Cordis,
Johnson & Johnson Medical Ltd.,
[redacted]

15th February 2008

Mr A Dillon CBE
Chief Executive
The National Institute for Health and Clinical Excellence
MidCity Place
71 High Holborn
London WC1V 6NA.

Dear Mr Dillon,

Appeal Against Final Appraisal Determination (FAD): Coronary Artery Stents for the Treatment of Ischaemic Heart Disease (Update to Guidance No. 71).

Cordis welcomes the recommendation that patients with coronary artery lesions longer than 15mm or vessels less than 3mm in diameter should be treated with drug-eluting stents (DESs). There are, however, a number of aspects of the FAD that we feels we must appeal. We note that the FAD differs from the Appraisal Consultation Document (ACD) in a number of key respects. In particular, the FAD is based on a significant new analysis and a substantial re-evaluation of the cost effectiveness of the DES technology. We would have preferred an opportunity to comment on a reissued ACD reflecting the Institute's new approach, but the release of a FAD has precluded the debate that could have occurred in the context of a second ACD. Unfortunately, we therefore have little option but to raise these issues through an appeal.

Our grounds of appeal against the FAD focus on the use of a £5,000/QALY ICER to determine the cost effective DES price premium and the statement of a specific BMS price as a basis for the understanding of DES cost effectiveness.

Section 1.1 of the FAD recommends the use of DESs in percutaneous coronary intervention for the treatment of coronary artery disease where the target artery to be treated has less than a 3mm calibre or the lesion is longer than 15mm, and where the price difference between the DES and BMS is no more than £300. The Appraisal Committee appears to have based this recommendation on evidence in Addendum 7 to the Assessment Report that analysed data proposed by the British Cardiovascular Intervention Society (BCIS). When these data were used in the Assessment Group's economic model, DESs were cost effective across a range of price premiums up to £400-£450. The Committee nevertheless concluded that the price differential between DES and BMS should be no more than £300 in order for DES to be considered cost effective.

The grounds for our appeal against this recommendation and the approach the Appraisal Committee has taken are: (1) that the Institute has failed to act fairly and in accordance with its published procedures as set out in its *Guide to the Technology Appraisal Process* and its *Guide to the Methods of Technology Appraisal*; (2) that the Institute has prepared guidance which is perverse in the light of the evidence submitted; and (3) that the Institute has exceeded its powers. The following sections summarise Cordis's key grounds for appeal under these headings.

Key Grounds for Appeal

1. Ground for Appeal 1: The Institute has failed to act fairly and in accordance with its published procedures.

1.1 The Institute has based its recommendation that the price difference between the DES and BMS must be no more than £300, on ICERs of less than £5,000/QALY. Its failure to base its recommendation on the ICER of £20,000/QALY specified in its own published procedures has unfairly prejudiced Cordis.

The Appraisal Committee has received evidence (Addendum 7 to the Assessment Report) that when the data proposed by the BCIS are used in the Assessment Group's economic model, DESs are cost effective at price premiums up to £400-£450, not just the £300 point estimate given in section 1.1 of the FAD. Section 3.2 of Addendum 7 to the Assessment Report refers to *"…the three high risk sub-groups which appear to be cost-effective if the DES price premium is below £400-450 per stent."*

Section 6.2.6.10 of the *Guide to the Methods of Technology Appraisal* states that "*Below a most plausible ICER of £20,000/QALY, judgements about the acceptability of a technology as an effective use of NHS resources are based primarily on the cost-effectiveness estimate.*" The Institute has little discretion to deviate from the £20,000 threshold. Provided the ICER is £20,000/QALY or below, cost-effectiveness is the primary basis for determining the acceptability of the technology, and only when the ICER exceeds £20,000/QALY should the Institute have regard to other factors.

Furthermore, in a House of Commons Health Select Committee Investigation into NICE,[1] the Chairman of the Institute described the QALY as a "reasonably robust approach" for appraising cost effectiveness. The Select Committee discussed the cost/QALY threshold of £20,000 - £30,000 as an effective and working threshold of cost effectiveness. The director of the health and economics facility at Birmingham University assured MPs that the threshold is "definitely a real threshold." According to the Chief Executive of the Institute, "QALYs are currently the best tool for understanding the opportunity cost of implementing NICE decision, and it is important that this tool is applied consistently."

Consistency in approach is one of the core, fundamental values of the Institute and the Appraisal Committee should strive for consistency when applying the £20,000/QALY benchmark. However, Section 4.3.13 of the FAD states that "*For a price difference of £300 the resulting ICERs were associated with costs per QALYs below £5000 for patients with small vessels and long lesions.*" The Institute has therefore failed to act fairly and in accordance with its published procedures by setting a price premium well below its own lower cost effectiveness benchmark, when it clearly received evidence that the price premium at which DESs remain cost effective is considerably higher.

If NICE is to take such an unprecedented step of naming a price premium, that premium should be expressed as the range that generates an ICER of £20,000 per QALY and up to £30,000 per QALY. The Institute should not impose unreasonably low price premiums that bring the ICER under £20,000/QALY. Since the price premium range of

[1] House of Commons Health Select Committee's investigation into NICE: QALYS and speed of decisions, 17 December 2007, see: http://www.nelm.nhs.uk/Record%20Viewing/viewRecord.aspx?id=583161.

£400-£450 delivers ICERs for DESs which are in turn within the range of £20,000-£30,000/QALY, there is no legitimate reason for the Institute to impose a maximum price premium of £300. The £300 point estimate of DES price premium would be better replaced with "*in the range of £400 to £450*," throughout the FAD.

Moreover, the Institute has failed to act in accordance with its own procedures under 5.9.1.1 of the *Guide to the Methods of Technology Appraisal* by failing to present measures of precision around the price premium that would lead to ICERs between £20,000 to £30,000 per QALY. Finally, the Institute has also failed to act fairly by failing to provide transparency on how it arrived at a fixed, point estimate of price premium when the economic modelling indicates a cost effective range.

2. Grounds for Appeal 2: The Institute has prepared guidance which is perverse in the light of the evidence submitted.

2.1. The Institute's recommendation that DESs should be used only when the price difference between the DES and BMS is no more than £300 is perverse in light of the evidence that DESs are cost-effective if the DES price premium is below £400-450 per stent.

As indicated above, the Appraisal Committee has received evidence in section 3.2 of Addendum 7 to the Assessment Report that *"…the three high risk sub-groups which appear to be cost-effective if the DES price premium is below £400-450 per stent.*" It is perverse for the Appraisal Committee to recommend a price premium of no more than £300 (equivalent to less than £5,000/QALY), when premiums of £400-£450 result in ICERs within the Institute's cost effectiveness range of £20,000-£30,000/QALY. This could be resolved by replacing the £300 point estimate of DES price premium with "*in the range of £400 to £450.*"

2.2. The Institute's reliance on a £131 mean absolute price of a BMS and procurement arrangements for DESs at a price difference of £300 has resulted in guidance that is perverse in the light of the evidence before it. The economic model shows that DES cost effectiveness is largely insensitive to BMS price.

Section 4.3.14 of the FAD states that "*The Committee's decision was based on the understanding that the mean absolute price of a BMS was £131 and that procurement arrangements for DESs at a price difference of £300 was already in place within many NHS regions and achievable across the NHS as a whole.*" It is perverse to base a decision on a mean absolute price of BMS because the structure of the economic model used to inform the Appraisal Committee's decisions shows that DES cost effectiveness is largely insensitive to BMS price. DESs will be cost effective in the price premium range of £400 to £450 virtually regardless of BMS price. Section 4.3.14 would not be perverse if it was worded as "*The Committee's decision was based on the understanding that procurement arrangements for DESs at a price difference of £400 to £450 was already in place within many NHS regions and achievable across the NHS as a whole.*"

3. Grounds for Appeal 3: The Institute has exceeded its powers.

3.1. By recommending that the price difference between the DES and BMS is no more than £300 and by stating a reference BMS price of £131, the Institute is either

seeking to fix or control the price of BMSs or DESs, or to establish NHS procurement policy. Both acts are in excess of the Institute's powers and remit.

Section 1.1 of the FAD states that "*Drug-eluting stents are recommended for use in percutaneous coronary intervention for the treatment of coronary artery disease, within their instructions for use, only if: … the price difference between drug-eluting stents and bare-metal stents is no more than £300.*" Section 4.3.14 of the FAD states that "*The Committee's decision was based on the understanding that the mean absolute price of a BMS was £131 and that procurement arrangements for DESs at a price difference of £300 was already in place within many NHS regions and achievable across the NHS as a whole.*" These sections are either an attempt to control the price at which the NHS sources BMS and DESs or to set NHS procurement policy, both of which are in excess of the Institute's remit and powers. We are unaware of similar conclusions by any Assessment Group or Appraisal Committee that have produced guidance or that are currently involved in the development of technology appraisals.

The functions of NICE are determined by the Secretary of State and are set out in the Directions and Consolidating Directions to the National Institute for Health and Clinical Excellence 2005 (the Directions). These Directions outline the functions of the Institute including (of relevance) "to appraise the clinical benefits and the costs of such health care interventions as may be notified by the Secretary of State and to make recommendations" … "to look into and consider, for the purpose of advising the Secretary of State with regard to possible improvements in the provision of health services and in the effective use of available resources, such other matters as may be notified by the Secretary of State" … "to have regard to […] the broad balance of clinical benefits and costs." Although these functions involve a general duty to consider and promote the effective use of resources and to consider costs and benefits when making recommendations, the Directions do not confer a duty or power on the Institute to set price controls. This is confirmed by section 6.1.8 of the *Guide to the Methods of Technology Appraisal*, which specifically states that the Institute is "not able to make recommendations on the pricing of technologies to the NHS." The power to set price controls for health service medicines and medical supplies lies with the Secretary of State.

Section 260(1) of the National Health Service Act 2006 (NHS Act) vests in the Secretary of State the power to control of maximum prices to be charged for any "medical supplies, other than health service medicines, required for the purposes of [the NHS Act]." The Act defines medical supplies to include "surgical, dental and optical materials and equipment," where equipment includes "any machinery, apparatus or appliance, whether fixed or not, and any vehicle." BMSs and DESs are therefore clearly medical supplies and the power to control their prices is the sole responsibility of the Secretary of State. Since the Secretary of State has not assigned this power to NICE, the Institute has no power to set price controls for devices.

Nor has the Institute the power to establish or set NHS procurement policy. The National Health Service Purchasing and Supply Agency is an executive agency within the Department of Health. It was established on 1 April 2000, following a Cabinet Office Procurement Review.

A Health Service Circular (HSC 1999/143) sets out the intended role of NHS PASA, which includes:

- "co-ordinating and guiding NHS procurement policy and strategy and ensuring that procurement issues are fully taken into account in national policy development" and
- "providing a source of expert advice on procurement policy and strategy to NHS Trusts and Health Authorities."

The terms of reference for NHS PASA are now set out in the NHS Purchasing and Supply Agency Framework Document from January 2001. The Agency's stated objectives include:

- "deliver a comprehensive, cost effective supply chain for the NHS";
- "ensure that purchasing and supply strategies reflect and contribute towards achievement of ministers' policies, strategies and priorities for the NHS"; and
- "establish and implement an overall framework for the management of purchasing and supply in the NHS."

In its policy role, NHS PASA will "develop policy about supply management in the NHS." In its strategy role, NHS PASA will "identify markets, services or products that are strategically crucial to the NHS, or where aggregated action will yield significant benefits not available locally" and "create and implement appropriate supply strategies, working with the NHS, the [NHS Logistics] Authority and with the commercial sector which serves the NHS."

In light of the above and since DES cost effectiveness is relatively insensitive to BMS price, the Institute should have limited itself to establishing the thresholds at which DESs become cost effective relative to BMSs, *i.e.* the premiums at which the ICER falls below £20,000/QALY and between £20,000-£30,000 per QALY. Furthermore, the cost effective price premium range would be better placed in section 4 rather than section 1. The premium is more rightly a consideration of cost effectiveness and should be presented in such a way as to avoid being interpreted as price setting.

With this in mind, section 1.1 would be better worded as "*Drug-eluting stents are recommended for use in percutaneous coronary intervention for the treatment of coronary artery disease, within their instructions for use if the target artery to be treated has less than a 3 mm calibre or the lesion is longer than 15 mm.*"

Section 4.3.14 would be better worded as "*The Committee's decision was based on the understanding that procurement arrangements for DESs at a price difference of £400 to £450 was already in place within many NHS regions and achievable across the NHS as a whole.*"

This re-wording of section 4.3.14 will also overcome potential implementation problems that could arise from stating an absolute BMS price and DES premium, rather than cost effective ranges. Smaller volume percutaneous coronary intervention (PCI) units may not be able to procure BMSs and DESs at the specific prices identified in the FAD, whereas the largest PCI centres may be well within the cost effective range, ensuring cost effectiveness across the NHS overall. After all, the NHS reference costs used in the economic model are NHS averages, so the concept of a DES price premium that delivers cost effectiveness on average across the NHS as whole is no different.

It should also be noted that newer generation BMSs tend to be more expensive but are preferred for complex anatomy because they may access coronary artery lesions that

older devices cannot. If the use of these devices were excluded by statement of an absolute BMS price, clinicians may not have access to the BMS that is most appropriate for these complex cases. The BMS pricing information provided by NHS professionals in the public consultation on the ACD reflects the differences between older and newer BMS technology, although this information does not appear to have been presented in the FAD. Furthermore, NHS Trusts often procure a whole range of PCI-related consumables on the same tender and they should continue to have the discretion to make decisions on the basis of best overall value, whilst being mindful that the DES price premium should fall within the cost effective range, rather than being directed to specific prices for individual line items. Cost effective ranges thus represent the best opportunity for effective implementation of the new guidance.

Yours sincerely,