In this edition of the British Medical Bulletin, we have, once again, a wide range of excellent and fascinating reviews. They are described using our usual approach of taking ethical and health policy articles first, and then following up with more theoretical papers, moving on to the more directly practical for medical practice.

First, we have a review of the ethical, legal and social issues raised by the collection, storage and use of DNA in forensic database, a fascinating and important subject, by Mairi Levitt from the Department of Philosophy at Lancaster University (page 235).

She makes the point that the UK National DNA database (NDNAD) is the largest and most inclusive forensic database in the world. The performance of the NDNAD, criteria for inclusion, legislative framework and plans for integrating forensic database across Europe are discussed.

She draws comparisons with the UK Biobank that has started collecting DNA samples linked to medical records and, unlike the NDNAD, requires informed consent from volunteers, allows withdrawal of samples and only includes adults. The potential advantages of research into genes associated with violent and ‘antisocial’ behaviour are discussed in the context of an increasing degree of surveillance in the UK.

She concludes that it should not be assumed that the benefits of forensic database will necessarily override the social and ethical costs, regardless of changes to the criteria for inclusion or the permitted uses of samples and profiles. The expansion of forensic database raises issues of important relevance to the medical profession.

Next, in health policy, we first have a paper by Ian Greener from the Manchester Business School entitled ‘Are the assumptions underlying patients choice realistic?’ (page 249).

His paper presents a review of the assumptions underlying patients’ choice in the NHS to examine who is meant to be making choices in the policy, what choices they are meant to be making and how those choices are meant to be made.

It suggests that policies to increase patients’ choice require a significant investment in terms of restructuring primary care services to allow them to happen, as well as to present relevant information to patients, but those patients may not want to make choices about where and what type of treatment they receive for the most part, being content with having a greater say in when they are treated.
Next is an article on ‘Adverse drug events in the elderly’ by Kathrin Cresswell, Bernard Fernando Brian McKinstry and Aziz Sheikh at the Division of Community Health Sciences, University of Edinburgh (page 259).

They state that increasing recognition of the burden associated with iatrogenic disease has led to international interest into how best to promote patient safety. Within this field, the subject of adverse drug events has received particular attention, this reflecting the known high frequency with which such events occur, particularly in the elderly.

Their review summarizes the epidemiological data on medication-related adverse events in elderly people, considering various known causes of such events and suggesting practical ways in which prescribing can be made safer for high-risk populations. They make the point that there is an increasing recognition that a relatively high proportion of adverse drug events in the elderly may be preventable. Systems issues have been found to play a particularly powerful role in this context, resulting in several promising approaches to address the problem.

There follows a review on ‘The role of antibody therapy in lymphoid malignancies’ by Claire Dearden at the Royal Marsden Hospital and Institute of Cancer Research in London (page 275).

She makes the point that over the past decade, the potential for delivering targeted therapy against malignant disease by the use of monoclonal antibodies (MoAbs) has begun to be realized. The development of human or chimeric antibodies and protein engineering to combine MoAbs with other biologically active molecules such as radioisotopes, toxins, chemotherapy and cytokines has made available a new range of agents with clinical activity.

Her paper reviews the requirements and strategies for successful MoAb therapy and the clinical experience in a range of lymphoid malignancies. The trials of the next decade will address issues such as the optimal strategies and timing for clinical use, the role of radio- and immuno-conjugates and, finally, what other potential molecules, such as those influencing cell growth and death, may be targeted.

There follows a review on ‘The modern concept of vascular cognitive impairment’ by John Bowler from the Royal Free Hospital in London (page 291).

He makes the point that vascular cognitive impairment (VCI) has superseded vascular and multi-infarct dementia as the term to be applied to describe cognitive decline because of cerebrovascular disease.

The change has been made for two principal reasons. The first is to move away from an Alzheimer-based definition of dementia and the second is to allow the identification of cases at the very earliest possible stage in order to afford them the greatest opportunity for treatment that may slow the rate of progression. The review outlines the concept
and describes the incidence, pathophysiological substrate, clinical features and management of VCI.

Then, there is a practical review of the treatment of ‘Acute upper gastrointestinal haemorrhage’ by Dr Kelvin Palmer from Edinburgh (page 307).

He says that acute gastrointestinal haemorrhage is a common medical emergency that has a hospital mortality of ~10%. Peptic ulcer bleeding, complicating non-steroidal anti-inflammatory drugs such as aspirin, or *Helicobacter pylori* infection is the most common cause of major bleeding. Gastro-oesophageal varices are less common, but managing the underlying liver disease and the severity of bleeding may be demanding.

The prognosis of patients presenting with acute bleeding is dictated by the presence of medical co-morbidities and by the severity of liver disease in patients with varices. Validated prognostic scoring systems, based on the severity of bleeding, diagnosis, endoscopic findings and extent of co-morbidities, predict mortality and have clinical utility. He then describes the treatment of the various causes of acute gastrointestinal haemorrhage, including the place for emergency surgery.

There follows a review on ‘Refractive surgery’ by Vikentia Katsanevaki and Stephen Tuft from Moorfields Eye Hospital in London (page 325).

They state that most procedures to treat refractive error are based on laser surgery, but other techniques are available. They review the relative advantages and the risks associated with the different surgical options. They make the point that laser refractive surgery is now a safe and effective alternative to glasses or contact lenses.

However, because refractive surgery is an area of rapidly developing technology, the relative benefits of the different surgical options remain uncertain. They say that controlled trials are required to provide better guidance as to the relative merits of the different surgical options. An effective surgical treatment for presbyopia is awaited.

Next, a most important subject is ‘Prostate cancer: palliative care and pain relief’ by Thompson, Wood and David Feuer from Barts Hospital in London (page 341).

They state that metastatic prostate cancer is incurable and causes significant morbidity. The focus of treatment should be on improving quality of life through appropriate oncological treatment and palliative care. The NICE guidelines for urological cancer recommend palliative care for all patients with prostate cancer, according to need. They discuss the main physical symptoms encountered in metastatic prostate cancer and their management, although many of the symptoms are also common in other advanced cancers.

They also introduce the UK Department of Health’s ‘End of Life Care Programme’. This intends to improve the lives and deaths of all
patients with incurable disease and should be a priority for all healthcare professionals, within any setting.

There follows a systematic review on ‘Repetitive shock wave therapy (SWT) for lateral elbow tendinopathy (tennis elbow)’ by Jan Rompe and Nicola Maffulli, Mainz, Germany and Keele University (page 355).

They show that the randomized-controlled trials on this subject are statistically and clinically heterogeneous, thus making conclusions from pooled meta-analyses difficult to interpret. To determine the effectiveness of shock wave therapy (SWT) for lateral elbow tendinopathy, a qualitative study-by-study assessment was thought to be of greater relevance for physicians confronted with a therapy-resistant tennis elbow patient.

Randomized trials were identified from a wide search that resulted in identifying 10 important studies. However, conflicting results of the 10 studies were found. Two high-quality randomized placebo-controlled trials reported significant success of SWT over placebo. Three other high-quality trials did not find any benefit of SWT over placebo. In these three trials, study designs deviated from the design described earlier in a number of ways. They conclude that in a qualitative systematic per-study analysis identifying common and diverging details of 10 randomised-controlled trials evidence was found for effectiveness of shock wave treatment for tennis elbow under well-defined, restrictive conditions only.

‘Hyperthermia induced by microwave diathermy in the management of muscle and tendon injuries’ is another review on the treatment of sports injuries from the stable of Nicola Maffulli at the Keele University, but involving Giombini, Giovannini, Di Cesare, Pacetti, Ichinoseki-Sekine, Shiraishi and Naito from an impressive number of centres in Rome and Tokyo.

They make the point that hyperthermia induced by microwave diathermy raises the temperature of deep tissues to 41–45°C using electromagnetic power. Microwave diathermy is used in the management of superficial tumours with conventional radiotherapy and chemotherapy and recently its use has been successfully extended to physical medicine and sports traumatology in Central and Southern Europe.

The authors searched the literature for relevant studies. The studies showed that hyperthermia induced into tissue by microwave diathermy can stimulate repair processes, increase drug activity, allow more efficient relief from pain, help removal toxic wastes, increase tendon extensibility and reduce muscle and joint stiffness. The biological mechanisms that regulate the relationship between the thermal dose and the healing process of soft tissues with low or high water content or with low or high blood perfusion are unknown.