

TABLE OF CONTENTS

TITLE	i
RATIFICATION LETTER	ii
AUTHENTICITY STATEMENT	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	vi
INDEX OF TABLE	viii
INDEX OF FIGURE	ix
ATTACHMENT LIST	x
ABBREVIATION LIST	xi
ABSTRACT	xii
INTISARI	xiv
INTRODUCTION	1
I.1. Background	1
I.2. Research Questions	3
I.3. Objectives	3
I.5. Research Benefit	5
LITERATURE REVIEW	6
II.1. Literature Review	6
II.1.1. Epidemiology of Colorectal cancer	6
II.1.2. Pathological findings of colorectal cancer	9
II.1.3. Angiogenesis in Colorectal cancer	11
II.1.4. Microvessel Density (MVD)	14
II.1.5. Correlation of MVD with clinicopathology profile	16
II.2. Theoretical Framework	19
II.3. Conceptual Framework	20
II.4. Hypothesis	20
RESEARCH METHODOLOGY	21
III.1. Study Design	21
III.2. Population and Subjects	21
III.3. Study Instruments	22
III.4. Study Method	22
III.4.1. Data Collection Method	22
III.4.2. Detection of microvessel density	22
III.4.3. Assessment of microvessel density	23
III.5. Sample Size Calculation	24
III.6. Variables	25
III.7. Operational Definition	25

III.8. Statistics Analysis	27
III.9. Ethical Consideration	28
RESULT AND DISCUSSION	29
IV.1 Result	29
IV.1.1. Demographic Data	29
IV.1.2. Microvessel density detection	30
IV.1.3 Microvessel density and clinicopathology profile	32
IV.2. Discussion	36
CONCLUSION AND SUGGESTION	43
V.1. Conclusion	43
V.2. Suggestion	43
REFERENCES	44
ATTACHMENT	

INDEX OF TABLE

Table 2.1 TNM staging 2002 (ESMO Guideline Working Group, 2010).....	11
Table 4.1 Baseline Characteristic.....	29
Table 4.2 Statistical correlations between MVD and the various clinicopathological aspect of the 94 analyzed colorectal carcinomas, investigated through Chi-square analysis and Fisher's test exact.....	32
Table 4.3 Statistical correlations between MVD and the various clinicopathological aspect of the 94 analyzed colorectal carcinomas, investigated through Independent T-test.....	34
Table 4.4 Statistical correlations between MVD and metastasis time sequence, investigated through binary logistic regression.....	35

INDEX OF FIGURE

Figure 2.1 Theoretical Framework.....	19
Figure 2.2 Conceptual Framework.....	20
Figure 4.1 Immunostaining using anti CD31 antibody of colorectal cancer specimen(10X objective magnification).....	31
Figure 4.2 Immunostaining using anti CD31 antibody of colorectal cancer specimen(10X objective magnification).....	31

ATTACHMENT LIST

Attachment 1 Ethical Clearance

Attachment 2 SPSS Analysis Result

ABBREVIATION LIST

<u>Abbreviation</u>	<u>Full Citation</u>
AJCC	American Joint Committee on Cancer
Ang	Angiopoetin
EDTA	Ethylenediaminetetraacetic Acid
CIAS	Computerised Image Analysis systems
CRC	Colorectal Cancer
DAB	Deaminobenzidine
FAP	Familial Adenomatous Polyposis
HNPCC	Hereditary Nonpolyposis Colorectal Cancer
IARC	International Agency for Research for Cancer
MVD	Microvessel Density
mm	milimeter
TBS	Tris Buffer Saline
UICC	Union for International Cancer Control
VEGF	Vascular Endothelial Growth Factor
VEGFR	Vascular Endothelial Growth Factor Receptor
µm	Micrometer