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## Perineal antropylosus transposition for total ano-rectal reconstruction in humans

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**Background:** Perineal transposition of antropylosus valve (APV), based on left gastroepiploic pedicle has been used for total anorectal reconstruction in patients suffering from end-stage fecal incontinence. We studied patients who underwent successful perineal APV transposition for end stage fecal incontinence, either after irreparable anal sphincter trauma, anorectal malformation (ARM) or following abdomino-perineal resection (APR).

**Patients:** Twenty patients underwent the procedure. Nine patients had replacement (following APR) (group 1) and 11 patients had augmentation (for severe anal sphincter injury or ARM) (group 2) of the anal sphincter. Two patients in group 1 with early graft-related complications were excluded from further analysis, because they had the grafts excised.

**Main Outcome Measures:** The primary outcome measures were anatomical integrity and functional status of the graft in the perineum, fecal incontinence scores and quality-of-life scores (SF-36) over a median follow-up of 24 months.

**Results:** The transposed grafts had a definite tone on digital examination, were well visualized on perineal MRI, showed high-velocity vascular inflow on Doppler ultrasound study and good vascularity on CT angiography. Anal manometry showed a significant ( $p=0.03$ ) rise in the post-operative resting neo-sphincter pressures with good retention of barium proximal to pyloric valve on distal loopogram. The post-operative St Mark incontinence score improved in both groups and was significantly better in group 2 than in group 1. There was significant improvement in postoperative physical and mental component scores in both groups.

**Conclusions:** APV can be used successfully for a selected group of patients with end-stage fecal incontinence. Patients undergoing anal sphincter augmentation (for severe anal sphincter injury or ARM) have better outcomes in comparison with those having an excised sensate anorectum (after APR).

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## Multiplexed diagnostic assay for detection of targetable mutations in lung adenocarcinoma using SNaPshot PCR technique

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**Introduction & Objectives:** Conventional therapeutic solutions in NSCLC are not effective to treat the disease. Despite of all developments in understanding the disease, mortality of lung cancer patients remains high. Recent developments of personalized therapy have given promising results in terms of improved survival of NSCLC patients. Thus, we were keen to develop a cost effective and sensitive diagnostic lung cancer panel assay for targetable mutation detection. Here, we present a multiplexed assay using SNaPshot PCR technique from FFPE samples.

**Methodology:** Multiplex PCR was optimized to amplify hotspot regions from 9 targetable genes followed by single base extension reaction using SNaPshot PCR and fragment analysis on ABI 3500 sequencer.

**Results:** The successfully developed mutation profiling assay was divided into 3 multiplexed reactions, covering 23 actionable genotypes of *EGFR*, *KRAS*, *BRAF*, *PIK3CA*, *Her2*, *AKT1*, *NRAS*, *MEK1* and *PTEN* genes. The assay was standardized and validated on blood samples, cell lines and FFPE samples expressing good sensitivity and specificity for wild type and mutant genotypes.

**Conclusion:** Multiplexed diagnostic assay using SNaPshot PCR is very economical, specific and sensitive to detect mutations in FFPE samples. We intend to implement this genomic profiling as therapeutic strategy in lung cancer patients at our centre.

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