotherapy port to receive IV vitamin C therapy. It is also important to share that while bench research suggests vitamin C may play an oxidative role that could make it a positive adjuvant treatment for cancer patients, further evidence from well-designed trials is required to determine its safety and efficacy (Fritz et al., 2014).	Fritz, H., Flower, G., Weeks, L., Cooley, K., Challaghan, M., McGowan, J., Skidmore, B., Kirchner, L., & Seely, D. (2014) Intravenous vitamin C and cancer: A systematic review. *Integrat Cancer Therap, 13*(4):280-300. Heaney, M. L., Gardner, J. R., Karasavvas, N., Golde, D. W., Scheinberg, D. A., Smith, E. A., & Oconnor, O. A. (2008). Vitamin C antagonizes the cytotoxic effects of antineoplastic drugs. *Cancer Research,68*(19), 8031-8038. doi:10.1158/0008-5472.can-08-1490 Hoffer, L.J., Robitaille, L., Zakarian, R., Melnychuk, D., Kavan, P., Agulnik, J., Cohen, V., Small, D., & Miller, W.H. (2015). High-dose intravenous vitamin C combined with cytotoxic chemotherapy in patients with advanced cancer: a phase I-II clinical trial. *PLoS One, 10*(4), e0120228. Park, S. (2013). The Effects of high concentrations of vitamin C on cancer cells. *Nutrients,5*(9), 3496-3505. doi:10.3390/nu5093496 Stephenson, C.M., Levin, R.D., Spector, T., & Lis, C.G. (2013). Phase I clinical trial to evaluate the safety, tolerability and pharmacokinetics of high-dose intravenous ascorbic acid in patients with advanced cancer. Cancer Chemothera Pharmacol, 72(1), 139-46. Vissers, M. C., & Das, A. B. (2018). Potential mechanisms of action for vitamin C in cancer: Reviewing the evidence. *Frontiers in Physiology,9*. doi:10.3389/fphys.2018.00809

Abbreviations: CM, Complementary medicine; HCP, Healthcare provider

Supplementary Table 2. Knowledge, attitudes, and readiness questions regarding complementary medicine asked in the baseline and follow-up surveys

Questionnaire Items
CM knowledge questions (Likert scale: 1=strongly agree to 4 = strongly disagree)
I am familiar with most credible CM information resources †
I have a good understanding of where to find the most recent CM evidence †
I feel knowledgeable about which health professionals to refer cancer patients interested in CM †
I am familiar with the reasons cancer patients are using CM †
I have an understanding about the information needs of cancer patients regarding CM †
I know about potential risks and benefits associated with select CM therapies (i.e., acupuncture, massage, NHPs)†
I am aware of the most common natural health products cancer patients are using †
I am familiar with Integrative Oncology Practice Guidelines recently published by the Society for Integrative Oncology †
Attitudes toward CM questions (Likert scale: 1 = strongly disagree to 4 = strongly agree)
Health professionals should prescribe many CM therapies because there is ample valid scientific evidence
Information about CM obtained by research methods other than randomized control trials has little value to health professionals ‡
Health professionals will benefit greatly from learning about health practices that exist outside the dominant Canadian culture
Most CM therapies are not as effective as conventional approaches for the treatment of minor health conditions ‡
The most important factor in facilitating patient healing is actively listening to a patient's story
Most CM providers have very limited formal professional training experiences ‡
One complementary therapy is as effective as another complementary therapy in the treatment of a particular disease ‡
Health professionals should avoid recommending most CM therapies because they may be harmful to patients ‡
CM treatments should be covered by public health insurance plans
Few CM therapies have professional associations that certify training of practitioners ‡

Health professionals should have knowledge of the licensing and certification requirements of CM therapies in their community

There is no need for health professionals to collaborate with specific CM practitioners who also provide care for their patients ‡

There are several reputable resources (e.g., peer-reviewed journals) that present reliable information on the scientific evidence for CM

Health professionals should not recommend CM therapies with patients because they can be held liable for malpractice ‡

The majority of patients who use CM do so as a last resort ‡

Health professionals should have as much knowledge of the basics of CM as conventional medicine

It is not important that health professionals prescribe treatment that match a patient's personal belief system about healing ‡

Most patients who use CM are dissatisfied with their conventional healthcare ‡

It is important that health professionals inquire about a patient's spiritual beliefs and practices

Health professionals should have specific expertise in the actual practice of a CM therapy

Asking patients about their use of CM should be part of standard clinical practice for all health professionals

Most patients who use CM no longer use conventional medicine ‡

Healing is different from curing

Health professionals should have sufficient knowledge to describe the most widely used CM therapies and health systems in their community of practice

More minority populations use complementary therapies than the Caucasian population ‡

The practice of all health professionals ought to include treatment plans that integrate CM therapies

CM is as effective as conventional medicine in modulating pain arising from chronic health conditions

Readiness to support CM decisions questions (Likert scale: 1 = strongly agree to 4 = strongly disagree)

I feel comfortable talking to cancer patients about CM‡

I feel comfortable making CM recommendations ‡

I feel confident in my ability to support cancer patients in making informed decisions about CM ‡

I feel confident in my ability to identify cancer patients' information needs related to CM ‡

I coordinate care for my patients with both CM and conventional practitioners ‡

When I first develop treatment plans, I consider both CM and conventional medicine treatment option ‡

I talk to CM practitioners to develop a coordinated treatment plan for my patients ‡

Suggestions from CM practitioners help me care for my patients ‡

I have a strong working relationship with CM practitioners ‡

When I need to consult a CM practitioner, I am able to contact someone I know ‡

Referring my patients to CM practitioners may keep them from getting needed care

I rarely need to refer my patients to CM practitioners

I am reluctant to refer patients to CM practitioners because of liability issues

I refer patients only to practitioners who are within my own health paradigm

I worry that if I refer patients to CM practitioners, they may not come back to me

I am open to CM treatment options only after exhausting all options within my health paradigm

I often refer my patients to CM practitioners ‡

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† Questions have been reverse coded so that higher scores reflect greater agreement with each statement

‡ Questions have been reversed coded so that higher scores indicate a more positive attitude or greater readiness

Abbreviations: CM, Complementary medicine; HCP, Health care provider

Supplementary Table 3. Mean scores baseline and post intervention for individual questions breaking down practices

How often do you ask cancer patients about their use of CM? *(Likert scale:* 1 = never to 5 = always*)*
How often do you ask cancer patients about their use of CM?
How often do you refer cancer patients to CM resources *(Likert scale:* 1 = never to 5 = always*)*
Specific sources of information about CM (e.g. websites, books, pamphlets)
A cancer centre health professional for information about CM
A cancer centre health professional for a CM therapy (e.g., meditation program)
An integrated health clinic
A CM practitioner outside of your cancer centre
Their primary care provider (i.e., family doctor) for care related to CM
How often do you consult with *(Likert scale:* 1 = never to 5 = always*)*
A cancer centre health professional about CM
A conventional health professional in the community about CM
A CM practitioner about CM in general
A CM practitioner about a patient's specific use of a particular CM therapy
How often do you engage in the following activities *(Likert scale:* 1 = never to 5 = always*)*
Provide information to cancer patients about CM
Provide recommendations to cancer patients about using CM
Review evidence on a CM therapy for a patient
Monitor cancer patient's use of CM
Provide a CM therapy
How often do you discuss the following CM issues with cancer patients *(Likert scale:* 1 = never to 5 = always*)*
How to balance the risks and benefits of using CM
The potential interactions of specific CM therapies with conventional cancer treatments
How to use CM safely during conventional cancer treatment
The level of evidence supporting specific CM therapies
Where to get evidence-based information about CM

Abbreviations: CM, Complementary medicine; HCP, Health care provider

Supplementary Table 4. Baseline and follow-up survey results for oncology healthcare providers' CM knowledge, attitudes, readiness and practices for participants who attended an education session (N=25)

	Baseline	**Follow-up**	**Mean Difference (95% CI)**	**P value***
	Mean (95% CI)	Mean (95% CI)		Baseline vs. follow-up
Total knowledge score	18.76 (17.25, 20.27)	23.52 (21.72, 25.32)	4.76 (3.09, 6.43)	**< 0.001****
Total attitude score	80.80 (77.17, 84.42)	83.06 (79.36, 86.76)	2.26 (0.18, 5.04)	0.035
Total readiness score	38.58 (35.93, 41.22)	42.64 (40.41, 44.87)	4.06 (2.28, 5.84)	**< 0.001****
Clinical practices				
Ask about CM	3.68 (3.31, 4.05)	3.80 (3.48, 4.12)	0.12 (-0.20, 0.44)	0.450
Refer to CM resources	12.36 (10.54, 14.17)	14.68 (13.32, 16.04)	2.32 (0.88, 3.48)	**0.0028****
Consult with another HCP about CM	7.16 (6.05, 8.26)	8.48 (7.55, 9.41)	1.32 (0.56, 2.08)	**0.002****
Engage in CM-related activities	11.72 (10.46, 12.98)	13.28 (12.00, 14.55)	1.56 (0.49, 2.63)	0.006
Provide CM decision support	15.16 (13.62, 16.70)	16.08 (14.29, 17.88)	0.77 (-0.26, 2.10)	0.120

* P-values represent test for difference between baseline and follow-up survey using paired t-tests

** Significant value after Bonferroni correction ($p < 0.006$)

Abbreviations: CI, confidence interval; CM, Complementary medicine.