

## TABLE OF CONTENTS

TITLE PAGE .....	i
APPROVAL PAGE .....	ii
ACKNOWLEDGEMENT .....	iii
AUTHENTICITY STATEMENT .....	v
TABLE OF CONTENTS .....	vi
LIST OF TABLES .....	viii
LIST OF FIGURES .....	ix
LIST OF SYMBOL AND ABBREVIATION .....	x
ABSTRACT .....	xi
INTISARI .....	xii
CHAPTER I. INTRODUCTION .....	1
A. Research Background .....	1
B. Research Questions .....	3
C. Research Objectives .....	3
D. Research Authenticity .....	3
E. Research Benefits .....	5
CHAPTER II. LITERATURE REVIEW .....	6
1. Lymphoma .....	6
1.1. Definition .....	6
1.2. Classification .....	6
2. Hodgkin Lymphoma .....	7
2.1. Definition .....	7
2.2. Epidemiology .....	7
2.3. Etiology and Risk Factors .....	8
2.4. Pathogenesis .....	10
2.5. Classification .....	11
2.6. Staging and Diagnosis .....	15
2.7. Clinical Characteristic .....	17
2.8. Treatment .....	18
2.9. Prognosis .....	19
2.10. Cytopenia in Hodgkin's Lymphoma .....	20
2.11. Anemia in Hodgkin's Lymphoma .....	22
3. Theoretical Framework .....	24

4. Conceptual Framework .....	25
5. Hypothesis.....	26
CHAPTER III. RESEARCH METHOD .....	27
A. Research Design.....	27
B. Place and Time of Research .....	27
C. Operational Definition .....	27
D. Subject and Population.....	29
E. Data Collection .....	29
F. Research Procedure .....	30
G. Data Analysis .....	30
H. Ethical Consideration .....	31
I. Timetable .....	31
CHAPTER IV. RESULT AND DISCUSSION .....	32
A. Result .....	32
1. Patient's sociodemographic, tumor characteristics, anemia status, and other hematological finding .....	32
2. Correlation between Anemia and IPS components, nutritional status, and extranodal involvement .....	41
B. Discussion .....	46
1. Patient's sociodemographic, hematological finding, and tumor characteristics .....	46
2. Correlation between anemia and IPS components .....	50
3. Research Limitation .....	51
CHAPTER V. CONCLUSION AND SUGGESTION .....	53
A. Conclusion .....	53
B. Suggestion .....	53
REFERENCES.....	54
APPENDICES .....	63
1. SPSS Calculation .....	63
2. Ethical Clearance Approval .....	96

## LIST OF TABLES

Table 1. List of previous research .....	3
Table 2. WHO classification of Hodgkin's Lymphoma.....	11
Table 3. Ann Arbor Classification .....	16
Table 4. Cotswold Modification for Hodgkin's lymphoma.....	17
Table 5. Five-year FFP and OS score .....	19
Table 6. ECOG Performance Status.....	20
Table 7. Normal range and interpretation of differential white blood cells.....	28
Table 8. Timetable. ....	31
Table 9. Characteristics of Patient, Tumor, and Choice of Treatment.....	32
Table 10. Univariate and Multivariate Logistic Regression Analysis .....	35
Table 11. Demographic Features of Hodgkin's Lymphoma Patients at Dr. Sardjito Hospital in the period of 2012-2018 .....	33
Table 12. Characteristic of tumor among HL population at Dr. Sardjito Hospital Yogyakarta in the period of 2012-2018 .....	35
Table 13. Histopathological Subtypes of Hodgkin's Lymphoma Correlated with Anemia .....	39
Table 14. Hematological Finding of Hodgkin's Lymphoma Patients at Dr. Sardjito Hospital in the year of 2012-2018.....	40
Table 15. Chi-Square Analysis Result .....	42
Table 16. Chi Square Analysis from a new cut-off point by ROC analysis .....	43
Table 17. Univariate and Multivariate analysis .....	44
Table 18. Total IPS analysis using Chi Square and Multivariate Logistic Regression .....	45

## LIST OF FIGURES

Figure 1. Nodular lymphocyte predominance.....	12
Figure 2. Nodular sclerosis cHL .....	13
Figure 3. Mixed cellularity cHL .....	13
Figure 4. Lymphocyte-depleted cHL .....	14
Figure 5. Lymphocyte-rich cHL .....	15
Figure 6. Theoretical framework .....	24
Figure 7. Conceptual framework.....	25
Figure 8. Anemia Severity among Hodgkin's Lymphoma Patients at Dr. Sardjito Hospital from 2012-2018 .....	37
Figure 9. Anemic population in HL patients among gender at Dr. Sardjito Hospital Yogyakarta in the period of 2012-2018 .....	38
Figure 10. Anemic population in HL patients among age at Dr. Sardjito Hospital Yogyakarta in the period of 2012-2018 .....	38