

**Patient-Controlled Epidural Analgesia (PCEA) Versus Intravenous
Patient-Controlled Analgesia (IV PCA) for Acute Postoperative Pain
Relief in Minimally Invasive Abdominal Surgeries: A Systematic
Review
THESIS**



Author:

JUNJUNGAN NIMASRATU RAHMATSANI

NIM: 011711133045

FACULTY OF MEDICINE

UNIVERSITAS AIRLANGGA

SURABAYA

2020

i

**Patient-Controlled Epidural Analgesia (PCEA) Versus Intravenous
Patient-Controlled Analgesia (IV PCA) for Acute Postoperative Pain
Relief in Minimally Invasive Abdominal Surgeries: A Systematic
Review
THESIS**



Author:

JUNJUNGAN NIMASRATU RAHMATSANI

NIM: 011711133045

FACULTY OF MEDICINE

UNIVERSITAS AIRLANGGA

SURABAYA

2020

i

FORM OF APPROVAL

Patient-Controlled Epidural Analgesia (PCEA) Versus Intravenous Patient-Controlled Analgesia (IV PCA) for Acute Postoperative Pain Relief in Minimally Invasive Abdominal Surgeries: A Systematic Review

THESIS

Proposed as One of the Requirements for Completing the Medical Study Program at the Faculty of Medicine Universitas Airlangga Surabaya

Author:

Junjungan Nimasratu Rahmatsani

011711133045

Approved by,

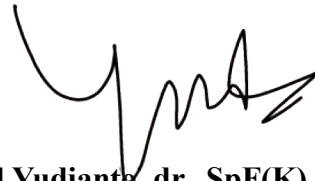
Supervisor I

Supervisor II



Bambang Pujo Semedi, dr. SpAn. KIC

NIP. 197302082008011013



Dr. Ahmad Yudianto, dr., SpF(K)., SH., M.Kes

NIP. 197305302016016101

**FACULTY OF MEDICINE
UNIVERSITAS AIRLANGGA
SURABAYA**

2020

EXAMINER'S DECISION SHEET

Patient-Controlled Epidural Analgesia (PCEA) Versus Intravenous Patient-Controlled Analgesia (IV PCA) for Acute Postoperative Pain Relief in Minimally Invasive Abdominal Surgeries: A Systematic Review
THESIS

**Approved and accepted after being tested by Medical Study Program Examiner
Faculty of Medicine Universitas Airlangga Surabaya
Surabaya, August 28, 2020**

Author:

Junjungan Nimasratu Rahmatsani

011711133045

Chief Examiner



Dr. Christijogo Soemartono-Waloejodr, dr., Sp.An., KAR.

NIP. 196008052016016101

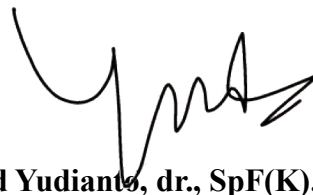
Supervisor I / Secretary of Examiner

Supervisor II / Member of Examiner



dr. Bambang Pujo Semedi, SpAn., KIC

NIP. 197302082008011013



Dr. Ahmad Yudianto, dr., SpF(K), SH., M.Kes

NIP. 197305302016016101

**FACULTY OF MEDICINE
UNIVERSITAS AIRLANGGA
SURABAYA**

2020