physiologic impairment that may be of use when assessing
fitness to fly.

Anit Gupta, MD
Janet Stocks, PhD
Institute of Child Health
London, UK
Gareth Jones, MD
University School Cambridge
Cambridge, UK

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Correspondence to: Anit Gupta, Institute of Child Health, 30
Guilford St, London, UK, WC1N 1EH; e-mail: anit.gupta@doctors.
org.uk
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Diagnosis of Cardiogenic Pulmonary Edema by Sonography Limited to the
Anterior Lung

To the Editor:

We read with interest the article in CHEST (July 2008) by
Lichtenstein and Mezière on the diagnostic value of lung ultras-
ound in patients with acute respiratory failure. They exam-
ined 64 patients with pulmonary edema in the ICU and observed
prevalent B-lines on each side of the anterior chest (the B profile)
in 62 cases. Based on these findings, the proposed Bedside Lung
Ultrasound in Emergency (BLUE) protocol rules out the diag-
nosis of cardiogenic pulmonary congestion when the anterior
chest scans do not show the B profile.

Our previous two studies2,3 in patients who had been admitted
to the emergency department seem to be in disagreement with
this view. We performed lung ultrasound in 130 dyspneic patients
with confirmed acute decompensated heart failure (ADHF). All
had multiple anterolateral B lines, but a retrospective analysis of
the distribution of artifacts revealed that 20% of these patients
(28.5% of 49 patients in the first study2 and 14.81% of 81 patients
in the second study2) did not show the B profile.

Considering that both teams used the same sonographic tech-
ique and definition of a positive scan finding, and that the diagnoses
were all officially confirmed in the hospitalization report using
standardized tests, we suggest two possible explanations to this
discrepancy. (1) Lichtenstein and Mezière1 mainly studied pa-
ients with severe pulmonary edema in the ICU, and the transudate
was probably extended to the whole lung despite gravity and
vasularity. The milder forms of ADHF do not necessarily show
anterolateral symmetric B lines, because congestion initially involves
the inferior lobes.4 Moreover, comorbidities occur frequently with a
possible asymmetric distribution of edema due to morphologic
changes in the lung parenchyma of COPD patients.4 (2) A different
timing of the sonographic examinations could be confounding. It has
been shown that B lines significantly clear after treatment in patients
who have been admitted to the hospital for ADHF.3

Despite this discrepancy, we strongly believe in the high clinical
value of the BLUE protocol as validated in critically ill patients. At
the same time, we remain convinced that in daily practice in the
emergency department sonographic examinations of the lateral
chest areas (requiring a few seconds more time) is mandatory to
diagnose even asymmetric or mild pulmonary congestion and the
conditions modified by initial treatment.

Giovanni Volpicelli, MD
Luciano Cardinali, MD
Alessandro Musa, MD
Valeria Caramello, MD
San Luigi Gonzaga Hospital
Torino, Italy

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interest exist with any companies/organizations whose products or
services may be discussed in this article.

Correspondence to: Giovanni Volpicelli, MD, San Luigi Gonzaga Hospital,
Emergency Medicine, Regione Gonzoale 10, Orbassano, Torino 10043, Italy; e-mail: giov.volpicelli@tin.it
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Response

To the Editor:

We are pleased to see the interest of Volpicelli and col-
leagues1,2 in lung ultrasound and the BLUE protocol.3 Our
observations (July 2008)3 stressed a correlation between pulmo-
nary edema and the B profile. Volpicelli and colleagues1,2 pointed
out cases of pulmonary edema without the B profile. In actual
fact, we believe there is no discordance between their results and
ours; rather, they are complementary. As Volpicelli and col-
leagues1,2 say, the severity of their patients’ illness was different
(patients were able to keep the supine position, and most did not
require instrumental therapy1). The time at which these results
were recorded, up to 48 h after hospital admission,3 is important
since B lines vanish during therapy. Most of their patients had the
B profile, however. Those patients with no B profile (14.8%,
considering only patients examined at hospital admission3) should
indeed be referred to as having the mildest cases. This hypothesis