Introduction

Item 2a. Scientific background and explanation of rationale

Example—“Surgery is the treatment of choice for patients with disease stage I and II non-small cell lung cancer (NSCLC) … An NSCLC meta-analysis combined the results from eight randomised trials of surgery versus surgery plus adjuvant cisplatin-based chemotherapy and showed a small, but not significant (p=0.08), absolute survival benefit of around 5% at 5 years (from 50% to 55%). At the time the current trial was designed (mid-1990s), adjuvant chemotherapy had not become standard clinical practice … The clinical rationale for neo-adjuvant chemotherapy is three-fold: regression of the primary cancer could be achieved thereby facilitating and simplifying or reducing subsequent surgery; undetected micro-metastases could be dealt with at the start of treatment; and there might be inhibition of the putative stimulus to residual cancer by growth factors released by surgery and by subsequent wound healing … The current trial was therefore set up to compare, in patients with resectable NSCLC, surgery alone versus three cycles of platinum-based chemotherapy followed by surgery in terms of overall survival, quality of life, pathological staging, resectability rates, extent of surgery, and time to and site of relapse.”

Explanation—

Typically, the introduction consists of free flowing text, in which authors explain the scientific back‑ ground and rationale for their trial, and its general outline. It may also be appropriate to include here the objectives of the trial (see item 2b).The rationale may be explanatory (for example, to assess the possible influence of a drug on renal function) or pragmatic (for example, to guide practice by comparing the benefits and harms of two treatments). Authors should report any evidence of the benefits and harms of active interventions included in a trial and should suggest a plausible explanation for how the interventions might work, if this is not obvious. The Declaration of Helsinki states that biomedical research involving people should be based on a thorough knowledge of the scientific literature. That is, it is unethical to expose humans unnecessarily to the risks of research. Some clinical trials have been shown to have been unnecessary because the question they addressed had been or could have been answered by a systematic review of the existing literature. Thus, the need for a new trial should be justified in the introduction. Ideally, it should include a reference to a systematic review of previous similar trials or a note of the absence of such trials.