

**Addis Ababa science and Technology University**

**Collage of biological and chemical engineering**

**Department of biotechnology**

**Seminar**

**Cancer Treatment**

**Name: Gelila Bizualem**

**ETS 0545/10**

**Academic Advisor: Dr. Gizachew**

**Submitted to Mr. Solomon**

**June 2021**

**Table of content**

Contents

[Abbreviations i](#_Toc76661926)

[Abstract ii](#_Toc76661927)

[Key words ii](#_Toc76661928)

[1 Introduction 1](#_Toc76661929)

[2 Cancer 2](#_Toc76661930)

[2.2 Types of gene that causes cancer 3](#_Toc76661931)

[2.3 Cancer diagnosis 4](#_Toc76661932)

[3 Types of cancer treatment 5](#_Toc76661933)

[4 Monoclonal antibody for cancer treatment 6](#_Toc76661934)

[4.1 Immunotherapy with monoclonal antibodies 7](#_Toc76661935)

[4.2 Monoclonal antibody drugs for cancer 7](#_Toc76661936)

[5 Gene therapy used in cancer treatment 8](#_Toc76661937)

[5.1 Viral vectors 10](#_Toc76661938)

[5.6 Immunotherapy 10](#_Toc76661939)

[Gene transfer 11](#_Toc76661940)

[Cell therapy 11](#_Toc76661941)

[6 Nanotechnology for cancer diagnosis and treatment 12](#_Toc76661942)

[Nanotechnology in diagnosis of cancer 12](#_Toc76661943)

[Tools of nanotechnology for cancer therapy 14](#_Toc76661944)

[Nanotechnology in treating cancer 15](#_Toc76661945)

[Conclusion 16](#_Toc76661946)

[References 17](#_Toc76661947)

**List of figures**

[Figure 1 Cancer Cells 2](#_Toc76398798)

[Figure 2 Cancer cell Vs Normal cell 3](#_Toc76398799)

[Figure 3 how genes cause cancer 4](#_Toc76398800)

[Figure 4 Monoclonal Antibodies in cancer treatment 6](#_Toc76398801)

[Figure 5 Gene therapy for cancer treatment 9](#_Toc76398802)

[Figure 6 Non-viral Vector for cancer therapy 11](#_Toc76398803)

[Figure 7 Nanotechnology for cancer treatment 13](#_Toc76398804)

[Figure 8 Nano particles 14](#_Toc76398805)