# TABLE OF CONTENTS

**PREFACE**                                                                                     ................................................................. i  
**TABLE OF CONTENTS**                                                                          ................................................................. iii  
**LIST OF TABLES**                                                                              ................................................................. iv  
**LIST OF FIGURES**                                                                             ................................................................. v  
**I. EXECUTIVE SUMMARY**                                                                        ................................................................. 1  
**II. INTRODUCTION**                                                                             ................................................................. 3  
**III. TECHNICAL NOTES**                                                                        ................................................................. 5  
**IV. CANCER INCIDENCE**                                                                        ................................................................. 8  
**V. CANCER CASES AND DEATHS BY RANK**                                                          ............................................................ 13  
**VI. STAGE AT DIAGNOSIS**                                                                      ................................................................. 16  
**VII. CANCER MORTALITY**                                                                       ................................................................. 18  
**VIII. YEARS OF POTENTIAL LIFE LOST**                                                           ............................................................ 23  
**IX. AVERAGE YEARS OF LIFE LOST**                                                              ............................................................... 25  
**X. SELECTED CANCER SITES INCIDENCE AND MORTALITY**                                           ................................................................. 26  
  - Bladder                                                                                     ................................................................. 27  
  - Breast (Female)                                                                             ................................................................. 29  
  - Cervix Uteri                                                                               ................................................................. 31  
  - Colorectal                                                                                 ................................................................. 33  
  - Corpus and Uterus                                                                           ................................................................. 35  
  - Kidney and Renal Pelvis                                                                   ................................................................. 37  
  - Leukemia                                                                                  ................................................................. 39  
  - Lung and Bronchus                                                                           ................................................................. 41  
  - Melanoma (Skin)                                                                            ................................................................. 43  
  - Myeloma                                                                                     ................................................................. 45  
  - Non-Hodgkin’s Lymphoma                                                                    ................................................................. 47  
  - Ovary                                                                                      ................................................................. 49  
  - Pancreas                                                                                   ................................................................. 51  
  - Prostate                                                                                  ................................................................. 53  
  - Stomach                                                                                     ................................................................. 55  
  - Thyroid                                                                                    ................................................................. 57  

**XI. APPENDICES**  
  - Appendix B: 2003-2012 South Dakota Estimated Population .................................................. 59  
  - Appendix C: Race in South Dakota by County, 2012 Estimated Population .............................. 60  
  - Appendix D: SEER Incidence Site Analysis Categories .......................................................... 61-63  
  - Appendix E: SEER Cancer Cause of Death Analysis Categories .............................................. 64-65  

**REFERENCES**                                                                                  ................................................................. 66
LIST OF TABLES

Table 1: Cancer Cases and Incidence Rates by County, South Dakota, 2012 and 2008-2012 Average .................................................................................................................. 8
Table 2: Age-adjusted Incidence Rates by County for Selected Sites, 2012 ....................... 9
Table 3: Age-adjusted Incidence Rates by Site, Gender, and Race, South Dakota, 2012 .... 10
Table 4: Percentage of Selected Cancers by Age Groups in South Dakota, 2012 .......... 12
Table 5: South Dakota Stage at Diagnosis, All Cases, 2012 ............................................. 16
Table 6: Stage at Diagnosis for Selected Sites by Race, South Dakota, 2012 ................... 17
Table 7: Cancer Mortality and Rates by County, South Dakota, 2012 and 2008-2012 .... 18
Table 8: Age-adjusted Mortality Rates by County for Selected Sites, South Dakota, 2012 .. 19
Table 9: Age-adjusted Mortality Rates by Site, Gender, and Race, South Dakota, 2012 ... 20
Table 10: Percentage of Cancer Deaths by Age Groups and Selected Primary Sites, South Dakota, 2012 ................................................................. 22
Table 11: Leading Causes of Years of Potential Life Lost (to age 75), South Dakota, 2012 ... 23
Table 12: Bladder Incidence and Mortality Summary, 2012 ............................................. 27
Table 13: Breast (Female) Incidence and Mortality Summary, 2012 ................................ 29
Table 14: Cervix Uteri Incidence and Mortality Summary, 2012 ...................................... 31
Table 15: Colorectal Incidence and Mortality Summary, 2012 ........................................... 33
Table 16: Corpus and Uterus, NOS Incidence and Mortality Summary, 2012 ................. 35
Table 17: Kidney and Renal Pelvis Incidence and Mortality Summary, 2012 .................... 37
Table 18: Leukemia Incidence and Mortality Summary, 2012 ........................................... 39
Table 19: Lung and Bronchus Incidence and Mortality Summary, 2012 ......................... 41
Table 20: Melanoma Incidence and Mortality Summary, 2012 ........................................ 43
Table 21: Myeloma Incidence and Mortality Summary, 2012 .......................................... 45
Table 22: Non-Hodgkin’s Lymphoma Incidence and Mortality Summary, 2012 ............... 47
Table 23: Ovarian Incidence and Mortality Summary, 2012 ............................................. 49
Table 24: Pancreas Incidence and Mortality Summary, 2012 .......................................... 51
Table 25: Prostate Incidence and Mortality Summary, 2012 ............................................ 53
Table 26: Stomach Incidence and Mortality Summary, 2012 ............................................ 55
Table 27: Thyroid Incidence and Mortality Summary, 2012 ............................................. 57
LIST OF FIGURES

Figure 1: All Sites Cancer Incidence Rates by Race and Gender, South Dakota, 2012......12
Figure 2: Percent Distribution of Cancer Cases and Deaths by Rank and Gender, South Dakota, 2012.................................................................13
Figure 3 Cancer Incidence Rates by County, South Dakota, 2012 (Map).................................14
Figure 4 Cancer Mortality Rates by County, South Dakota, 2012 (Map)...............................15
Figure 5: Stage at Diagnosis, All Sites, South Dakota, 2012..................................................16
Figure 6: Stage at Diagnosis in South Dakota, White, 2012....................................................17
Figure 7: Stage at Diagnosis in South Dakota, American Indian, 2012.................................17
Figure 8: All Sites Cancer Mortality Rates by Race and Gender, South Dakota, 2012.........22
Figure 9: Years of Potential Life Lost (YPLL) Before Age 75 for Leading Causes of Death, by Race, South Dakota, 2012......................................................23
Figure 10: Years of Potential Life Lost (YPLL) Before Age 75 for Leading Causes of Death, by Race, South Dakota, 2008-2012 ....................................................23
Figure 11: YPLL for Selected Cancers Among Whites, South Dakota, 2012 .........................24
Figure 12: YPLL for Selected Cancers Among American Indians, South Dakota, 2012........24
Figure 13: AYLL for Selected Cancers Among Whites, South Dakota, 2012 .......................25
Figure 14: AYLL for Selected Cancers Among American Indians, South Dakota, 2012........25
Figure 15: Bladder Cancer Stage at Diagnosis, South Dakota, 2012......................................27
Figure 16: Bladder Cancer Number of Cases and Deaths by Age, South Dakota, 2012........28
Figure 17: Bladder Cancer Cases and Deaths by Year, South Dakota, 2001-2012...............28
Figure 18: Bladder Cancer Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012.................................................................28
Figure 19: Female Breast Cancer Stage at Diagnosis, South Dakota, 2012.........................29
Figure 20: Female Breast Cancer Number of Cases and Deaths by Age, South Dakota, 2012 .................................................................................................30
Figure 21: Female Breast Cancer Cases and Deaths by Year, South Dakota, 2001-2012....30
Figure 22: Female Breast Cancer Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012 ........................................................................30
Figure 23: Cervix Uteri Cancer Stage at Diagnosis, South Dakota, 2012.........................31
Figure 24: Cervix Uteri Cancer Number of Cases and Deaths by Age, South Dakota, 2012........32
Figure 25: Cervix Uteri Cancer Cases and Deaths by Year, South Dakota, 2001-2012 ....32
Figure 26: Cervix Uteri Cancer Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012.................................................................32
Figure 27: Colorectal Cancer Stage at Diagnosis, South Dakota, 2012..............................33
Figure 28: Colorectal Cancer Number of Cases and Deaths by Age, South Dakota, 2012....34
Figure 29: Colorectal Cancer Cases and Deaths by Year, South Dakota, 2001-2012 ........34
Figure 30: Colorectal Cancer Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012.................................................................34
Figure 31: Corpus and Uterus, NOS Cancer Stage at Diagnosis, South Dakota, 2012........35
Figure 32: Corpus and Uterus, NOS Cancer Number of Cases and Deaths by Age, South Dakota, 2012.............................................................................36
Figure 33: Corpus and Uterus, NOS Cancer Cases and Deaths by Year, South Dakota, 2001-2012.............................................................................36
Figure 34: Corpus and Uterus, NOS Cancer Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012.................................................................36
Figure 35: Kidney and Renal Pelvis Cancer Stage at Diagnosis, South Dakota, 2012 ......37
Figure 36: Kidney and Renal Pelvis Cancer Number of Cases and Deaths by Age, South Dakota, 2012.............................................................................38
LIST OF FIGURES (cont'd)

Figure 37: Kidney and Renal Pelvis Cancer Cases and Deaths by Year, South Dakota, 2001-2012 ................................................................. 38
Figure 38: Kidney and Renal Pelvis Cancer Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012 ............................... 38
Figure 39: Leukemia Number of Cases and Deaths by Age, South Dakota, 2012 ................................................................. 40
Figure 40: Leukemia Cases and Deaths by Year, South Dakota, 2001-2012 ................................................................. 40
Figure 41: Leukemia Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012 ................................................................. 40
Figure 42: Lung and Bronchus Cancer Stage at Diagnosis, South Dakota, 2012 ................................................................. 41
Figure 43: Lung and Bronchus Cancer Number of Cases and Deaths by Age, South Dakota, 2012 ................................................................. 42
Figure 44: Lung and Bronchus Cancer Cases and Deaths by Year, South Dakota, 2001-2012 ................................................................. 42
Figure 45: Lung and Bronchus Cancer Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012 ................................................................. 42
Figure 46: Melanoma of the Skin Stage at Diagnosis, South Dakota, 2012 ................................................................. 43
Figure 47: Melanoma of the Skin Number of Cases and Deaths by Age, South Dakota, 2012 ................................................................. 44
Figure 48: Melanoma of the Skin Cases and Deaths by Year, South Dakota, 2001-2012 ................................................................. 44
Figure 49: Melanoma of the Skin Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012 ................................................................. 44
Figure 50: Myeloma Number of Cases and Deaths by Age, South Dakota, 2012 ................................................................. 46
Figure 51: Myeloma Cases and Deaths by Year, South Dakota, 2001-2012 ................................................................. 46
Figure 52: Myeloma Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012 ................................................................. 46
Figure 53: Non-Hodgkin’s Lymphoma Stage at Diagnosis, South Dakota, 2012 ................................................................. 47
Figure 54: Non-Hodgkin’s Lymphoma Number of Cases and Deaths by Age, South Dakota, 2012 ................................................................. 48
Figure 55: Non-Hodgkin’s Lymphoma Cases and Deaths by Year, South Dakota, 2001-2012 ................................................................. 48
Figure 56: Non-Hodgkin’s Lymphoma Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012 ................................................................. 48
Figure 57: Ovarian Cancer Stage at Diagnosis, South Dakota, 2012 ................................................................. 49
Figure 58: Ovarian Cancer Number of Cases and Deaths by Age, South Dakota, 2012 ................................................................. 50
Figure 59: Ovarian Cancer Cases and Deaths by Year, South Dakota, 2001-2012 ................................................................. 50
Figure 60: Ovarian Cancer Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012 ................................................................. 50
Figure 61: Pancreatic Cancer Stage at Diagnosis, South Dakota, 2012 ................................................................. 51
Figure 62: Pancreatic Cancer Number of Cases and Deaths by Age, South Dakota, 2012 ................................................................. 52
Figure 63: Pancreatic Cancer Cases and Deaths by Year, South Dakota, 2001-2012 ................................................................. 52
Figure 64: Pancreatic Cancer Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012 ................................................................. 52
Figure 65: Prostate Cancer Stage at Diagnosis, South Dakota, 2012 ................................................................. 53
Figure 66: Prostate Cancer Number of Cases and Deaths by Age, South Dakota, 2012 ................................................................. 54
Figure 67: Prostate Cancer Cases and Deaths by Year, South Dakota, 2001-2012 ................................................................. 54
LIST OF FIGURES (cont'd)

Figure 68: Prostate Cancer Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012 ..........................................................54
Figure 69: Stomach Cancer Stage at Diagnosis, South Dakota, 2012 .........................55
Figure 70: Stomach Cancer Number of Cases and Deaths by Age, South Dakota, 2012 .....56
Figure 71: Stomach Cancer Cases and Deaths by Year, South Dakota, 2001-2012 ..............56
Figure 72: Stomach Cancer Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012 .........................................................................................56
Figure 73: Thyroid Cancer Stage at Diagnosis, South Dakota, 2012 ..............................57
Figure 74: Thyroid Cancer Number of Cases and Deaths by Age, South Dakota, 2012 ....58
Figure 75: Thyroid Cancer Cases and Deaths by Year, South Dakota, 2001-2012 .............58
Figure 76: Thyroid Cancer Age-Adjusted Rates, Cases, and Deaths by Year, South Dakota, 2001-2012 ........................................................................................................58