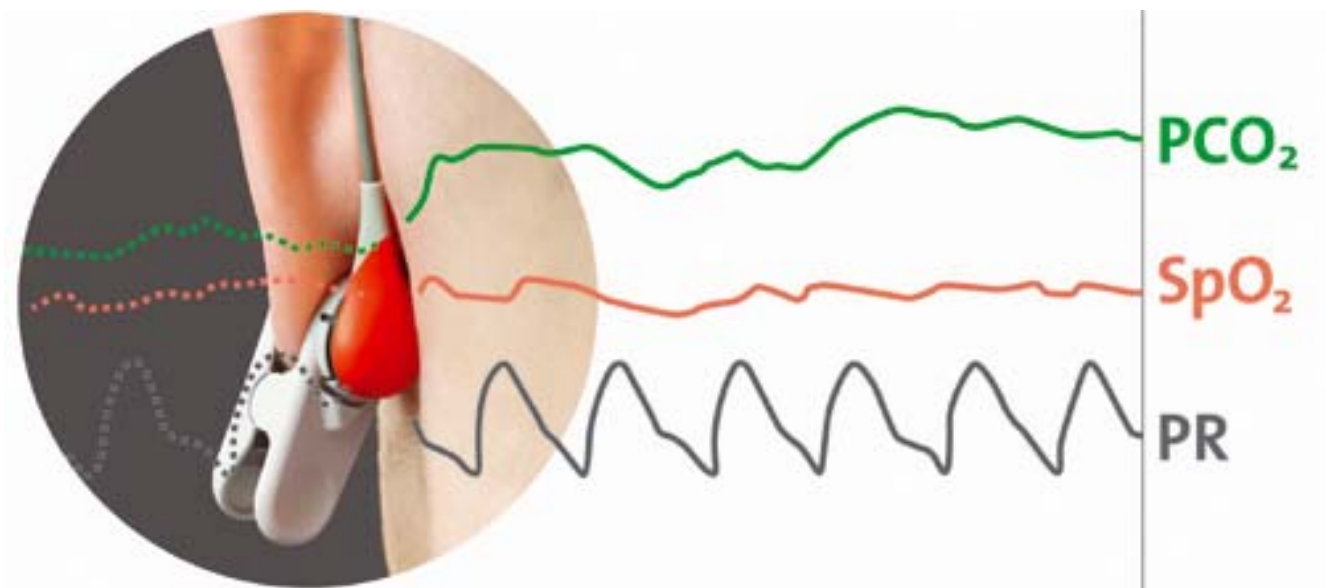


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Clinical Studies List

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A. Reviewed and Published Papers

Published in 2009

Intensive Care Med. 2009 Jan 27 (PMID: 19172246 [PubMed - as supplied by publisher])

[Carbon dioxide monitoring during long-term noninvasive respiratory support in children](#)

Rebeca Paiva, Uros Krivec, Guillaume Aubertin, Emmanuelle Cohen, Annick Clement, Brigitte Fauroux, Pediatric Pulmonary Department, AP-HP, Hôpital Armand Trousseau, Research Unit

Published in 2008

Support Care Cancer. 2008 Aug 22 (PMID: 18719948 [PubMed - as supplied by publisher])

[Use of oxygen and opioids in the palliation of dyspnoea in hypoxic and non-hypoxic palliative care patients: a prospective study](#)

Clemens KE, Quednau I, Klaschik E.

Department of Science and Research, Centre for Palliative Medicine, University of Bonn, Bonn, Germany, katri-elina.clemens@malteser.de.

Masui. 2008 Apr;57(4):453-6 PMID: 18416203 [PubMed - indexed for MEDLINE]

[Are transcutaneous blood gas measurement monitors \(SenTec Digital Monitor system\) useful for the respiratory management of chronic respiratory failure?](#)

[Yazawa R., Gamo M., Kokawa A., Hirose Y.](#)

Department of Anesthesiology, Kanagawa Cardiovascular and Respiratory Center, Yokohama 236-8651

Respiratory Care. August 2008, 53(8): 1042-1047 (PMID: 18655742 [PubMed - indexed for MEDLINE])

[Transcutaneous Carbon Dioxide Pressure Monitoring in a Specialized Weaning Unit](#)

Douglas C, Johnson MD, Salma Batool MD, Ronald Dalbec RRT

Spaulding Rehabilitation Hospital, 125 Nashua Street, Boston MA 02114.

Chest. 2008 Mar 13, 133(6):1421-5. (PMID: 18339783 [PubMed - indexed for MEDLINE])

[Combined Oximetry-Cutaneous Capnography in Patients Assessed for Long Term Oxygen Therapy](#)

Schafroth Török S, Leuppi JD, Baty F, Tamm M, Chhajed PN.

Pulmonary Medicine, University Hospital, Basel, Switzerland

J Palliat Med. 2008 Mar;11(2):204-16. PMID: 18333735 [PubMed - indexed for MEDLINE]

[Is there a higher risk of respiratory depression in opioid-naïve palliative care patients during symptomatic therapy of dyspnea with strong opioids?](#)

Clemens KE, Quednau I, Klaschik E.

Department of Science and Research for Palliative Medicine, University of Bonn, Bonn, Germany. katrina-elina.clemens@malteser.de

Korean J Anesthesiol, February, 2008, 54(2): 129-133.

[A Comparison of Transcutaneous and End-Tidal Measurements of CO₂ in one Lung Ventilation](#)

Hey Ran Choi, M.D., Sang Seok Lee, M.D., Yun Hee Lim, Byung Hoon Yoo, M.D., Jun Heum Yon, M.D., Ki Hyuk Hong, M.D. and Dong Won Kim, M.D.

Department of Anesthesiology and Pain Medicine, Sanggye Paik Hospital, Inje Univ. College of Medicine, Seoul, Korea

Support Care Cancer January 2008;16(1):93-9.(PMID: 17929063 [PubMed - indexed for MEDLINE])

[Effect of hydromorphone on ventilation palliative care patients with dyspnea](#)

Clemens KE, Klaschik E.

Department of Anaesthesiology, Intensive Care Medicine, Palliative Medicine and Pain Therapy, Malteser Hospital Bonn/Rhein-Sieg, Von-Hompesch-Strasse 1, Bonn, Germany. katri-elena.clemens@malteser.de

Published in 2007

Chest. 2007 Dec;132(6):1810-6 PMID: 18079217 [PubMed - indexed for MEDLINE]

[Transcutaneous PCO₂ Monitoring During Initiation of Noninvasive Ventilation](#)

Storre JH, Steurer B, Kabitz HJ, Dreher M, Windisch W.

Department of Pneumology, University Hospital Freiburg, Killianstrasse 5, D-79106 Freiburg, Germany.

J Clin Monit Comput. 2007 Oct;21(5):303-9. (PMID: 17701383 [PubMed - indexed for MEDLINE])

[Clinical validation of a digital transcutaneous PCO₂/SpO₂ ear sensor in adult patients after cardiac surgery.](#)

Baulig W, Schütt P, Roth HR, Hayoz J, Schmid ER.

Division of Cardiac Anaesthesia, Institute of Anaesthesiology, University Hospital of Zurich, Raemistrasse 100, Zurich, 8091, Switzerland

Journal of Pain and Symptom Management, 2007 April 04 (PMID: 17397708 [PubMed - indexed for MEDLINE])

[Symptomatic Therapy of Dyspnea with Strong Opioids and Its Effect on Ventilation in Palliative Care Patients](#)

Katri Elina Clemens, MD, PhD, and Eberhard Klaschik, MD, PhD

Department of Science and Research in Palliative Medicine, University of Bonn; and Center for Palliative Medicine, Malteser Hospital Bonn-Hardtberg, Bonn, Germany

Journal of Minimal Access Surgery 2007; 3: 8-13.

[Non-invasive monitoring of PaCO₂ during one-lung ventilation and minimal access surgery in adults: end-tidal versus transcutaneous techniques](#)

Paul Cox P, Tobias JD

University of Missouri School of Medicine and the Departments of Anesthesiology and Pediatrics, Columbia, Missouri, USA

Kinesither Rev 2007;(72):20-2

[Kinésithérapie respiratoire et syndrome d'hyperventilation](#)

Aïnara Dominguez,

Kinésithérapeute, CHR Metz-Thionville, Service de Rééducation,57038 Metz Cédex,

Published in 2006

Arch Bronconeumol. 2006 May;42(5):246-51. (PMID: 16740241 [PubMed - indexed for MEDLINE])

[Transcutaneous measurement of partial pressure of carbon dioxide and oxygen saturation: validation of the SenTec monitor](#)

Domingo Ch, Canturri E, Lujan M, Moreno A, Espuelas H, Marin A.
Servei de Pneumologia, Corporacio Sanitaria Parc Tauli, Sabadell, Barcelona, Espana. cdomingo@cspt.es

Arch Bronconeumol. 2006 May;42(5):225-9. (PMID: 16740237 [PubMed - indexed for MEDLINE])

[Usefulness of transcutaneous carbon dioxide pressure monitoring to measure blood gases in adults hospitalized for respiratory disease](#)

Herrejon A, Inchaurrega I, Palop J, Ponce S, Peris R, Terradez M, Blanquer R.
Servicio de Neumologia, Hospital Universitario Dr. Peset, Valencia, Espana. herrejon_alb@gva.es

Eur Respir J. 2006 Aug;28(2):386-90. Epub 2006 Apr 26. (PMID: 16641122 [PubMed - in process])

[Measurement of combined oximetry and cutaneous capnography during flexible bronchoscopy](#)

Chhajed PN, Rajasekaran R, Kaegi B, Chhajed TP, Pflimlin E, Leuppi J, and Tamm M.
Pulmonary Medicine, University Hospital Basel, Petersgraben 4, CH-4301 Basel, Switzerland

Intensive Care Med. 2006 Feb;32(2):309-12. Epub 2006 Jan 31. (PMID: 16450093 [PubMed - in process])

[Transcutaneous arterial carbon dioxide pressure monitoring in critically ill adult patients.](#)

Rodriguez P, Lellouche F, Aboab J, Buisson CB, Brochard L
Faculte Medicine, Universite Paris XII, 94010, Creteil Cedex, France.

Anesthesiology. 2006 Apr;104(4):701-7. (PMID: 16571965 [PubMed - indexed for MEDLINE])

[An evaluation of transcutaneous carbon dioxide partial pressure monitoring during apnea testing in brain-dead patients.](#)

Vivien B, Marmion F, Roche S, Devilliers C, Langeron O, Coriat P, and Riou B
Department of Anesthesiology, Centre Hospitalier Universitaire Pitie-Salpetriere, Assistance Publique-Hopitaux de Paris, Paris, France.

Asian Hospital & Healthcare Management, 2006 Nov; [eBook-Version](#)

[Ventilation Monitoring – Non-invasive is the way](#)

Karges Gido, SenTec AG, Ringstrasse 39, 4106 Switzerland.

Published in 2005

CHEST 2005; 127:585–588 (PMID: 15706000 [PubMed - indexed for MEDLINE])

[Detection of Hypoventilation During Thoracoscopy: Combined Cutaneous Carbon Dioxide Tension and Oximetry Monitoring With a New Digital Sensor](#)

Chhajed PN, Kaegi B, Rajasekaran R, and Tamm M.
Pulmonary Medicine, University Hospital Basel, Petersgraben 4, CH-4301 Basel, Switzerland

Respiration. 2005 Aug 30; [Epub ahead of print] (PMID: 16131790 [PubMed - as supplied by publisher])

[\(Un\)Explained Hyperventilation](#)

Chhajed PN, Langewitz W, and Tamm M.
Divisions of Respiratory Medicine and Psychosomatic Medicine, University Hospital Basel, Basel, Switzerland.

Published in 2004

Curr Opin Anaesthesiol. 2004 Dec;17(6):521-5. (PMID: 17031089 [PubMed - in process])

[Cutaneous carbon dioxide monitoring in adults.](#)

Chhajed PN, Heuss LT, and Tamm M.

Division of Respiratory Medicine and Division of Gastroenterology, University Hospital, Basel, Switzerland
Institute of Pulmonology, Medical Research & Development, Mumbai, India.

Digestion. 2004;70(3):152-8. Epub 2004 Oct 12. (PMID: 15479975 [PubMed - indexed for MEDLINE])

[Combined pulse oximetry/cutaneous carbon dioxide tension monitoring during colonoscopies: pilot study with a smart ear clip.](#)

Heuss LT, Chhajed PN, Schnieper P, Hirt T, and Beglinger C

Department of Gastroenterology and Division of Respiratory Medicine, University Hospital, Basel, Switzerland.

J Clin Monit Comput. 2004 Apr;18(2):75-9. (PMID: 15362268 [PubMed - indexed for MEDLINE])

[Performance of a digital PCO₂/SPO₂ ear sensor.](#)

Kocher S, Rohling R, Tschupp A.

SenTec Inc., Ringstrasse 39, CH-4106 Therwil, Switzerland.

Published in 2003

Anesth Analg. 2003 Jan;96(1):82-4. (PMID: 12505928 [PubMed - indexed for MEDLINE])

[A combined ear sensor for pulse oximetry and carbon dioxide tension monitoring: accuracy in critically ill children.](#)

Tschupp A, Fanconi S.

SenTec Inc., Therwil, Switzerland.

B. Congress Contributions (Abstracts, Posters, Talks)

Presented in 2009

SCCM 2009, Annual Meeting, Poster Presentation, February 2009

Transcutaneous Carbon Dioxide Monitoring During Percutaneous Tracheostomy

Steven J. Trottier, Michael Blackburn St. John's Mercy Medical Center, Department of Critical Care Medicine, St. Louis University, Division of Pulmonary, Critical Care, and Occupational Medicine, St. Louis, Missouri

Presented in 2008

AARC 2008, Annual Meeting, Poster Presentation, December 2008

Evaluation of a digital transcutaneous pCO₂ Sensor and its correlation to arterial blood gas pCO₂ measurements during neonatal high frequency oscillatory ventilation

Daniel D. Rowley, RRT-NPS, RPFT, Janet Glass, RRT, Timothy Hicks, RRT, Tamara Wheeler, RRT, Frank Caruso, RRT, Puomonyary Diagnostics and Repsiratory Therapie Services, University of Virginia Medical Center, Charlottesville, Virginia, USA

ATS 2008, Annual Meeting, Poster Presentation, May 2008

Measurement of Cutaneous Carbon Dioxide Tension during Non-Invasive Ventilation and Extubation in the Intensive Care Unit

P.N. Chhajed, M.D., D. Grisch, M.D., F. Baty, Ph.D., A. Azzola, M.D., M. Tamm, M.D., Basel, Switzerland

Presented in 2007

ERS 2007, Annual Meeting, Poster Presentation, September 2007

Use of transcutaneous PCO₂ for the home care follow-up of pulmonary disease patients

P. Cervantes, D. Laplaud, L. Huret, F. Arboit, J. Hermann, S. Raymond, F. Tourmente (Metz, Maxeville, France)

ASA 2007 Annual Meeting: Abstract # A439, Poster Presentation, San Francisco, USA, Oct. 2007

Transcutaneous and End-Tidal Carbondioxide Monitoring during Laparoscopic Bariatric Surgery

Preeti Arora, M.D., Roman Schumann, M.D., Victor Chung, B.S., Carolyn D'Ambrosio, M.D., M. Soledad Cepeda, M.D., Ph.D. Anesthesia, Tufts-New England Medical Center, Boston, Massachusetts

New England Anesthesia Residents Conference (NEARC), University of Massachusetts Worcester, MA, April 07

Transcutaneous CO₂ Partial Pressure Monitoring during apnea test for brain death diagnosis

P. Arora, MD., V. Chung, BS, C. D'Ambrosio, MD., M. S. Cepeda, MD, PhD,
R. Schumann, MD. Tufts-New England Medical Center, Tufts University School of Medicine, Boston, MA

American Society for Bariatric Surgery, 24 th Annual Meeting, San Diego, CA, USA June 2007

Obstructive Sleep Apnea in the Pacu following bariatric Surgery

Victor Chung B.S., Carolyn D'Ambrosio, M.D., M.S., Sean O'Reilly, M.D.*, Jana Hudcova, M.D., Roman Schumann, M.D.*, Tufts University school of Medicine,*Tufts-New England Medical Center

ATS 2007, Annual Meeting, Oral Presentation, May 2007

Combined oximetry and cutaneous capnography in patients assessed for long term oxygen therapy

S. Schafroth Torok, M.D., J.D. Leuppi, M.D., Ph, F. Baty, PhD., M. Tamm, M.D., P.N. Chhajed, M.D.
Basel, Switzerland

ATS 2007, Annual Meeting, Poster Presentation, May 2007

Comparison of combined oximetry and cutaneous capnography using a digital sensor with arterial blood gas analysis

D. Miedinger, M.D., P.N. Chhajed, M.D., F. Baty, PhD., M. Bernasconi, M.D., L.T. Heuss, M.D., M. Tamm, M.D.
Basel, Switzerland

Presented in 2006

European Respiratory Care Association Congress, Oral Presentation, Athena Greece, Oct. 2006

Reproducibility of PtcCO₂ in Pediatrics

T. David, A. Stagnara, La Maisonnée, Centre Médical Pédiatrique, Franchville France,

ASA 2006 Annual Meeting: Abstract #650729, Poster Presentation

Dynamic properties of a new transcutaneous CO₂ sensor: fast enough for early detection of apnea?

Schumacher PM, Caruso ALG, Hartwich V, Luginbuehl M, Bouillon TW
Department of Anesthesiology, University Hospital Bern, Bern, Switzerland

ASA 2006 Annual Meeting: Abstract, Poster Presentation

Transcutaneous Carbon Dioxide Monitoring in Spontaneously-Breathing Intensive Care Unit Patients

Baciarello M, Squicciarini G, Gatti M, Malagutti G, Casati A
Department of Anesthesiology, Critical Care and Pain Medicine, University of Parma, Parma; Italy

ASA 2006 Annual Meeting: Abstract, Poster Presentation

Transcutaneous Carbon Dioxide Monitoring during Controlled Mechanical Ventilation

Zasa M, Leone S, Gatti M, Malagutti G, Cicciarella L

Department of Anesthesiology, Critical Care and Pain Medicine, University of Parma, Parma; Italy

Presented in 2005

ATS 2005, Abstract, Poster Presentation

TRANSCUTANEOUS PCO₂ MONITORING IN A VENTILATOR WEANING UNIT

R. Dalbec, R.R.T., S. Batool, M.D., Y. Levin, M.D., A. Riendeau, R.R.T., R.N., D.C. Johnson, M.D.

Spaulding Rehabilitation Hospital, Boston, MA, USA

ATS 2005, Abstract, Poster Presentation

Transcutaneous CO₂ Partial Pressure Monitoring during apnea test for brain death diagnosis

Rodriguez PO, Lellouche F, Brochard L,

Medical ICU, Henri Mondor Hospital, Créteil, France

ATS 2005, Abstract, Poster Presentation

Transcutaneous CO₂ Partial Pressure Monitoring in critically ill patients

Rodriguez PO, Lellouche F, Brun-Buisson C, Brochard L,

Medical ICU, Henri Mondor Hospital, Créteil, France

AARC 2005, Abstract, Open Forum – Monitoring 1

Evaluation of a Transcutaneous CO₂ Monitor and Its Correlation to ABG PaCO₂ Measurements

Rowley DD, Walsh BK, Barry Young B, Caruso FJ

Pulmonary Diagnostics and Respiratory Therapy Services, University of Virginia Health System, Charlottesville, Virginia, USA

APARC 2005, Abstract and Poster Presentation

Optimization of Non-Invasive Ventilation Pressures using combined continuous oximetry and cutaneous carbon dioxide tension monitoring

Chhajed PN, Gehrler S, Chhajed TP, Strobel I, Brutsche MH, Tamm M, Strobel W

Departement of Pulmonary Medicine and Pulmonary Cell Research Laboratory, Basel, Switzerland

Presented in 2004

Japanese Pediatrics Meeting 2004, Invited Lecture

Importance of non-invasive pCO₂ and SpO₂ monitoring in Pediatrics

Fanconi S,

University Hospital Lausanne, Departement of Pediatrics and Pediatric Surgery, 1011 Lausanne, Switzerland

European Society of Intensive Care 2004, Abstract & Poster Presentation

Transcutaneous CO₂ Partial Pressure Monitoring in ICU patients

Rodriguez PO, Lellouche F, Brun-Buisson C, Brochard L,

Medical ICU, Henri Mondor Hospital, Créteil, France

AARC 2004 and ATS 2004, Abstract & Poster Presentation

Comparison of cutaneous carbon dioxide tension and oxygen saturation measurements using a new combined digital sensor with arterial blood gas values

Chhajed PN, Heuss LT, and Tamm M.

Division of Respiratory Medicine and Division of Gastroenterology, University Hospital, Basel, Switzerland

AARC 2004, Abstract & Poster Presentation

(Un)explained Hyperventilation

Chhajed PN, Langewitz W, and Tamm M.

Divisions of Respiratory Medicine and Psychosomatic Medicine, University Hospital Basel, Basel, Switzerland.

AARC 2004, Oral Presentation

SenTec Digital Monitoring System

J. Hayoz, Ph.D

SenTec AG, Ringstrasse 39, 4106 Therwil

CHEST 2004, Abstract, Poster Presentation

Cutaneous carbon dioxide tension monitoring might enhance patient safety during bronchoscopy and medical thoracoscopy

Chhajed PN, Rajasekaran R, Kaegi, B, Tamm M

Pulmonary Medicine, University Hospital Basel, Petersgraben 4, CH-4301 Basel, Switzerland

ERS 2004 and WCB 2004, Abstract, Poster Presentation

Quantification of hypoventilation by carbon dioxide tension measurement during flexible bronchoscopy

Chhajed PN, Rajasekaran R, Kaegi, B, Tamm M

Pulmonary Medicine, University Hospital Basel, Petersgraben 4, CH-4301 Basel, Switzerland

ERS 2004, Abstract, Poster Presentation

Use of a heated SpO₂-PCO₂ single sensor: comparison of results versus arterial blood gas measurements

Darne C, Hattab A, Picard C, Lagonotte D, Naudin C, Viau F

Briis-sous-Forges, France

ATS 2004, Abstract, Poster Presentation

Carbon Dioxide Tension Monitoring during Thoracoscopy

Chhajed PN, Tamm M

Pulmonary Medicine, University Hospital Basel, Petersgraben 4, CH-4301 Basel, Switzerland

DDW 04, Abstract, Oral Presentation

Patient Surveillance with a new combined POX and PCO₂ Single Ear Sensor "V-SignTM" during colonoscopies

Heuss LT, Schnieper P, Hayoz J, Beglinger C

Division of Gastroenterology, University Hospital, Basel, Switzerland

Presented in 2003

ISIAPO 2003, Abstract, Poster Presentation

Worlds first combined digital pulse oximetry and carbon dioxide tension ear sensor

Hayoz J, Rohling R, Tschupp A

SenTec AG, Ringstrasse 39, 4106 Therwil



Presented in 2002

EACTA 2002, Abstract, Oral Presentation

Combined pulse oximetry and carbon dioxide tension ear sensor in adult patients early after cardiac surgery

Hayoz J, Schmid ER, Schmidlin D, Tschupp A
Div. of Cardiovascular Anaesthesia, University Hospital, Zurich, Switzerland
SenTec AG, Ringstrasse 39, 4106 Therwil, Switzerland

Presented in 2001

EWCI 2001, Abstract, Oral Presentation

V-Sign™, a digital pulse oximetry and carbon dioxide tension ear sensor

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