INTRODUCTION

Colorectal cancer represents around 10% of all cancers worldwide. Specifically, adenocarcinoma represents more than 95% of all these cases (Figure 1). The incidence of colorectal cancer may be greatly reduced by early colonoscopic detection and removal of polyps [1] (Figure 2). It also makes it possible to reduce the health cost associated with the different stages of the disease [2] (Figure 3). Current practice requires resection of all detected polyps (benign or malignant) for histological analysis (Figure 4). Accurate endoscopic diagnosis of polyps may allow differentiation of lesions, and prevent removal of benign, low-risk polyps.

OBJECTIVE

We aim to identify the medical needs related to the equipment involved in the diagnosis of colorectal polyps, and quantify potential improvements in routine clinical practice.

METHOD

A review of the current literature and state of the art was performed, as well as structured interviews with senior endoscopists and histopathologists.

RESULTS AND CONCLUSIONS

We determine there is a demand for accurate, objective, and automated differentiation of colonic lesions, in particular hyperplastic and adenomatous polyps. In addition, improved detection of small or flat polyps is desired. A new endoscopic imaging technology should be used, and should not affect the size, weight and handling characteristics of the instrument.

ACKNOWLEDGMENTS

This work has been funded by the European Union's Horizon 2020 research and innovation programme under grant agreement No. 722112. This information reflects the authors' views, and the Agencies and the Commission are not responsible for any use that may be made of the information contained.