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1 **Diagnostic Ultrasound: Physics and Equipment, 3rd edition - Book Review**

2 Stephen Wolstenhulme MHSc¹ and James McLaughlan PhD^{2,3}

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4 Authors Affiliations:

5 1) Leeds Teaching Hospitals NHS Trust, St James's University Hospital, Leeds, UK.

6 2) Institute of Medical Research, St James' University Hospital, University of Leeds,

7 Leeds, U.K.

8 3) School of Medicine, University of Leeds, Woodhouse Lane, Leeds, U.K.

9

10 Corresponding Author:

11 Stephen Wolstenhulme MHSc

12 Department of Radiology

13 Beckett Street

14 Leeds

15 U.K. LS9 7TF

16 Telephone: 0113 2064422

17 Email: Stephen.wolstenhulme@nhs.net

18

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23

24 Diagnostic Ultrasound: Physics and Equipment, 3rd edition - Book Review

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29

30 The publication of the first edition in 2002, followed by the second edition in 2009, of
31 this book has been a resounding success. These books enhanced the ultrasound
32 market by providing a detailed, succinct and applicable account of the physics and
33 technology underpinning diagnostic ultrasound. Both books have become the
34 standard introductory text for academics, clinicians, students and trainees throughout
35 the world.

36

37 After nearly a decade, the need for a text to stretch the mind and imagination of
38 medical and non-medical ultrasound practitioners (undergraduate and postgraduate
39 students; and academics and clinicians), in the fundamental principles and
40 'technological advances', remains. This third edition fits the brief admirably and is
41 also available as an e-book. It allows the reader to gain a deep and broad
42 understanding of the physics and technological perspectives. This is probably best
43 represented by the addition of a new chapter on advanced techniques for imaging
44 flow, which incorporates and expands upon the previous section on tissue Doppler.

45

46 All chapters have been re-visited and updated successfully, either through the
47 addition of new figures or updating the bibliography. As before, all chapters include
48 clear subheadings; ultrasound images of diagnostic quality, in grey-scale and colour;
49 schematic diagrams; appropriate equations and a comprehensive bibliography. The
50 editors have written with clarity and brevity on topics such as 'developments in

51 transducer technology' and 'recent developments in beam forming of array probes'.
52 While the chapters on 3D ultrasound, contrast agents and elastography now
53 describe the state of the art technology for clinical practice and the future potential
54 for these modalities. A valuable learning aid is all chapters include questions and the
55 model answers are provided at the end of the book. The appendices provide useful
56 material on general topics integral to the field of ultrasound such as the decibel, the
57 binary system, along with updated British Medical Ultrasound Society (BMUS)
58 scanning guidelines. Multimedia elements might benefit from supplementary online
59 materials particularly in the form of videos to capture the fourth dimension of
60 ultrasound imaging: time.

61

62 This excellent textbook serves as a reference volume, which fulfils a major role in the
63 diagnostic ultrasound field. This book is an important contribution to the education
64 and instruction of any ultrasound practitioner. Continuing education is necessary
65 given the type of professions and disciplines who will use this textbook, for the next
66 ten years and beyond. We recommend you use this source in your educational
67 programs.