



RANDOMISED TRIAL OF RECTAL PROLAPSE SURGERY

PROTOCOL

ASSOCIATION OF COLOPROCTOLOGY OF GREAT BRITAIN & IRELAND

The inadequacy of existing clinical trial evidence on surgery for complete rectal prolapse is highlighted in a recent Cochrane review:

“The small number of relevant trials identified, and their small sample sizes together with other methodological weaknesses severely limit the usefulness of this review for guiding practice. It was impossible to identify or refute clinically important differences between the alternative surgical operations. Larger rigorous trials are needed to improve the evidence with which to define optimum surgical treatment.... Very little attention appears to have been given to the issue of quality of life assessment in these trials. Future trials should be designed to incorporate formal assessment of quality of life issues.... There is an urgent need for high quality randomised clinical trials with sufficient statistical power, and long-term follow-up to evaluate the existing surgical techniques reliability.”

Brazzelli M, Bachoo P, Grant A. Surgery for complete rectal prolapse in adults (Cochrane Review). In: *The Cochrane Library*, Issue 2, 2004. Chichester, UK: John Wiley & Sons, Ltd.

The fundamental aim of PROSPER is to provide much more reliable evidence on the benefits and risks of the commonly used surgical procedures for rectal prolapse.

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1. INTRODUCTION AND TRIAL DESIGN

Rectal prolapse is a profoundly disabling condition, occurring mainly in elderly and parous women. The pathogenesis is ill understood and there are no reliable estimates of the prevalence of the condition. Amongst the 50% (154) of senior surgical members of the Association of Coloproctology responding to a questionnaire on the subject, the median number of prolapse operations performed annually was 6 (range 0-25) suggesting that at least 1000 operations are undertaken each year in the UK alone.

Curative treatment is exclusively surgical but, with over 100 different operations having been described, there is no accepted standard procedure, reflecting the poor clinical trial evidence base and consequent uncertainty among surgeons about risk-benefits of different procedures. Surgical procedures can be assigned to two main categories - abdominal and perineal. All abdominal procedures involve fixation of the rectum to the sacrum (rectopexy), usually but not always using a sheet of foreign material to support the rectum or to induce fibrotic adhesion; 'suture rectopexy' is performed without any such material. Another major division within the range of procedures is the inclusion, or not, of a resection of bowel; suture rectopexy may be performed with resection of a variable length of colon, while perineal surgery can be performed with or without resection of the whole length and thickness of the prolapsus. The most widely used perineal operation in the UK entails stripping of the mucosa and plication of the muscle layers of the prolapse (Delorme's operation), while in the United States perineal proctosigmoidectomy (Altemeier's operation), in which the prolapse is full thickness resected, is more widely performed. Association questionnaire respondents vary widely in their general approach - 41% prefer the abdominal approach and 23% the perineal, while 38% have no routinely favoured approach. Similarly, the ACPGBI questionnaire respondents showed no consistent view on the merits of including resection in their preferred procedure. Preference was not related to case volume.

2. MAKING OPERATIVE CHOICES

When considering operative choices in the individual case, the surgeon may ask various questions, some of which might be:

- What are the relative merits of abdominal or perineal surgery?
- Should resection be included in the procedure (abdominal or perineal)?
- If an abdominal operation is contemplated, does a sheet of foreign material need to be used - or would sutures alone be enough?

Some of the relative merits of abdominal and perineal surgery are obvious, particularly when considered in individual cases. It is apparent from the large volume of reported data – mainly non randomised - and individual experience that some general statements can be made about the relative merits of the various procedures:

- perineal operations are less invasive and perhaps associated with less operative risk
- abdominal procedures have a lower risk of recurrent prolapse
- resection in abdominal procedures may decrease the risk of postoperative constipation but increase the risk of postoperative complications

These general presumptions and assumptions may be enough in some individual patients to allow the surgeon to feel reasonably certain on the approach to be preferred. In many - perhaps most - cases, however, operative choice is not based on certainty.

3. RANDOMISED TRIALS IN RECTAL PROLAPSE SURGERY

Randomised trial data to clarify some of the technical choices are very limited. Five RCTs have been published, including in all just 157 patients (range 18-63) (Cochrane review). With such relatively small numbers of randomised patients, major endpoints cannot be addressed powerfully. The Table below summarises the RCTs, the final column indicates whether any statistically significant differences were demonstrated in the trial. There are clearly large areas of uncertainty remaining in our understanding of the relative merits of the range of prolapse operations, much of which can be clarified only through the design and performance of a large scale randomised trial.

TRIAL Year [ref.]	Number random- ised	ABDOMINAL			PERINEAL		SIG DIFF. ¶
		Suture rectopexy	Sheet	Resection rectopexy	Delorme's	Altemeier's	
St Marks 1991 [1]	26		XX*				+[1]
Helsinki 1992 [2]	30		X	X			0[2]
Glasgow 1992 [3]	18	X		X			+[3]
Royal Free 1994 [4]	63	X	X				0[4]
Birmingham 1994 [5]	20			X		X	+[5]

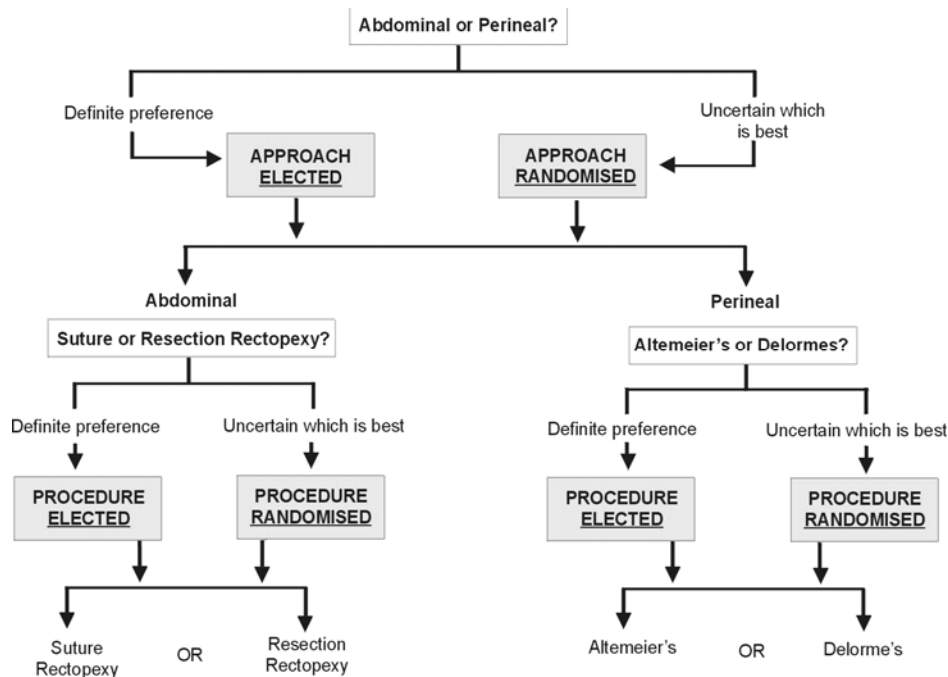
KEY

- X Randomised procedures
- Sheet Rectopexy involving insertion of a sheet of foreign material
- Delorme's Mucosectomy (Delorme's operation)
- Altemeier's Perineal proctosigmoidectomy (Altemeier's operation)
- * Randomisation = sheet rectopexy with/without lateral dissection
- Sig Diff ¶ Any significant difference reported
- + [1] = Rectal electrical sensory threshold higher after lateral ligament division (P<0.01)
- 0 [2] = No significant differences
- + [3] = Increase in colonic marker retention day 5 with rectopexy alone (P<0.01)
- 0 [4] = No significant differences in recurrence, incontinence or constipation
- + [5] = ↑ maximum resting pressure, rectal compliance in resection rectopexy (P=0.003, <0.001)

4. PRAGMATIC TRIAL DESIGN

Given the uncertainty as to the best method of intervention and the lack of informative randomised evidence, a two stage randomised, controlled clinical trial has been devised. Eligibility for randomisation is based on the 'uncertainty principle'. In such a trial, when considering an individual case, randomisation should be performed only where relevant uncertainty exists. The surgeon should consider whether it is appropriate for each patient with rectal prolapse to be randomised into the **PROSPER** trial. If the surgeon considers, for whatever reason, that one or other choice of approach, and one particular type of operation, is definitely indicated in a particular case the patient is not eligible to take part in the trial. Randomisation should only take place when substantial uncertainty exists about choice of approach and/or type of operation.

The following trial design is based on this premise:



If the surgeon is unsure of the relative merits of the abdominal and perineal approach in a particular case, **RANDOMISATION ONE** is performed between the abdominal and perineal approach.

Alternatively, the abdominal or perineal approach can be elected if considered to be clearly indicated. After **RANDOMISATION ONE**, or if the surgeon has elected to undertake an abdominal or perineal procedure, **RANDOMISATION TWO** is performed.

If the abdominal approach is elected or allocated at **RANDOMISATION ONE**, then **RANDOMISATION TWO** is between suture rectopexy and resection rectopexy; if perineal, randomisation is between Altemeier's and Delorme's operations.

Again, the surgeon can opt for one or other operation if it is considered that this particular operation is clearly indicated. But if the surgeon considers that there is certainty about both the choice of approach and the choice of procedure in a particular case, **NEITHER RANDOMISATION CAN BE PERFORMED** and the patient is not eligible to be in the **PROSPER** trial.

Prior to beginning patient entry, a surgeon can record their preference to participate in only one aspect of the trial, e.g. only randomise between perineal approaches or, after performing **RANDOMISATION ONE**, only use one of the two procedures compared in the second randomisations, e.g. randomise between abdominal and perineal approaches always using Delorme's procedure if a perineal approach is drawn. (Any preference recorded at the time of joining the trial can be altered subsequently by informing the **PROSPER** trial office). Thus, with this pragmatic trial design, any surgeon with any uncertainty regarding choice of approach or operations in rectal prolapse should feel able to participate in this protocol.

In order that abdominal **RANDOMISATION TWO** should be a pure comparison, it was decided that the two competing procedures should:

- allow estimation of the merits of resection
- be identical except for the inclusion or not of resection
- should not risk infection of foreign material in the resection arm

It was therefore apparent that a suture rectopexy should constitute one arm, with resection added to it to constitute the alternative procedure. The Royal Free Hospital trial [4] (63 patients) found no difference in main endpoints between suture rectopexy and Ivalon rectopexy.

5. THE STUDY

5.1. Study group

Patients eligible for this study will be those with **FULL THICKNESS RECTAL PROLAPSE** defined as circumferential rectal mucosa visible at the anus with rectal muscle palpable through it.

5.2. Pre-operative investigations

All patients should have a rigid sigmoidoscopy. Other investigations are at the discretion of the surgeon. These are: colonic transit study using either the "shapes" (6) or isotope method; motor function investigations (resting pressure, squeeze pressure, anal canal length, rectoanal reflex); sensory function investigations (threshold volume, urge volume, maximal volume, compliance, electrical sensitivity); pudendal nerve terminal motor latency; anal ultrasound.

5.3. Timing of consent & randomisation

The operations in the trial vary in length and centres will need to plan the operative slot within the Trust's schedule and in line with usual practice; therefore it will usually be necessary for randomisation to occur prior to surgical admission, necessitating early consent from the patient. A patient information sheet is provided (Appendices A, B or C depending on choice of randomisation options). At most centres, where pre-operative tests are not performed at a separate appointment, patients who agree to take part in the study should be asked to sign the consent form (Appendix D) at the first clinic appointment. If they would prefer longer to decide they can be given the consent form to take away, sign, witness and return by post. It is considered impractical and unethical to recall this patient group to the clinic solely to sign a consent form. However, in some centres, patients will have a second appointment for pre-operative tests and hence longer to consider participation.

In either of these circumstances, there is a period of days or weeks between consent and the operation and the patient should be told that they can change their mind about participation at any time. Confirmation of consent should be obtained on the usual pre-operative consent forms.

5.4. Randomisation

Randomisation will be carried out based on the uncertainty principle, as has been described earlier. Patients will be randomised preoperatively by telephoning or faxing the central randomisation service at the University of Birmingham Clinical Trials Unit (see notepad for contact details). The randomisation will be done using a computerised minimised randomisation procedure. All questions on the randomisation notepad (Appendix E) should be completed before calling the randomisation service. The operation should take place as soon as an operative slot is available at the centre. The patient's GP should be informed that the patient has agreed to take part in the **PROSPER** study and which type of surgery was allocated (Appendix F).

5.5. Outcome measures

The primary outcome measures are:

- a) Change in defaecatory performance, e.g. continence and evacuation (Kamm score)
- b) Change in Quality of Life (EuroQoL EQ-5D)

Secondary outcome measures are:

- c) Operative Morbidity/Mortality
- d) Recurrence of Prolapse

5.6. Data collection at baseline

Bowel function (using the Kamm score) needs to be assessed prior to randomisation and recorded on the randomisation notepad. In addition to this, the patient should complete a quality of life assessment using the 5-item EuroQoL EQ-5D questionnaire (Appendix L), with added linear analogue scales and resource usage questions for the health economics assessment (Appendix M). Defaecatory performance, continence and evacuation, and results of any optional investigations are recorded on the Baseline Assessment form (Appendix G). Details of the operation performed and any complications should be recorded on the Surgery Details form (Appendix H) and returned to the trial co-ordinating centre as soon as possible after completion of hospital stay.

5.7. Follow-up

Follow-up intervals are timed to fit in with routine post-operative visits with assessments at about six weeks after surgery and at one year and three years. Of these the assessment at one year is most important. At each visit data similar to that collected pre-operatively will be recorded on the Data Collection Forms (Appendices I to K). If the optional investigations are performed at baseline then, where possible, they should be repeated at one year and three years post-operatively. The follow-up forms should be returned to the trial co-ordinating centre as soon as possible after each assessment.

In the event of recurrence, the surgeon should treat the patient as seems appropriate. In the event of incontinence persisting beyond three months despite appropriate non-surgical measures, consideration should be given to sphincter surgery.

5.8. Power calculation

The **PROSPER** study had recruited 200 patients by May 2005. Because this is less than originally projected, the minimum recruitment target has been reduced to 300. To improve statistical sensitivity, the primary outcome measure for all comparisons will be bowel function and quality of life. Recurrence – previously the primary outcome for the randomisation between perineal and abdominal approaches – is now a secondary outcome measure for all comparisons. Fewer numbers are needed to compare effects of different surgical techniques on bowel function or quality of life than recurrence. With 300 randomised in total, it is projected that there will be approximately 230 patients in the Altemeier's v Delorme's randomisation, 70 in the resection versus suture rectopexy and 36 in the abdominal versus perineal randomisation. This allows detection of the following effect sizes (standardised differences):

Number in comparison	Size of difference to be detected	
	80% power at p<0.05	90% power at p<0.01
36	0.95 s.d	1.37 s.d
70	0.68 s.d	0.96 s.d
230	0.37 s.d	0.52 s.d

An effect size of 0.2s.d. is considered small, 0.5 moderate, and 1.0 large (Cohen 1977). The absolute size of treatment effect that can be detected depends on the standard deviation of the outcome measure. For bowel function (KAMM score), the standard deviation (of baseline and 1 year scores and of change from baseline) is about 7 points, on a 24-point scale, giving the following size differences that could be detected:

Number in comparison	Size of difference to be detected	
	80% power at p<0.05	90% power at p<0.01
36	6.7	9.6
70	4.8	6.7
230	2.6	3.6

Similarly, using the observed standard deviation of about 0.3 for the quality of life scale (EuroQoL EQ-5D), the size differences that could be detected are:

Number in comparison	Size of difference to be detected	
	80% power at p<0.05	90% power at p<0.01
36	0.28	0.41
70	0.20	0.29
230	0.11	0.16

Recurrence and operative morbidity are important outcomes but the numbers of events are small and hence moderate differences will be difficult to detect. Given that most patients entered have received elective perineal surgery, it is only likely to be feasible to identify relatively large reductions in recurrence between the two forms of perineal surgery: for example, with 200 randomised, there would be over 80% power at p<0.05 to detect a 65% reduction (e.g. 20% reduced to 7%) in recurrence with Altemeier's compared to Delorme's procedure.

5.9. Data Monitoring Committee

During the period of intake of the study, interim analyses of major endpoints will be supplied, in strict confidence, to an independent data monitoring committee (DMC) along with updates on results of other related studies. The DMC will advise the chair of the steering committee if, in their view, the randomised comparisons in **PROSPER** have provided, both (a) “proof beyond reasonable doubt”^{*} that for all, or for some, types of patient one particular treatment is definitely indicated or definitely contraindicated in terms of a net difference in the primary outcome measures, and (b) evidence that might reasonably be expected to influence the patient management of many clinicians who are already aware of the other main trial results. The steering committee can then decide whether to modify intake to the study. Unless this happens, however, the steering committee, the collaborators and all of the central administrative staff (except those who supply the confidential analyses) will remain ignorant of the interim results.

5.10. Health economics

A health economics assessment will be made. Important resource usage data will be collected from patients at baseline and subsequently by postal questionnaire (Appendix M).

5.11. Operative technique

It is recognised that some surgeons will be unfamiliar with some of the operative techniques, particularly Altemeier’s procedure. A video is available to standardise techniques as far as possible although minor variations will not preclude patient entry. In addition, training sessions can be arranged by the PROSPER Trials Office. The essential and non-essential features of each procedure are outlined in Section 6.

5.12. Indemnity

There are no special arrangements for compensation for non-negligent harm suffered by patients as a result of participating in the study. **PROSPER** is not a commercial trial and therefore ABPI guidelines do not apply. The normal NHS indemnity liability arrangements for clinician initiated research (NHS Booklet HSG(96) 48) will therefore operate. However, it should be noted that this covers only non-negligent liability as NHS Trusts are responsible for negligent liability because of their duty of care to patients being treated within their hospital, whether or not that patient is participating in a clinical trial.

5.13. Cost implications

PROSPER has been designed to minimise extra costs for participating trusts. Patients with rectal prolapse would have to undergo surgery whether or not they were participating in the **PROSPER** study. The operations being compared are all in standard use. No extra investigations, tests or follow-up visits are required because of the trial.

^{*} Appropriate criteria of proof beyond reasonable doubt cannot be specified precisely, but a difference of at least three standard deviations in an interim analysis of a major outcome measure may be needed to justify halting, or modifying, the study prematurely. If this criterion were to be adopted, it would have the practical advantage that the exact number of interim analyses would be of little importance, so no fixed schedule is proposed.

6. OPERATIVE DESCRIPTIONS

6.1. Perineal approaches

6.1.1. Delorme's procedure

Patient may be in lithotomy or prone position and is catheterised. Prolapse is exteriorised and held with grasping forceps, solution of adrenaline saline (1 in 200,000 or 300,000) with or without bupivacaine (0.25%) may be injected submucosally just beyond the dentate line. Diathermy or scissor dissection to strip a mucosal tube off the underlying smooth muscle. This process should continue circumferentially to the apex of the prolapse and then inside as far as possible. The muscle wall is imbricated with a series of radial absorbable sutures. The two cut ends of mucosa are sutured together with interrupted absorbable sutures.

6.1.2. Altemeier's procedure

Patient may be in lithotomy or prone position (prone preferred since it allows the intra-abdominal contents to fall away from the field of dissection) and is catheterised. Prolapse is exteriorised - grasped in forceps. A circumferential incision is performed by diathermy ensuring haemostasis. The redundant rectum is then drawn through the anal margin. Any associated hernial sac identified and the peritoneal cavity entered. A simple herniotomy is then performed. The levator may be plicated (optional). The redundant rectum is then excised, suturing the anastomosis as the bowel is divided (as in a circumcision).

6.2. Abdominal approaches

Abdominal procedures may be performed at open laparotomy or via the laparoscope. At the outset of the trial, surgeons must register their intention to use the laparoscopic approach if that is to be their routine.

6.2.1 Suture rectopexy

The patient is placed in the Lloyd-Davies position, and a urinary catheter inserted. The rectum is mobilised to the pelvic floor posteriorly. Lateral and anterior dissection are optional. After laying the mobilised rectum into the concavity of the sacrum, a 'hitch stitch' is placed between the L5/S1 intervertebral disc and the mesorectum at the rectosigmoid junction. Thereafter three or four sutures are placed between the presacral fascia and the mesorectum. Choice of suture material is optional.

6.2.2. Resection rectopexy

The patient is placed in the Lloyd-Davies position, and a urinary catheter inserted. The rectum is mobilised to the pelvic floor posteriorly. The sigmoid and left colon are mobilised. At a minimum the sigmoid is resected and an anastomosis made at 12cm. Mobilisation of the splenic flexure, resection of more than the sigmoid and part descending colon and type of anastomosis are all optional. The rectum is fixed as for simple rectopexy.

OPERATION TECHNICAL CHECK LIST

	ESSENTIAL	OPTIONAL
Delorme's	<ul style="list-style-type: none"> • continue mucosectomy over apex into mouth of prolapse 	<ul style="list-style-type: none"> • number of sutures • suture material
Altemeier's	<ul style="list-style-type: none"> • prolapse pulled down and as much resected as possible 	<ul style="list-style-type: none"> • levator plication • suture material
Suture Rectopexy	<ul style="list-style-type: none"> • posterior dissection to pelvic floor • fixation to sacrum 	<ul style="list-style-type: none"> • division lateral ligaments • anterior dissection • suture material
Resection Rectopexy	<ul style="list-style-type: none"> • minimum entire sigmoid resection • posterior dissection to pelvic floor • fixation to sacrum 	<ul style="list-style-type: none"> • additional colonic resection • type of anastomosis • conservative vascular ligation

7. REFERENCES

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Association of Coloproctology
Of Great Britain and Ireland
Randomised Trial of Rectal Prolapse Surgery

**PATIENT INFORMATION SHEET FOR THE PERINEAL (DELORME'S AND ALTEMEIER'S)
AND ABDOMINAL (SUTURE RECTOPEXY AND RESECTION RECTOPEXY) PROCEDURES**

An Invitation to take part in a national study of surgery for rectal prolapse

- You have a rectal prolapse that will need to be treated by surgery.
- There are several different types of operation for rectal prolapse, and surgeons are not yet sure which is best.
- In order to find out which type of operation is best, this hospital is taking part in an international research study called **PROSPER**.
- People taking part in the **PROSPER** study are divided into groups, each undergoing a different type of surgery, and then the groups are compared.
- If you agree to take part in **PROSPER**, you will be asked some questions about your bowel habit and about your general health. You will be asked the same questions again a few weeks after surgery and then one and three years later.
- We would like you to take part in **PROSPER** to help find out what the best operation for rectal prolapse is, but you do not have to if you prefer not to.

Invitation to take part in PROSPER, a study of rectal prolapse surgery

As your doctors have told you, you have a rectal prolapse that will need to be treated by surgery. There is a choice from several different types of operation used for the treatment of rectal prolapse, and surgeons are not yet sure which one of these is best. In order to find out, this hospital is taking part in an international research study called **PROSPER**. We would like to invite you to take part in this study, which is optional: you do not have to take part if you don't want to. Before you decide, it is important that you understand why the research is being done and what would be involved if you do agree to take part. You should take plenty of time to read this information leaflet and to discuss the study with your surgeon. Please do not hesitate to ask if you have any questions, or if there is any more information that you would like before you decide.

What is a rectal prolapse and what treatments are there for it?

When the back passage (rectum) sticks out like a lump from the anus, as though a sleeve were turning inside out, this condition is called rectal prolapse. Many different types of operation are used to repair rectal prolapse. These operations differ in terms of the amount of physical upset they cause, the likelihood of the prolapse coming back, and their effect on bowel function and it is not yet clear which operation is best.

What is the PROSPER study?

Surgeons are not sure which is the best way of treating patients with rectal prolapse. To find out which of the operations is best we are inviting people needing rectal prolapse surgery to take part in the **PROSPER** study. People taking part in the study are divided into groups, each undergoing a different type of surgery, and then the groups are compared. The decision as to which particular group a patient is allocated to is done by the **PROSPER** study office using a random process (like tossing a coin), so that the groups are the same. Neither the patient nor the surgeon knows which group the patient would be in until after they decide to take part. This is what is called a "randomised clinical trial" and is the standard and most reliable way of comparing treatments. Once the research has been completed the results will be analysed and published. This will form the basis on which further patients with rectal prolapse can be treated.

Why am I being invited to take part?

We are inviting all suitable patients with rectal prolapse to take part. Several hundred patients will be included in **PROSPER**, recruited from this hospital and many others in this country and other parts of the world.

Do I have to take part?

No. It is up to you to decide whether or not you wish to take part. If you decide not to take part in the trial that is not a problem. The standard of care you receive will not be affected in any way by your decision. Your surgeon will discuss with you the pros and cons of the standard treatments currently available.

What does taking part in PROSPER involve?

You will be asked some questions about your bowel habit and whether you have any problems with soiling or incontinence (whether or not you have accidents). You will also be asked some questions about any problems you may be having doing your normal daily activities and about your general health. After surgery you will be seen by your surgeon a few weeks after the operation, and then again one year and three years after the operation. At these follow up visits you will be asked the same questions that you were asked before your operation. If you miss one of these appointments, one of the study organisers may write to you, or telephone, to ask how successful the surgery has been. Your surgeon may also wish to do some extra investigations or to see you more frequently than this.

What are the operations that are being compared?

There are two different ways of operating on rectal prolapse: 'perineal' (through the bottom) or 'abdominal' (through the abdomen). There are also two different types of operation, one involves removing some of the bowel and the other does not. The details of the possible operations are set out below. Once your operation has been decided, more details of that procedure will be explained to you just as it would if you were not taking part in the study. If you have further concerns or require further information please do not hesitate to ask your surgeon.

Operations done through the bottom – the perineal approach

The two perineal operations being compared are called 'Altemeier's operation', which involves removing some of the bowel, and 'Delorme's operation', which does not.

- **Altemeier's** - This operation is done through the bottom. A small section of the bowel is removed and the two ends are stitched together just inside the bottom.
- **Delorme's** – This operation is also done through the bottom. The lining of the prolapsed rectum is removed and the remaining muscle tube is stitched like the pleating of a skirt, or accordion, allowing the prolapse to be returned within the back passage.

Operations done through the abdomen – the abdominal approach

The two abdominal operations are 'resection rectopexy', which involves removing some of the bowel and 'suture rectopexy', which does not.

- **Resection Rectopexy** - This operation is done through the abdomen (tummy). Rather than just fixing the rectum on the inside, some of the bowel is removed and the ends of the bowel are then stitched back together.
- **Suture Rectopexy** - This operation is also done through the abdomen and therefore involves a cut to the abdomen. The rectum is pulled up from within and fixed internally by stitches to prevent it coming out through the bottom.

What are the possible benefits and disadvantages of these different operations?

All of the operations described above are known to be effective ways of treating rectal prolapse and so the treatment you receive will be at least as good as that available outside the study. However, all operations need the patient to have a general anaesthetic and there is a small risk that something may go wrong with operations under general anaesthesia. The risk is a little lower, and recovery afterwards is usually quicker, with the perineal operations than with abdominal operations. The disadvantage of the perineal operations is that the prolapse is more likely to return with up to one in five people treated having a recurrence. It may be less likely that the prolapse returns with Altemeier's operation than with Delorme's operation, but both procedures can be repeated if this should happen. The disadvantage of the Altemeier's operation and of suture rectopexy is that there is a join in the bowel that needs to heal, which sometimes causes problems. On the other hand, these operations may reduce the risk of the prolapse recurring and the disturbance of bowel function afterwards is said to be less. Thus, there are advantages and disadvantages to each type of operation. If your surgeon thought that there is some reason why one particular operation would be better for you then you would have this operation and you would not be entered into the **PROSPER** study. It is because your surgeon is not sure which of the possible operations would be best for you that you are being invited to take part. The information from the **PROSPER** study will tell us more about the benefits and disadvantages of each operation and help surgeons treat rectal prolapse more effectively in the future.

What if something goes wrong?

Taking part in the study would not affect your usual legal rights. The indemnity process within the hospital where you are being treated covers all patients having surgery. This would apply to any form of surgery that you receive, whether in the study or not. If you are not satisfied with any aspect of the way you have been approached or treated during the course of this study, the normal National Health Service complaints mechanisms are available to you.

Will my taking part in the study be kept confidential?

Yes, all information collected in the study will remain strictly confidential in the same way as your other medical records. If you agree to take part, your doctor will send basic information about you and your condition to the study’s central organisers, which will be put into a computer and analysed. Your GP will also be informed that you are taking part in the study. All information will be held securely and in strict confidence. No named information about you will be published in the trial report. Occasionally, inspections of clinical trial data are undertaken to ensure that, for example, all participants have given consent to take part. But, apart from this, only the study organisers will have access to the data.

Who is organising and funding the research?

This project is being organised jointly by the NHS-funded Clinical Trials Unit at the University of Birmingham (see address below) and the Association of Coloproctology of Great Britain and Ireland. It is funded by the BUPA Foundation Medical Charity. There is no commercial involvement in the study and the doctors taking part in the research are not paid for entering patients.

Who has reviewed the study?

This study has been reviewed and approved by the Multicentre Research Ethics Committee in Birmingham and by the Local Research Ethics Committee at this hospital. During the study, an independent Data Monitoring Committee will review the results at regular intervals and if one kind of operation were clearly better, the study would be stopped early.

What do I need to do if I decide to take part?

If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you want to think about it for longer, or discuss it with friends or relatives, then you can take this information sheet and the consent form away with you and sign, witness and return the form later. You will not need to make an extra visit to the hospital. Whether you agree to take part now or later, you would be free to withdraw at any time after and without giving a reason. All you would need to do is to contact your surgeon either in writing or by telephone and your name will be withdrawn from the study. This will not adversely affect the care that you receive.

Who do I ask if I need further information?

Please feel free to contact your surgeon or the person below if you need further information, or if you change your mind and wish to withdraw from the study.

Thank you in anticipation for taking part in this study

For any queries about the study or for further information please contact:

Name:

Tel No:

Position:

The PROSPER study coordinating centre is located at the University of Birmingham Clinical Trials Unit, Park Grange, 1 Somerset Road, Birmingham B15 2RR. Web address: www.bctu.bham.ac.uk



**PATIENT INFORMATION SHEET FOR THE ABDOMINAL PROCEDURES –
SUTURE RECTOPEXY AND RESECTION RECTOPEXY**

An Invitation to take part in a national study of surgery for rectal prolapse

- You have a rectal prolapse that will need to be treated by surgery.
- There are several different types of operation for rectal prolapse, and surgeons are not yet sure which is best.
- In order to find out which type of operation is best, this hospital is taking part in an international research study called **PROSPER**.
- People taking part in the **PROSPER** study are divided into groups, each undergoing a different type of surgery, and then the groups are compared.
- If you agree to take part in **PROSPER**, you will be asked some questions about your bowel habit and about your general health. You will be asked the same questions again a few weeks after surgery and then one and three years later.
- We would like you to take part in **PROSPER** to help find out what the best operation for rectal prolapse is, but you do not have to if you prefer not to.

Invitation to take part in PROSPER, a study of rectal prolapse surgery

As your doctors have told you, you have a rectal prolapse that will need to be treated by surgery. There is a choice from several different types of operation used for the treatment of rectal prolapse, and surgeons are not yet sure which one of these is best. In order to find out, this hospital is taking part in an international research study called **PROSPER**. We would like to invite you to take part in this study, which is optional: you do not have to take part if you don't want to. Before you decide, it is important that you understand why the research is being done and what would be involved if you do agree to take part. You should take plenty of time to read this information leaflet and to discuss the study with your surgeon. Please do not hesitate to ask if you have any questions, or if there is any more information that you would like before you decide.

What is a rectal prolapse and what treatments are there for it?

When the back passage (rectum) sticks out like a lump from the anus, as though a sleeve were turning inside out, this condition is called rectal prolapse. Many different types of operation are used to repair rectal prolapse. These operations differ in terms of the amount of physical upset they cause, the likelihood of the prolapse coming back, and their effect on bowel function and it is not yet clear which operation is best.

What is the PROSPER study?

Surgeons are not sure which is the best way of treating patients with rectal prolapse. To find out which of the operations is best we are inviting people needing rectal prolapse surgery to take part in the **PROSPER** study. People taking part in the study are divided into groups, each undergoing a different type of surgery, and then the groups are compared. The decision as to which particular group a patient is allocated to is done by the **PROSPER** study office using a random process (like tossing a coin), so that the groups are the same. Neither the patient nor the surgeon knows which group the patient would be in until after they decide to take part. This is what is called a "randomised clinical trial" and is the standard and most reliable way of comparing treatments. Once the research has been completed the results will be analysed and published. This will form the basis on which further patients with rectal prolapse can be treated.

Why am I being invited to take part?

We are inviting all suitable patients with rectal prolapse to take part. Several hundred patients will be included in **PROSPER**, recruited from this hospital and many others in this country and other parts of the world.

Do I have to take part?

No. It is up to you to decide whether or not you wish to take part. If you decide not to take part in the trial that is not a problem. The standard of care you receive will not be affected in any way by your decision. Your surgeon will discuss with you the pros and cons of the standard treatments currently available.

What does taking part in PROSPER involve?

You will be asked some questions about your bowel habit and whether you have any problems with soiling or incontinence (whether or not you have accidents). You will also be asked some questions about any problems you may be having doing your normal daily activities and about your general health. After surgery you will be seen by your surgeon a few weeks after the operation, and then again one year and three years after the operation. At these follow up visits you will be asked the same questions that you were asked before your operation. If you miss one of these

appointments, one of the study organisers may write to you, or telephone, to ask how successful the surgery has been. Your surgeon may also wish to do some extra investigations or to see you more frequently than this.

Version 2.0, November 24 2005

What are the operations that are being compared?

There are two different ways of operating on rectal prolapse: 'perineal' (through the bottom) or 'abdominal' (through the abdomen). Your surgeon thinks an abdominal operation would be best for you. There are two different types of abdominal operations: one is called 'resection rectopexy' and involves removing some of the bowel and the other ('suture rectopexy') does not. The details of the abdominal procedures are set out below. Once your operation has been decided, more details of that procedure will be explained to you just as it would if you were not taking part in the study. If you have further concerns or require further information please do not hesitate to ask your surgeon.

- **Suture Rectopexy** - This operation is done through the abdomen (tummy) and therefore involves a cut to the abdomen. The rectum is pulled up from within and fixed internally by stitches to prevent it coming out through the bottom.
- **Resection Rectopexy** - This operation is also done through the abdomen. Rather than just fixing the rectum on the inside some of the bowel is removed and the ends of the bowel are then stitched back together.

What are the possible benefits and disadvantages of these two operations?

Both of the operations described above are known to be effective ways of treating rectal prolapse and the treatment you receive will be at least as good as that available outside the study. However, both operations need the patient to have a general anaesthetic and there is a small risk that something may go wrong with all operations under general anaesthesia. The suture rectopexy operation has the disadvantage that it may result in disturbance in your bowel function afterwards. The resection rectopexy has the disadvantage that it involves a join in the bowel, which may cause complications. The disturbance of bowel function afterwards is not clearly known but is said to be less with resection rectopexy than with suture rectopexy. If your surgeon thought that there is some reason why one particular type of abdominal operation would be better for you then you would have this operation and you would not be entered into the **PROSPER** study. It is because your surgeon is not sure which of these two operations would be best for you that you are being invited to take part. The information from the **PROSPER** study will tell us more about the benefits and disadvantages of the two operations and help surgeons treat rectal prolapse more effectively in the future.

What if something goes wrong?

Taking part in the study would not affect your usual legal rights. The indemnity process within the hospital where you are being treated covers all patients having surgery. This would apply to any form of surgery that you receive, whether in the study or not. If you are not satisfied with any aspect of the way you have been approached or treated during the course of this study, the normal National Health Service complaints mechanisms are available to you.

Will my taking part in the study be kept confidential?

Yes, all information collected in the study will remain strictly confidential in the same way as your other medical records. If you agree to take part, your doctor will send basic information about you and your condition to the study's central organisers, which will be put into a computer and analysed. Your GP will also be informed that you are taking part in the study. All information will be held securely and in strict confidence. No named information about you will be published in the trial

Version 2.0, November 24 2005

report. Occasionally, inspections of clinical trial data are undertaken to ensure that, for example, all participants have given consent to take part. But, apart from this, only the study organisers will have access to the data.

Who is organising and funding the research?

This project is being organised jointly by the NHS-funded Clinical Trials Unit at the University of Birmingham (see address below) and the Association of Coloproctology of Great Britain and Ireland. It is funded by the BUPA Foundation Medical Charity. There is no commercial involvement in the study and the doctors taking part in the research are not paid for entering patients.

Who has reviewed the study?

This study has been reviewed and approved by the Multicentre Research Ethics Committee in Birmingham and by the Local Research Ethics Committee at this hospital. During the study, an independent Data Monitoring Committee will review the results at regular intervals and if one kind of operation were clearly better, the study would be stopped early.

What do I need to do if I decide to take part?

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Who do I ask if I need further information?

Please feel free to contact your surgeon or the person below if you need further information, or if you change your mind and wish to withdraw from the study.

Thank you in anticipation for taking part in this study

For any queries about the study or for further information please contact:

Name:

Tel No:

Position:



**PATIENT INFORMATION SHEET FOR THE PERINEAL PROCEDURES –
DELORME'S AND ALTEMEIER'S**

An Invitation to take part in a national study of surgery for rectal prolapse

- You have a rectal prolapse that will need to be treated by surgery.
- There are several different types of operation for rectal prolapse, and surgeons are not yet sure which is best.
- In order to find out which type of operation is best, this hospital is taking part in an international research study called **PROSPER**.
- People taking part in the **PROSPER** study are divided into groups, each undergoing a different type of surgery, and then the groups are compared.
- If you agree to take part in **PROSPER**, you will be asked some questions about your bowel habit and about your general health. You will be asked the same questions again a few weeks after surgery and then one and three years later.
- We would like you to take part in **PROSPER** to help find out what the best operation for rectal prolapse is, but you do not have to if you prefer not to.

Invitation to take part in PROSPER, a study of rectal prolapse surgery

As your doctors have told you, you have a rectal prolapse that will need to be treated by surgery. There is a choice from several different types of operation used for the treatment of rectal prolapse, and surgeons are not yet sure which one of these is best. In order to find out, this hospital is taking part in an international research study called **PROSPER**. We would like to invite you to take part in this study, which is optional: you do not have to take part if you don't want to. Before you decide, it is important that you understand why the research is being done and what would be involved if you do agree to take part. You should take plenty of time to read this information leaflet and to discuss the study with your surgeon. Please do not hesitate to ask if you have any questions, or if there is any more information that you would like before you decide.

What is a rectal prolapse and what treatments are there for it?

When the back passage (rectum) sticks out like a lump from the anus, as though a sleeve were turning inside out, this condition is called rectal prolapse. Many different types of operation are used to repair rectal prolapse. These operations differ in terms of the amount of physical upset they cause, the likelihood of the prolapse coming back, and their effect on bowel function and it is not yet clear which operation is best.

What is the PROSPER study?

Surgeons are not sure which is the best way of treating patients with rectal prolapse. To find out which of the operations is best we are inviting people needing rectal prolapse surgery to take part in the **PROSPER** study. People taking part in the study are divided into groups, each undergoing a different type of surgery, and then the groups are compared. The decision as to which particular group a patient is allocated to is done by the **PROSPER** study office using a random process (like tossing a coin), so that the groups are the same. Neither the patient nor the surgeon knows which group the patient would be in until after they decide to take part. This is what is called a "randomised clinical trial" and is the standard and most reliable way of comparing treatments. Once the research has been completed the results will be analysed and published. This will form the basis on which further patients with rectal prolapse can be treated.

Why am I being invited to take part?

We are inviting all suitable patients with rectal prolapse to take part. Several hundred patients will be included in **PROSPER**, recruited from this hospital and many others in this country and other parts of the world.

Do I have to take part?

No. It is up to you to decide whether or not you wish to take part. If you decide not to take part in the trial that is not a problem. The standard of care you receive will not be affected in any way by your decision. Your surgeon will discuss with you the pros and cons of the standard treatments currently available.

What does taking part in PROSPER involve?

You will be asked some questions about your bowel habit and whether you have any problems with soiling or incontinence (whether or not you have accidents). You will also be asked some questions about any problems you may be having doing your normal daily activities and about your general health. After surgery you will be seen by your surgeon a few weeks after the operation, and then again one year and three years after the operation. At these follow up visits you will be asked the same questions that you were asked before your operation. If you miss one of these appointments, one of the study organisers may write to you, or telephone, to ask how successful

the surgery has been. Your surgeon may also wish to do some extra investigations or to see you more frequently than this.

What are the operations that are being compared?

There are two different ways of operating on rectal prolapse: 'perineal' (through the bottom) or 'abdominal' (through the abdomen). Your surgeon thinks a perineal operation would be best for you. There are two different types of perineal operations: one is called 'Altemeier's operation' and involves removing some of the bowel and the other ('Delorme's operation') does not. The details of the two operations are set out below. Once your operation has been decided, more details of that procedure will be explained to you just as it would if you were not taking part in the study. If you have further concerns or require further information please do not hesitate to ask your surgeon.

- **Delorme's** – This operation is done through the bottom. The lining of the prolapsed rectum is removed and the remaining muscle tube is stitched like the pleating of a skirt, or accordion, allowing the prolapse to be returned within the back passage.
- **Altemeier's** - This operation is also done through the bottom. A small section of the bowel is removed and the two ends are stitched together just inside the bottom.

What are the possible benefits and disadvantages of these two operations?

Both of the operations described above are known to be effective ways of treating rectal prolapse and the treatment you receive will be at least as good as that available outside the study. However, both operations need the patient to have a general anaesthetic and there is a small risk that something may go wrong with all operations under general anaesthesia. However, the risk is a little lower, and recovery afterwards is usually quicker, with these perineal operations than with abdominal operations. The disadvantage of the Delorme's operation is that the prolapse returns in up to one in five people treated. It may be less likely that the prolapse returns with Altemeier's operation than with Delorme's operation, but both procedures can be repeated if this should happen. The disadvantage of the Altemeier's operation is that there is a join in the bowel that needs to heal, which sometimes causes problems. If your surgeon thought that there is some reason why one particular type of perineal operation would be better for you then you would have this operation and you would not be entered into the **PROSPER** study. It is because your surgeon is not sure which of these two operations would be best for you that you are being invited to take part. The information from the **PROSPER** study will tell us more about the benefits and disadvantages of the two operations and help surgeons treat rectal prolapse more effectively in the future.

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Who do I ask if I need further information?

Please feel free to contact your surgeon or the person below if you need further information, or if you change your mind and wish to withdraw from the study.

Thank you in anticipation for taking part in this study

For any queries about the study or for further information please contact:

Name:

Tel No:

Position:



Association of Coloproctology
of Great Britain and Ireland
Randomised Trial of Rectal Prolapse Surgery
Patient Consent Form

Please keep the original of this form in the patient's notes, give one copy to the patient and send a second copy to the PROSPER Trial Office

Patient Hospital Identification Number:

Name of Researcher:

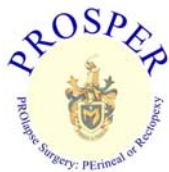
1. I confirm that I have read and understood the information sheet for the **PROSPER** study (version 2.0, dated November 24 2005) and have had the opportunity to ask questions.
2. I understand that my participation in this study is voluntary and that I am free to withdraw at any time, without giving any reason, and without my medical care or legal rights being affected.
3. I understand that sections of any of my medical notes may be looked at by responsible individuals from the Clinical Trials Unit at the University of Birmingham and at the hospital where my surgery is being carried out. I give permission for these individuals to have access to my records.
4. I understand that the study researchers may contact me by telephone or email to remind me to complete the questionnaires or to ask me the questions over the telephone.
5. I agree that information about my disease and progress will be provided, in confidence, by my doctors to the central organisers and will be used for medical research only. I understand that the information held by the NHS and records maintained by the General Register Office may be used to keep in touch with me and follow up my health status.
6. I agree to take part in the above study.

Name of Patient: Signature Date / /

Name of Witness: Signature Date / /

Address of Witness:
.....

APPENDIX E



PROSPER Trial Office
University of Birmingham Clinical Trials Unit
FREEPOST MID21289
Park Grange
1 Somerset Road
Edgbaston
Birmingham
B15 2BR
Tel: 0121 687 2322
Fax: 0121 687 2313

<GP Name>
<GP Address 1>
<GP Address 2>
<GP Address 3>
<Date>

Dear Dr <GP Name>

Re: Patient Name **Date randomised:**

Date of Birth **Trial Number**

Your patient named above has a rectal prolapse, which requires surgical treatment. We are currently taking part in a randomised trial comparing different forms of surgery for the treatment of rectal prolapse. This is a multicentre trial organised by the Association of Coloproctology of Great Britain & Ireland, which is funded by the BUPA Foundation medical charity and co-ordinated by the University of Birmingham Clinical Trials Unit.

Your patient has kindly consented to take part in this study and has been randomised to have the following operation:

I attach an information sheet about the different types of surgery being compared in the study. I will let you know when the surgery has been done and inform you when your patient attends the regular follow-up appointments post-operatively.

Please do not hesitate to get in touch with me should you require any further information.

Yours sincerely

Name:

Hospital:

Telephone:



APPENDIX F RANDOMISATION NOTEPAD

PART A: IDENTIFICATION DETAILS (please print in capitals)

Hospital: Consultant:

Patient's full name:

Date of birth: - - Sex: Male Female

PART B: ELIGIBILITY

Does the patient suffer from full thickness Rectal Prolapse? **YES** **NO** *If the answer to any of these questions is*

Has the patient given written informed consent? **YES** **NO**, *the patient is not eligible to take part.*

PART C: ASA SCORE (Please tick one box):

- ASA I Healthy patient.
- ASA II Patient with mild to moderate systemic disease not limiting activities
- ASA III Patient with severe systemic disturbance imposing a functional limitation e.g. ischaemic heart disease with limited exercise tolerance.
- ASA IV Severe systemic disease which is a constant threat to life e.g. COAD with dyspnoea at rest.
- ASA V Moribund, unlikely to survive 24hrs without surgery.

PART D: CONTINENCE Circle one score from each of the seven rows below and add up

	FREQUENCY (see below)						No	Yes
	Never	Rarely	Sometimes	Weekly	Daily			
Incontinence for solid stool	0	1	2	3	4	Need to wear pad or plug	0	2
Incontinence for liquid stool	0	1	2	3	4	Taking constipating medicines	0	2
Incontinence for gas	0	1	2	3	4	Inability to defer defaecation for 15 minutes	0	4
Alteration in life style	0	1	2	3	4			

Frequency of incontinence

Never No episodes in the past 4 weeks

Rarely 1 episode in the past 4 weeks

Sometimes >1 episode a week in the past 4 weeks but < 1 a day

Weekly 1 or more episodes a week but < 1 a day

Daily 1 or more episodes a day

KAMM SCORE:

Minimum score = 0 (perfect continence)

Maximum score = 24 (totally incontinent)

QUALITY OF LIFE & RESOURCE USAGE

EuroQoL Quality of Life assessment completed? Yes (Please attach) No Reason?

PART E: RANDOMISATION

Are you willing to enter the patient into randomisation 1? (abdominal vs. perineal approach)?

Yes No → If No, elected procedure: Abdominal Perineal

If "No" (randomisation 1 not performed), what is the reason?

Surgeon preference Patient preference Other Please specify:

If allocated or elected PERINEAL procedure, are you willing to randomise the patient between Delorme's and Altemeier's operation?

Yes No → If No, elected operation: Delorme's Altemeier's

If allocated or elected ABDOMINAL procedure, are you willing to randomise between suture and resection rectopexy?

Yes No → If No, elected rectopexy: Suture Resection

If "No" (randomisation 2 not performed), what is the reason?

Surgeon preference Patient preference Other Please specify:

If "No" for both randomisation 1 and 2 patient is not eligible to take part

RANDOMISED ALLOCATION - Complete at the time of randomisation phone call

Abdominal or Perineal or approach not randomised

Delorme's or Altemeier's or operation not randomised Suture or Resection or rectopexy not randomised

Estimated date of surgery/...../..... PROSPER TRIAL NUMBER (allocated at randomisation):

CONTACT NAME: TELEPHONE:

N.B. After randomisation, follow-up data will be requested, even if the trial surgery is not performed or the diagnosis is changed.

Please return a copy of this form (with the QoL questionnaire) to: PROSPER Trial Office, The University of Birmingham Clinical Trials Unit, Park Grange, 1 Somerset Road, Edgbaston, Freeport MID21289, Birmingham. B15 2BR.



APPENDIX G BASELINE ASSESSMENT

To be completed by the clinician

PART A: IDENTIFICATION DETAILS

Patient's name:

PROSPER Trial N°

Date of Birth: - -

Hospital number

NHS Number (if available):

Date of assessment - -

PART B: EVACUATION

Frequency of bowel actions Number per week:

Straining Yes No

Incomplete emptying Yes No

Oral laxatives Yes No

Enemas/Suppositories Yes No

Comments (if any):

PART C: OPTIONAL INVESTIGATIONS

Transit study

Shapes Isotope Normal Abnormal Not done

MOTOR AND SENSORY FUNCTION Please fill in as appropriate

Motor Function

Normal Range

Value

Resting pressure (cmH₂O)

Squeeze pressure (cmH₂O)

Anal canal length (cm)

Recto anal reflex Present Absent

Sensory Function

Normal Range

Value

Threshold volume (ml)

Urge volume (ml)

Maximal volume (ml)

Compliance (mm.Hg/mm)

Electrical Sensitivity (mA):

mid anal

rectal

PUDENDAL NERVE TERMINAL MOTOR LATENCY (MS)

Right

Left

ANAL ULTRASOUND (Please attach copy of report)

Normal: Yes No

Form completed by

Date / /



APPENDIX H
SURGERY DETAILS FORM
To be completed by the clinician

Patient's full name:

Date of birth:/...../.....

Sex: Male Female

Surgeon:

Grade:

Date of Surgery: --

PROSPER trial number

PART A: OPERATION PERFORMED:

Delorme's operation Altemeier's operation

Suture rectopexy Resection rectopexy

Other operation:

If the operation performed was not the randomised allocation please state the reason:

IF SUTURE OR RESECTION RECTOPEXY:

Anterior dissection Yes No

Lateral ligaments divided Yes No

Laparoscopic Yes No

Method of fixation:

Absorbable Taut

Non Absorbable Lax

IF RESECTION RECTOPEXY:

More than sigmoid resected Yes No **If yes:** Total colectomy Partial colectomy

Type of anastomosis Sutured Stapled

IF ALTEMEIER'S:

Length of specimen cm (measured in theatre)

PART B: COMPLICATIONS

Major complications are those requiring re-operation/imaging intervention or resulting in prolonged hospitalisation or death. Minor complications are the remainder.

Please tick one box for each complication:

Wound infection major minor none

Intra-abdominal abscess major minor none

Bleeding major minor none

Obstruction major minor none

Anastomotic leak major minor none

Cardiorespiratory problems major minor none

Other (specify) major minor none

If dead, date: Cause of death if known (attach copies of any relevant reports)

PART C: DISCHARGE DETAILS

Date of Discharge from hospital:/...../.....

Discharge to: Home Community Hospital Nursing Home Other

Date of next appointment/...../.....

Name of person completing form:

Contact telephone: Today's date:/...../.....



APPENDIX I
6 WEEKS FOLLOW-UP FORM
To be completed by the clinician

PART A: DATA ASSESSMENT

Direct observation Patient deceased Yes No

Third party report (e.g. phone report from carer) If deceased, please attach report (e.g. letter to GP) detailing events leading to death.

Patient too frail/senile to permit assessment

Recurrence? Yes → mucosal Further surgery? Yes (Attach Report)

No Full thickness No

Date of Recurrence --

PART B: EVACUATION

Frequency of bowel actions Number per week:

Straining Yes No

Incomplete emptying Yes No

Oral laxatives Yes No

Enemas/Suppositories Yes No

Comments (if any):
.....
.....

PART B: CONTINENCE

Circle one score from each of the seven rows below and add up

	FREQUENCY (see below)						No	Yes
	Never	Rarely	Sometimes	Weekly	Daily			
Incontinence for solid stool	0	1	2	3	4	Need to wear pad or plug	0	2
Incontinence for liquid stool	0	1	2	3	4	Taking constipating medicines	0	2
Incontinence for gas	0	1	2	3	4	Inability to defer defaecation for 15 minutes	0	4
Alteration in life style	0	1	2	3	4			

Frequency of incontinence

Never No episodes in the past 4 weeks

Rarely 1 episode in the past 4 weeks

Sometimes >1 episode a week in the past 4 weeks but < 1 a day

Weekly 1 or more episodes a week but <1 a day

Daily 1 or more episodes a day

KAMM SCORE:

Minimum score = 0 (perfect continence)
Maximum score = 24 (totally incontinent)

PART C: QUALITY OF LIFE

EuroQol Quality of Life assessment completed?

Yes (Please attach) No Reason?

Form completed by Date/...../.....



APPENDIX J ONE YEAR FOLLOW-UP FORM

To be completed by the clinician

PART A: DATA ASSESSMENT

Direct observation Patient deceased Yes No

Third party report (e.g. phone report from carer) If deceased, please attach report (e.g. letter to detailing events leading to death)

Patient too frail/senile to permit assessment

Recurrence? Yes → mucosal Further surgery? Yes (Attach Report)
 No Full thickness No

Date of recurrence --

PART B: EVACUATION

Frequency of bowel actions Number per week:

Straining Yes No

Incomplete emptying Yes No

Oral laxatives Yes No

Enemas/Suppositories Yes No

Comments (if any):

PART B: CONTINENCE

Circle one score from each of the seven rows below and add up

	FREQUENCY (see below)						No	Yes
	Never	Rarely	Sometimes	Weekly	Daily			
Incontinence for solid stool	0	1	2	3	4	Need to wear pad or plug	0	2
Incontinence for liquid stool	0	1	2	3	4	Taking constipating medicines	0	2
Incontinence for gas	0	1	2	3	4	Inability to defer defaecation for 15 minutes	0	4
Alteration in life style	0	1	2	3	4			

Frequency of incontinence

- Never* No episodes in the past 4 weeks
- Rarely* 1 episode in the past 4 weeks
- Sometimes* >1 episode a week in the past 4 weeks but < 1 a day
- Weekly* 1 or more episodes a week but <1 a day
- Daily* 1 or more episodes a day

KAMM SCORE:

Minimum score = 0 (perfect continence)
Maximum score = 24 (totally incontinent)

PART C: QUALITY OF LIFE

EuroQol Quality of Life assessment completed?
 Yes (Please attach) No Reason?

Form completed by Date / /



APPENDIX K
THREE YEAR FOLLOW-UP FORM
 To be completed by the clinician

PART A: DATA ASSESSMENT

Direct observation Patient deceased Yes No

Third party report (e.g. phone report from carer) If deceased, please attach report (e.g. letter to detailing events leading to death)

Patient too frail/senile to permit assessment

Recurrence? Yes → mucosal Further surgery? Yes (Attach Report)
 No Full thickness No

Date of recurrence --

PART B: EVACUATION

Frequency of bowel actions Number per week:

Straining Yes No

Incomplete emptying Yes No

Oral laxatives Yes No

Enemas/Suppositories Yes No

Comments (if any):

PART B: CONTINENCE

Circle one score from each of the seven rows below and add up

	FREQUENCY (see below)						No	Yes
	Never	Rarely	Sometimes	Weekly	Daily			
Incontinence for solid stool	0	1	2	3	4	Need to wear pad or plug	0	2
Incontinence for liquid stool	0	1	2	3	4	Taking constipating medicines	0	2
Incontinence for gas	0	1	2	3	4	Inability to defer defaecation for 15 minutes	0	4
Alteration in life style	0	1	2	3	4			

Frequency of incontinence

- Never No episodes in the past 4 weeks
- Rarely 1 episode in the past 4 weeks
- Sometimes >1 episode a week in the past 4 weeks but < 1 a day
- Weekly 1 or more episodes a week but <1 a day
- Daily 1 or more episodes a day

KAMM SCORE:

Minimum score = 0 (perfect continence)

Maximum score = 24 (totally incontinent)

PART C: QUALITY OF LIFE

EuroQol Quality of Life assessment completed?
 Yes (Please attach) No Reason?

Form completed by Date / /



APPENDIX L
QUALITY OF LIFE (EuroQoL EQ-5D)
YOUR OWN HEALTH STATE TODAY

Patient initials

Date of birth --

Date questionnaire completed - -

Baseline **6 weeks** **1 year** **3 year**

PROSPER trial Number

Date received

FOR TRIAL OFFICE USE ONLY

By placing a tick in one box in each group below, please indicate which statement best describes your own health state today.

Do not tick more than one box in each group

Mobility

- I have no problems walking about
- I have some problems in walking about
- I am confined to bed

Self care

- I have no problems with self-care
- I have some problems washing or dressing myself
- I am unable to wash or dress myself

Usual activities e.g. work, study, housework, family or leisure activities

- I have no problems with performing my usual activities
- I have some problems with performing my usual activities
- I am unable to perform my usual activities

Pain/ Discomfort

- I have no pain or discomfort
- I have moderate pain or discomfort
- I have extreme pain or discomfort

Anxiety/ Depression

- I am not anxious or depressed
- I am moderately anxious or depressed
- I am extremely anxious or depressed

YOUR OWN HEALTH STATE TODAY

To help people say how good or bad their health state is, we have drawn a scale (rather like a thermometer) on which the best state you can imagine is marked by 100 and the worst state you could imagine is marked by 0.

We would like you to indicate on the scale how good or bad your own health is today, in your opinion. Please do this by drawing a line from the box to whichever point on the scale indicates how good or bad your current health state is.

**Your own
health state
today**

**Best
Imaginable
health state**



**Worst
Imaginable
health state**

YOUR OWN BOWEL FUNCTION TODAY

We would also like you to indicate on the scale how good or bad your bowel function is today, in your opinion. Please do this by drawing a line from the box to whichever point on the scale indicates how good or bad your current bowel function is.

**Best
Imaginable
bowel function**

100



**Your own
bowel
function today**

**Worst
Imaginable
bowel function**

ABOUT YOUR HEALTH IN GENERAL

Please choose the answer that best describes how true or false each of the following statements is for you.

(Please tick one box on each line)

	Definitely true	Mostly true	Not sure	Mostly false	Definitely false
I seem to get ill more easily than other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am as healthy as anybody I know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I expect my health to get worse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My health is excellent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Compared with my general level of health over the past 12 months, my health state today is....

(Please tick one box from each group)

- Better
- Much the same
- Worse

Are you:

- A current smoker
- An ex-smoker
- A never smoker



APPENDIX M
RESOURCE USAGE
Health Economics

To be completed at Baseline, 6weeks, 1year and 3years (delete as appropriate)

PART A: IDENTIFICATION DETAILS (please print in capitals)

Patient's initials:

Date of birth: - -

Date questionnaire completed: - -

HEALTH PROBLEMS

During the last year

- | | No | Yes |
|--|--------------------------|--------------------------|
| 1. Have you spent any days in hospital for any reason? | <input type="checkbox"/> | <input type="checkbox"/> |
| If Yes, please give the total number of days: | | days |
| 2. Have you been to a hospital clinic as an outpatient for any reason? | <input type="checkbox"/> | <input type="checkbox"/> |
| If Yes, please give the number of visits: | |visits |

During the last four weeks

- | | No | Yes |
|---|--------------------------|--------------------------|
| 3. Have you been to see your GP at the health centre or surgery for any reason? | <input type="checkbox"/> | <input type="checkbox"/> |
| If Yes, please give the number of visits: | |visits |
| 4. Has your GP visited you at home for any reason? | <input type="checkbox"/> | <input type="checkbox"/> |
| If Yes, how many times? | |times |
| 5. Has a nurse visited you at your home for any reason? | <input type="checkbox"/> | <input type="checkbox"/> |
| If Yes, how many times? | |times |
| 6. Has anyone from social services or a voluntary organisation visited you at home? | <input type="checkbox"/> | <input type="checkbox"/> |
| If Yes, how many times? | |times |
| 7. Has a relative or friend taken time off work to look after you? | <input type="checkbox"/> | <input type="checkbox"/> |
| If Yes, how many days? | | days |

If yes to any of the above, what was the problem?

.....
.....

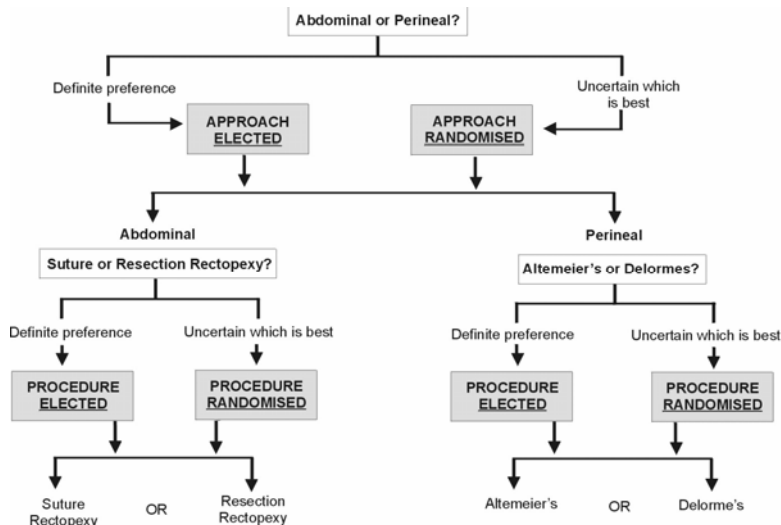
PROSPER TRIAL SCHEMA

ELIGIBILITY

- Patient has full thickness Rectal Prolapse.
- Patient has given informed consent.

RANDOMISE IF UNCERTAIN

- The surgeon should consider whether it is appropriate for each patient with rectal prolapse to be randomised into the **PROSPER** trial. Randomisation should only take place when substantial uncertainty exists. If the surgeon considers, for whatever reason, that one or other choice of approach, and type of operation, is definitely indicated in a particular case the patient is not eligible to take part in the trial.



OBTAINING PATIENT CONSENT

- At most centres, where pre-operative tests are not performed at a separate appointment, patients who agree to take part in the study should be asked to sign the consent form at the first clinic appointment. If they would prefer longer to decide they should be given a consent form to take away, sign, witness and return **BY POST**.
- However, in some centres, patients will have a second appointment for pre-operative tests and hence longer to consider participation.
- In either of these circumstances, there is a period of weeks between the randomisation and the operation and the patient should be told that they can change their mind about participation at any time. Confirmation of consent should be obtained on the usual pre-operative consent forms.
- Once initial consent has been gained randomisation can take place.

TELEPHONE RANDOMISATION

- Prepare for telephone questions using the randomisation notepad (**see Note A**)
- Ring the randomisation service on 0800 953 0274 (toll-free in UK) or +44 (0) 121 687 2319 from outside the UK.
- When all the relevant questions on the randomisation notepad have been answered, a treatment allocation and patient reference number will be given.

Note A: The person randomising will need to answer all questions on the randomisation notepad.

FOLLOW-UP

- A routine post-operative visit at six weeks, and at one year and three years. Data collected will be recurrence of full-thickness rectal prolapse, continence (Kamm Score), and quality of life (EuroQoL).

FOR RANDOMISATION TELEPHONE (TOLL FREE IN UK):

0800 953 0274 OR FAX +44 (0)121 687 2313 or +44 (0)121 687 2319 FROM OUTSIDE THE UK.

For administrative queries and trial supplies, contact

PROSPER Trial Office, University of Birmingham Clinical Trials Unit, Park Grange, 1 Somerset Road, Edgbaston, Birmingham UK. B15 2RR. Tel: 0121 687 2322 Fax: 0121 687 2313 Email: prosper-trial@contacts.bham.ac.uk