

# Table of Contents

<b>Forward</b> .....	<b>9</b>
<b>About the Authors</b> .....	<b>10</b>
<b>Preface</b> .....	<b>12</b>
Dr. Barbara MacDonald’s Acknowledgements .....	<b>14</b>
Dr. Kelly Jennings’ Acknowledgements.....	<b>16</b>
<i>Authors’ Note:</i> .....	<i>17</i>
<i>Legal disclaimers:</i> .....	<i>20</i>
<b>INTRODUCTION</b> .....	<b>21</b>
<b>Why integrative medical care is so important in the treatment of cancer</b> .....	<b>25</b>
<b>Chapter One: Before Conventional Treatment Begins</b> .....	<b>26</b>
<i>Section 1 – The Initial Consultation</i> .....	<i>26</i>
1.1 Preparing for the first interview .....	<i>26</i>
1.2 Developing Trust .....	<i>28</i>
1.3 Potential Pitfalls of Integrative or Naturopathic Care.....	<i>29</i>
1.4 Establishing A Consultation Schedule.....	<i>31</i>
<i>Section 2 - Pre-treatment Evaluations</i> .....	<i>32</i>
2.1 Assessing & Reviewing Your Patient’s Risk.....	<i>32</i>
2.1.1 Non-modifiable Risk factors.....	<i>32</i>
2.1.2 Modifiable Risk Factors.....	<i>33</i>
2.1.3 Factors Theorized to Increase Risk.....	<i>36</i>
2.1.4 Inflammation in the Etiology of Cancer .....	<i>37</i>
<i>Section 3 - Building Bridges</i> .....	<i>39</i>
3.1 Choosing Alternative Care Only.....	<i>39</i>
3.2 Working with the Conventional Medical Team.....	<i>40</i>
<b>Chapter Two: Understanding Diagnosis and Treatment Options</b> .....	<b>42</b>
<i>Section 1 - Diagnosis of Breast Cancer</i> .....	<i>42</i>
1.1 Helping Your Patient Understand Her Diagnosis.....	<i>42</i>
1.2 How Breast Cancer is Diagnosed .....	<i>42</i>
1.2.1 Breast Ultrasound.....	<i>43</i>
1.2.2 Breast MRI.....	<i>44</i>
1.2.3 Breast-Specific Gamma Imaging.....	<i>45</i>
1.2.4 Biopsy .....	<i>46</i>
1.2.5 The controversy about breast biopsy seeding .....	<i>48</i>
1.3 Breast Cancer Algorithms.....	<i>49</i>
<i>Section 2 - Pre-treatment Laboratory Evaluation</i> .....	<i>52</i>
2.1 Conventional Lab Tests – Highly Recommended .....	<i>52</i>
2.2 Naturopathic Pre-Treatment Testing Considerations.....	<i>55</i>
<i>Section 3 - Interpreting the Pathology Report</i> .....	<i>57</i>
Pathology Report Sections.....	<i>57</i>
3.1 Procedural and Gross Descriptions.....	<i>58</i>
3.2 Types of Invasive and Non-Invasive Breast Cancer.....	<i>58</i>

3.2.1 Invasive (or Infiltrating) Ductal Carcinoma .....	58
3.2.2 Invasive (or Infiltrating) Lobular Carcinoma .....	59
3.2.3 Inflammatory Breast Cancer .....	60
3.2.4 Non-Invasive Breast Cancer - Ductal Carcinoma In Situ .....	62
3.3 Microscopic Description .....	63
3.3.1 Tumor Size .....	63
3.3.2 Histological grade .....	64
3.3.3 Margins .....	65
3.4 Lymphovascular Invasion .....	65
3.4.1 Node Status .....	65
3.5 Hormone Status .....	65
3.6 HER-2 status .....	66
3.7 Breast Cancer Staging .....	67
3.7.1 TNM Staging .....	67
3.7.2 Summary Staging .....	68
<i>Section 4 - Clinical Decisions Based On Pathology Report .....</i>	<i>70</i>
4.1 Lumpectomy and Radiation vs Mastectomy for Invasive Breast Cancer .....	70
4.2 Lymph Node Removal .....	71
4.3 Neoadjuvant Chemotherapy/Endocrine Therapy .....	72
4.4 Reconstruction Considerations .....	74
<i>Section 5 - Hereditary Cancer: BRCA Gene Mutations .....</i>	<i>75</i>
5.1 Normal Function of the BRCA1 and BRCA2 genes .....	75
5.2 Risk of Breast and Ovarian Cancer with BRCA Gene Mutations .....	75
5.3 Clinical Characteristics of People with BRCA Gene Mutations .....	76
5.4 Pathologic Characteristics of BRCA1/2 Positive Breast Cancer .....	78
5.5 Prognosis of Women with BRCA1 or 2 Positive Breast Cancer .....	79
5.6 Modifiable Factors that May Influence Risk in Women with BRCA Gene Mutations .....	80
5.7 Prophylactic Measures For Hereditary Cancers .....	81
5.7.1 Prophylactic Oophorectomy for BRCA carriers .....	81
5.7.2 Prophylactic Mastectomy for BRCA Carriers .....	82
5.8 Tamoxifen for BRCA Carriers .....	82
<i>Section 6 - The Young Pre-menopausal Breast Cancer Patient .....</i>	<i>83</i>
6.1 Prophylactic Oophorectomy .....	83
<i>Section 7 - Your Recommendations Do Matter .....</i>	<i>85</i>
<b>Chapter Three: Non-Invasive Breast Cancer .....</b>	<b>88</b>
<i>Section 1 - Ductal Carcinoma In Situ .....</i>	<i>88</i>
1.1 Factors Influencing Rates of Recurrence of DCIS .....	89
1.2 Conventional Treatment Options for DCIS .....	90
1.3 Naturopathic Treatment Options for DCIS .....	91
<i>Section 2 - Lobular Carcinoma In Situ .....</i>	<i>92</i>
2.1 Conventional Treatment Options for LCIS .....	93
2.2 Naturopathic Treatment Options for LCIS .....	94
<i>Section 3 - Alternative Medicine Only for DCIS or LCIS .....</i>	<i>94</i>
<b>Chapter Four: Surgery .....</b>	<b>95</b>
<i>Section 1 - Preparing for Surgery .....</i>	<i>95</i>
1.1 Presurgical Cleanse .....	95
1.1.1 Simple Cleanse Recommendations .....	96
1.2 What to Avoid Two Weeks Prior to Surgery .....	97
<i>Section 2 - The Surgery Experience .....</i>	<i>97</i>

2.1	The Day of Surgery.....	100
<i>Section 3: Naturopathic Therapies to Use Before, During and After Surgery</i> .....		103
3.1	Naturopathic Support - Preparing for Surgery.....	104
<i>Section 4 - Breast Reconstruction</i> .....		106
4.1	Implant Reconstruction Concerns.....	107
4.2	Flap Reconstruction Concerns.....	107
4.3	Breast Size.....	108
4.4	Additional Reconstruction Information and Concerns.....	108
4.5	Naturopathic Support of Women Having Reconstruction.....	109
<i>Section 5: Guided-Imagery For Surgery</i> .....		110
5.1	Preparation for Guided-Imagery.....	111
5.2	A Guided Meditation for Letting Go of the Breast with Gratitude.....	114
5.3	A Guided Imagery to Improve the Surgical Experience.....	116
<b>Chapter Five: Chemotherapy</b> .....		<b>120</b>
<i>Section 1 - Indications for Chemotherapy</i> .....		120
<i>Section 2 – Chemotherapy Drugs and How They are Administered</i> .....		121
2.1	Dose Dense Chemotherapy.....	122
2.2	Neoadjuvant Chemotherapy.....	122
<i>Section 3 - The Chemotherapy Experience</i> .....		125
3.1	Working with the Medical Oncology Team during Chemotherapy.....	126
3.1.1	Symptoms and Lab Results that Will Halt Chemotherapy Treatment.....	128
3.2	Polymorphism CYP3A4 and Chemotherapeutic Agents.....	129
<i>Section 4 - Support of the Patient during Chemotherapy</i> .....		130
<i>Section 5 – Doxorubicin/Cyclophosphamide (Adriamycin/Cytoxan)</i> .....		131
5.1	Doxorubicin (Adriamycin).....	131
5.2	Common Side Effects of Adriamycin.....	132
5.2.1	Cardiac side effects.....	132
5.2.2	Fatigue.....	132
5.2.3	Increased Risk of Infection.....	132
5.2.4	Myelosuppression.....	133
5.2.5	Nausea & Vomiting.....	133
5.2.6	Mucositis.....	133
	Nutrients and botanicals that May Increase the Efficacy of A/C.....	134
5.3	What to Avoid during A/C Chemotherapy.....	135
<i>Section 6 – Paclitaxel (Taxol)</i> .....		136
6.1	Naturopathic Support during Taxol.....	138
6.2	What to Avoid During Taxol.....	139
<i>Section 7 – Trastuzumab (Herceptin)</i> .....		142
7.1	Naturopathic Support for the Patient receiving Herceptin.....	143
7.1.1	Improving Sensitivity to Herceptin.....	143
7.1.2	Decreasing Side Effects of Herceptin and Preventing Toxicity.....	146
<i>Section 8 - Managing General Side Effects of Chemotherapy</i> .....		147
8.1	Cardioprotective Care.....	147
8.2	For the Blood: Leukopenia.....	148
8.3	Anemia.....	149
8.4	Thrombocytopenia.....	151
8.5	Chemotherapy side effects related to quality of life.....	151
8.6	Constipation.....	151
8.7	Herpes/cold sores.....	151

8.8	Insomnia.....	152
8.9	Low energy .....	152
<i>Section 9 - Menopausal Symptoms .....</i>		<i>155</i>
9.1	Hot flashes and Night Sweats .....	155
9.2	Vaginal dryness and Dyspareunia.....	156
9.3	Acupuncture for Hot Flashes .....	158
<i>Section 10 - Guided Imagery for Chemotherapy.....</i>		<i>159</i>
<i>Section 11 – Antioxidants and Chemotherapy.....</i>		<i>162</i>
<i>Section 12 – Chemotherapy Classification Chart .....</i>		<i>169</i>
<b>Chapter Six: Radiation .....</b>		<b>173</b>
<i>Section 1 - The Radiation Experience .....</i>		<i>173</i>
<i>Section 2 - Radiation Side Effects .....</i>		<i>174</i>
<i>Section 3 – Naturopathic Support of the Patient Undergoing Radiation.....</i>		<i>176</i>
3.1.	Maintain Energy Levels During Radiation.....	177
3.1.1	Supplements to Support Energy.....	178
3.2	Protect and Nourish Healthy Cells .....	179
3.3	Limit Side Effects .....	180
3.4	Enhance Radiation Therapy.....	180
3.5	Immune Support .....	180
<i>Section 4: Prevention of Lymphedema .....</i>		<i>182</i>
<i>Section 5 - Topical Applications to Maintain Healthy Skin .....</i>		<i>184</i>
<i>Section 6 - Brachytherapy: Alternative to External Beam Radiation .....</i>		<i>186</i>
<i>Section 7 - Antioxidants and Radiation.....</i>		<i>188</i>
<i>Section 8 - Chinese Medicine and Radiation Therapy .....</i>		<i>192</i>
<i>Section 9 – Guided-Imagery: Preparing for Radiation.....</i>		<i>193</i>
<b>Chapter Seven: Hormone Blocking Drugs .....</b>		<b>196</b>
<i>Section 1 – The Use of SERMS for Estrogen Sensitive Breast Cancers.....</i>		<i>196</i>
1.1	Side Effects of Tamoxifen/SERMs .....	196
1.1.1	Uterine Changes.....	197
1.1.2	Cardiac Risk.....	198
1.1.3	Cataracts, Liver and Gallbladder Disease.....	198
1.1.4	Menopausal Symptoms.....	198
1.2	Use of Tamoxifen In Cancer Prevention .....	199
1.3	Using Polymorphism Testing to Pre-determine Tamoxifen Efficacy .....	199
<i>Section 2 - Naturopathic Support for Patients on Tamoxifen .....</i>		<i>201</i>
<i>Section 3 – Conventional Alternatives to Tamoxifen .....</i>		<i>203</i>
<i>Section 4 - Tamoxifen vs. Raloxifene.....</i>		<i>204</i>
<i>Section 5 - Aromatase Inhibitors.....</i>		<i>206</i>
5.1	Practicing Prevention While On Aromatase Inhibitors .....	208
<i>Section 6 – SERMS vs. AIs – Which is Optimal For Your Patient .....</i>		<i>210</i>
<b>Chapter Eight: Advanced Breast Cancer .....</b>		<b>212</b>
<i>Section 1 – Monitoring While in Remission .....</i>		<i>212</i>

<i>Section 2 - Recurrent and Metastatic Breast Cancer</i> .....	213
<i>Section 3 - Sites of Metastasis</i> .....	214
<i>Section 4 - Symptom Picture of Metastatic Breast Cancer</i> .....	215
4.1 Bone metastasis.....	215
4.2 Lung Metastasis.....	215
4.3 Liver Metastasis.....	216
4.4 Brain Metastasis.....	217
<i>Section 5 - Medical Options Per Metastatic Location</i> .....	219
5.1 Conventional Treatment for Bone Metastasis.....	220
5.2 Natural Treatment For Those With Metastasis to the Bone.....	221
5.3 Conventional Treatment for Liver and Lung Metastasis.....	222
5.3.1 Side Effects of Oral Capecitabine (Xeloda) and Gemcitabine (Gemzar).....	222
5.3.2 Natural Adjunctive Support for Those on Xeloda.....	223
5.3.3 Side Effects of Epirubicin.....	224
5.3.4 Side Effects of Paclitaxel and Docetaxel.....	224
5.4 Natural Treatment For Those With Metastasis to the Liver.....	224
5.5 Natural Treatment For Those With Metastasis to the Lungs.....	225
5.5 Conventional Treatment of Brain Metastasis.....	226
5.6 Natural Treatment For Those With Metastasis to the Brain.....	227
<i>Section 6 - Anti-cancer Botanicals for Metastatic Cancer</i> .....	228
6.1 Well-Documented Anti-Cancer Herbs.....	229
6.2 Other Anti-cancer Nutrients To Consider.....	230
<i>Section 7 - Alternate Drugs Used In Advanced Breast Cancer</i> .....	230
7.1 Abraxane - Albumin-bound paclitaxel.....	230
7.2 Avastin (bevacizumab).....	231
7.2.1 Avastin - Serious Side Effect Profile.....	232
7.2.2 Naturopathic Support of Patients Receiving Avastin.....	232
7.3 Tykerb and Xeloda for Patients with HER2+ Metastatic Breast Cancer.....	233
7.3.1 Side Effect Profile of Tykerb.....	234
<i>Section 8 - Complementary vs. Alternative Medicine in Advanced Breast Cancer</i> .....	234
<b>Chapter Nine: After Conventional Treatment</b> .....	<b>236</b>
<i>Section 1: Preventing Recurrence and Promoting Healing</i> .....	236
<i>Section 2: The Steps to Preventing Recurrence</i> .....	238
<i>Section 3: Treating Residual Side Effects of Cancer Therapies</i> .....	240
<i>Section 4: Review of Etiologic Factors</i> .....	241
<i>Section 5: Developing a Working Hypothesis</i> .....	244
<i>Section 6: Factoring in Personality</i> .....	248
<i>Section 7: Determining Cause Using Laboratory Analysis</i> .....	255
7.1 DetoxiGenomic Profile.....	255
7.2 General Health Assessment Testing.....	256
7.3 Salivary Adrenal Stress Hormone Testing.....	257
7.4 Essential Fatty Acids Testing.....	258
7.5 Estrogen Metabolism Testing (2:16 Hydroxy-estrone Ratio).....	258
7.6 Heavy Metal Testing.....	259
<i>Section 8: Eliminate, Minimize and/or Treat the Factors Contributing to Cancer Formation</i> .....	260
8.1 Addressing Inflammation.....	261
8.1.2 Anti-Inflammatory Diet.....	262
8.1.3 Naturopathic Anti-inflammatory Protocols.....	262

8.1.4 Naturopathic anti-inflammatory supplements.....	263
8.2 Improving Estrogen Metabolism Ratio.....	263
Section 9: <i>Improving Constitutional Health</i> .....	266
Section 10: <i>Create a Balanced Prevention of Recurrence Plan</i> .....	267
10.1 Immune System Modifiers.....	268
10.2 Chinese Immune Modulating Herbs .....	269
10.3 Antioxidants.....	269
10.4 Other Immune Modulators to Consider: Action and Dosage .....	270
Section 11: <i>Lifestyle Factors for Recurrence Risk Reduction</i> .....	273
<b>Chapter Ten: Conclusion .....</b>	<b>275</b>
<i>Your Individual Treatment Style</i> .....	275
<i>Final Word from the Authors</i> .....	276
<b>Appendices .....</b>	<b>278</b>
<i>Genomic Testing – Single Nucleotide Polymorphisms</i> .....	278
<i>Immune-modulating and Anti-cancer Agents: Mechanism of Action</i> .....	286
Green tea – <i>Camellia sinensis</i> (ECGC) .....	286
<i>Coriolus versicolor</i> .....	287
Maitake mushroom .....	288
Reishi mushroom .....	288
Safety and Dosing of Mushroom Extracts .....	290
Wormwood - <i>Artemisia annua</i> (artemesinin), <i>QingHao</i> .....	291
Turmeric – <i>Curcuma longa</i> (curcumin), <i>JiangHuang</i> .....	293
<i>Astragalus membranaceus</i> , <i>HuangQi</i> .....	295
Larch - <i>Larix occidentalis</i> (arabinogalactan).....	296
Melatonin.....	296
Coenzyme Q10 .....	297
Resveratrol.....	298
<i>Chinese Medicine, the Five Elements and Personality Types</i> .....	301
<i>Lifestyle Factors: Studies on Diet and Exercise</i> .....	310
<i>Anti-inflammatory Diet</i> .....	312
<i>How to Use Foods and Beverages to Heal Your Body</i> .....	314
<i>Hydrotherapy: Castor Oil Pack</i> .....	319
<i>Hydrotherapy: Warming Socks Treatment</i> .....	321
<i>Resources</i> .....	322
<u>Referenced Product Suppliers</u> .....	322
<u>Referenced Laboratories</u> .....	325
<i>Ordering Naturopathic Laboratory Tests</i> .....	328
<b>Endnotes.....</b>	<b>330</b>