

Contents

	الأية القرآنيه	II
	Dedication	III
	Acknowledgment	IV
	Abstract	V
	ملخص البحث	VI
	List of Abbreviation	VII
	Chapter One	
1.1	Introduction	1
1.2	Problem of study	4
1.3	Objectives of Study	4
1.3.1	General objective	4
1.3.2	Specific objective	4
1.4	Research Overview	5
	CHAPTER TWO	
2.1	Theoretical Background	6
2.2	Atomic Structure	6
2.2.1	The Nucleus	6
2.2.2	Classification of Nuclei	7
2.2.3	Atomic Mass Unit	9
2.2.4	Nuclear Binding Energy	9
2.2.5	Nuclear Stability	10
2.3	Radioactivity	11
2.3.1	Methods of Radioactive Decay	12
2.3.2	Spontaneous Fission	13
2.3.3	Alpha Decay	14
2.3.4	Beta Decay	14
2.3.5	Gamma Decay	14
2.4	Radiation dose from imaging examinations	15
2.5	The benefits of nuclear medicine examinations	16
2.6	Pervious study	17
	Chapter three	
3.1	Materials	20
3.1.1	Machine used	20

3.1.2	Study area and duration	20
3.2	Methods	20
3.2.1	Study population	20
3.3	Patient preparation	21
3.3.1	Patient positioning	21
3.3.2	Interviewing of patient	21
3.4	Method of Data analysis	21
	Chapter Four	
4.1	Results	22
	Chapter Five	
5.1	Discussion	26
5.2	Conclusion	28
5.3	Recommendation	29
	References	30

Last of tables		
4.1	demographic data for all patients and data patients dose in mCi at NMDC	22
4.2	demographic data for female and patients dose in mCi at NMDC	22
4.3	demographic data for male and patients dose in mCi at NMDC	23
4.4	demographic data for all patients and patients dose in mCi at RCIH	23
4.5	demographic data for female and patients dose in mCi at RCIH	24
4.6	demographic data for male and patients dose in mCi at RCIH	24
4.7	show statistical parameters for patients dose in mCi at NMDC and RCIH	25

	Last of figures	
2.1	figure shows the mass number and atomic number of hydrogen, deuterium and tritium	8
2.2	figure shows The nuclear stability curve	11
2.3	figure shows the hypothetical of nucleus	13
4.1	show statistical parameters for patients dose in mCi at NMDC and RCIH	25