

MEDICAL NEEDS IN CURRENT COLONOSCOPY PROCEDURES OF COLORECTAL CANCER DIAGNOSIS

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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.

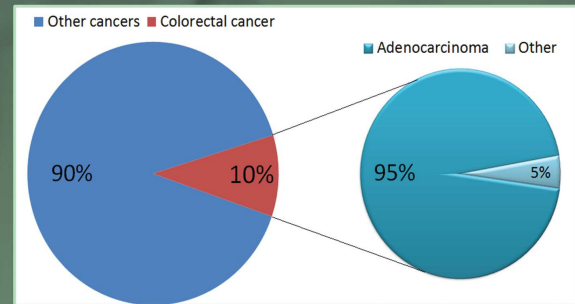


Figure 1. Statistics of colorectal cancer

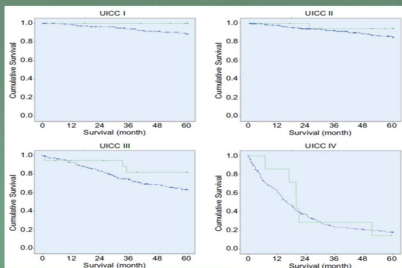


Figure 2. Reduction of the incidence of colorectal cancer (UICC - Union for International Cancer Control stage)

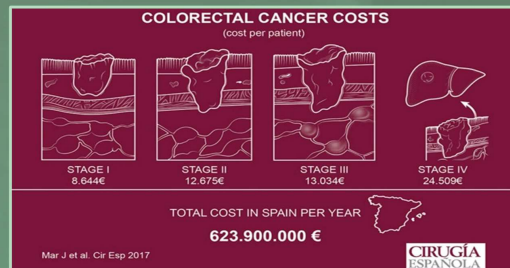


Figure 3. Reduction of health costs

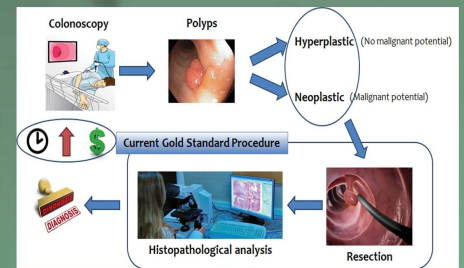


Figure 4. Current gold standard procedure

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.

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