NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Medical Technologies Evaluation Programme

MT 205 - The ReCell spray-on skin system for treating skin loss, scarring and depigmentation after burn injury

Expert Adviser Questionnaire Responses

Name of Expert Advisers	Job Title	Professional Organisation/ Specialist Society	Nominated by	Ratified
Dr Amber Young	Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead	Association of Burns & Reconstructive Anaesthetists	Specialist Society	-
Mr Bruce Philp	Consultant Plastic Surgeon	British Burn Association	Sponsor	Y
Dr Rebecca Martin	Lead Anaesthetist & Intensivist	Association of Burns & Reconstructive Anaesthetists	Specialist Society	-
Miss Isabel Jones	Burns Consultant	British Association of Plastic, Reconstructive and Aesthetic Surgeons	Sponsor	Y
Dr Sarah Pape	Consultant Plastic Surgeon	British Association of Plastic, Reconstructive and Aesthetic Surgeons	NICE	-

YOUR PERSONAL EXPERIENCE (IF ANY) WITH THIS TECHNOLOGY

Question 2: Please indicate your experience with this technology?

Expert Advisers	I have had direct involvement with this	I have referred patients for its use	I manage patients on whom it is used in another part of their care pathway	I would like to use this technology but it is not currently available to me
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Yes**	**No**	**Yes**	**No**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Yes**	**Yes**	**Yes**	**No**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Blank**	**Blank**	**Yes**	**Blank**
Miss Isabel Jones **Burns Consultant**	**Yes**	**No**	**No**	**No**
Dr Sarah Pape **Consultant Plastic Surgeon**	**No**	**No**	**No**	**Yes**

Any Comments?	
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Blank**
Mr Bruce Philp **Consultant Plastic Surgeon**	**I have used Recell spray cells for my burns patients for over 4 years. Recell is used on our burns unit for a number of indications which are detailed below. It is a unique technology at the moment, with potentially important patient and health care resource benefits.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**I provide anaesthesia and intensive care to patients who have received and may benefit from this technology and am involved as part of a specialist team caring for patients with burns to whom it is applicable.**

Expert Advisers	I have had direct involvement with this	I have referred patients for its use	I manage patients on whom it is used in another part of their care pathway	I would like to use this technology but it is not currently available to me
Miss Isabel Jones **Burns Consultant**	Blank			
Dr Sarah Pape **Consultant Plastic Surgeon**	**I have received training from the manufacturer but refused permission to use in my hospital because of costs**			

Question 3: Have you been involved in any kind of research on this technology? If Yes, please describe?

Expert Advisers	Yes/No	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	No	Blank
Mr Bruce Philp **Consultant Plastic Surgeon**	No	**I have not been involved in formal research yet but am keen to be invloved in clinical trials using Recell in the future. A research project comparing Recell and cultured allogeneic cells in suspension (produced by Altrika) on burn wounds is due to start in our unit later in 2013.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	No	Blank
Miss Isabel Jones **Burns Consultant**	**Yes**	Blank
Dr Sarah Pape **Consultant Plastic Surgeon**	**No**	Blank

THIS PRODUCT (TECHNOLOGY) AND ITS USE

Question 4: How would you best describe this technology?

Expert Advisers	It is a minor variation on existing technologies with little potential for different outcomes and impact	It is a significant modification of an existing technology with real potential for different outcomes and impact	It is thoroughly novel - different in concept and/ or design to any existing
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	No	**Yes**	**Yes**
Mr Bruce Philp **Consultant Plastic Surgeon**	No	No	**Yes**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	Blank	Blank	**Yes**
Miss Isabel Jones **Burns Consultant**	Blank	**Yes**	Blank
Dr Sarah Pape **Consultant Plastic Surgeon**	No	**Yes**	No

Any Comments?

Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	Blank
Mr Bruce Philp **Consultant Plastic Surgeon**	**The technology is novel and unique and there are no current comparator products that I am aware of. The technique of enzymatic preparation of an autologous cell suspension is not new but the Recell kit allowing preparation in the operating theatre of an autologous skin cell suspension is new and unique.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Previous techniques have relied on laboratory culture of patients skin cells which is time consuming and can only be performed in a limited number of specialist laboratories; this technology can be applied at the time of initial surgery without additional delays and expense of laboratory cultured cells**

Miss Isabel Jones **Burns Consultant**	**Blank**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Blank**

Question 5: What is the most appropriate use (e.g. clinical indication) for the technology?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**It is used to improve wound healing in burn patients both in burn wounds and donor sites. It is especially useful in larger or difficult to heal burns / wound areas with or without skin grafts with or without wider spaced meshing.**

Expert Advisers	Comment
Mr Bruce Philp **Consultant Plastic Surgeon**	**Recell has a role to play in a number of clinical scenarios in burn care.** **1. Mid and deep dermal burns - To transplant autologous keratinocytes and melanocytes to augment and speed healing in mid - to deep dermal burns. This can prevent the need for autologous skin grafting. Recell is usually used following debridement using the Versajet hydrosurgery system and Biobrane dressings. The donor site for the Recell cell suspension is very small compared to conventional skin grafting techniques. There may even be a role in healing superficial burns in selected cases (particularly in children) as there is some limited evidence of possible supra normal healing times using autologous cell suspensions.** **2. Patients with pigmented skin types (Fitzpatrick skin type 3-6) - Recell uniquely can reintroduce melanocytes into healing burn wounds in patients with pigmented skin types, hence reducing or preventing hypo-pigmented burn scars. There is now convincing evidence of persistent melanocyte transplantation using Recell in vitiligo patients and our anecdotal evidence supports melanocyte transplantation and improved repigmentation in burn wounds.** **3. Recell can augment healing of meshed skin grafts by accelerating the healing of the mesh graft interstices. The aesthetic appearance of meshed grafts plus Recell also seems improved.** **4. Skin Graft donor sites - Recell may reduce the healing time of donor sites, which is particularly important in major burn injuries when skin graft donor site healing is the main rate limiting step in burn wound closure** **5. Numerous studies have shown a relationship with slow time-to-healing of burns and the resultant incidence in hypertrophic scars (red, lumpy and itchy/painful scars) .A reduction in the healing time of burn wounds, meshed skin grafts and donor sites treated with Recell may reduce the incidence of hypertrophic scarring and the associated adverse symptoms and use of resources (scar management therapy including pressure garments, splints, silicone dressings, physiotherapy etc.)**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Our team has used this in management of acute burn injuries to aid burn wound healing of partial thickness burn injuries eg scald burns in children. We have also used with meshed skin grafts to improve time to healing, reduction and improved healing of donor sites in major burns. Timely healing of injuries reduces the incidence of hypertrophic scarring and improves outcomes, and prompt donor site healing allows re-harvesting of door sites which allows timelier coverage and reduced risk of infection in major burn patients.** **It can be additionally applied to reconstructive surgery and used to improve established scar appearance .**

Expert Advisers	Comment
Miss Isabel Jones **Burns Consultant**	**This technology is used to apply a suspension of autologous epidermal cells to wounds. It has varied applications including** **-on a chronic wound with the aim of changing the molecular profile and stimulating epithelialisation** **-on a partial thickness injury that will struggle to heal without a graft** **-on stable depigmented skin**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Resurfacing of mid to deep-dermal burns for quicker healing and less scarring, repigmentation of depigmented skin in scars and vitiligo**

COMPARATORS (including both products in current routine use and also "competing products")

Question 6: Given what you stated is the appropriate indication (clinical scenario) for its use, what are the most appropriate "comparators" for this technology which are in routine current use in the NHS?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Other skin healing products such as split thickness skin grafts for full thickness/ deep dermal wounds and biological dressings for partial thickness scalds and donor sites with traditional dressings .**
Mr Bruce Philp **Consultant Plastic Surgeon**	**There are no direct comparator products that I am aware of. Appropriate comparators would be standard-of-care treatments for a particular burns unit such as particular dressings or skin grafting. Cultured keratinocytes are rarely used in our unit (only in massive burn injury- burns greater than 75% TBSA- in children and young adults). We previously had access to sub-confluent keratinocyte cell culture through a research link to the Royal London Hospital but that facility has not been available for the last 3 years. As far as I am aware cultured keratinocytes are currently only commercially available from Altrika in Sheffield, UK (Myskin and allogeneic Cryoskin) but these cell delivery systems are very different to Recell; Myskin is autologous keratinocytes grown in the laboratory on a silicone and acrylic sheet and Cryoskin uses allogeneic cells grown on a silicone sheet.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**one in routine use but occasional use of laboratory cultured keratinocytes, but this technology is not readily or locally available**
Miss Isabel Jones **Burns Consultant**	**The only comparator is laboratory processing of a skin biopsy to release the keratinocytes for use immediately in suspension, or following culture. The indications are similar, but Recell has the very significant advantage of being aavailable anywhere without requiring the use of a laboratory able to process human tissue for clinical use.**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Dressings, skin graft, cosmetic camouflage make-up**

Question 7: "Competing products": Are you aware of any other products which have been introduced with the same purpose as this one?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**As above- but none specifically**
Mr Bruce Philp **Consultant Plastic Surgeon**	**I am not aware of any competing products. Various commercial companies have offered cultured keratinocytes for use in burns in the last 30 years but there are no other products that I am aware of with the same purpose as Recell, which is the preparation and delivery of non-cultured dissociated skin cells to the burn wound.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**not aware**
Miss Isabel Jones **Burns Consultant**	**No**
Dr Sarah Pape **Consultant Plastic Surgeon**	**No**

POSSIBLE BENEFITS FOR PATIENTS

Question 8: What are the likely additional benefits for patients of using this technology, compared with current practice/comparators?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Potential for improved healing for difficult to heal or large burn areas with or without widely meshed grafts and improved donor site healing. Improved healing in partial thickness scalds.** **Improved speed and quality of healing as above resulting in decreased length of stay, decreased critical care stay, decreased scarring, improved quality of healing, decreased septic episodes.**
Mr Bruce Philp **Consultant Plastic Surgeon**	**1. Faster wound healing times for burn wounds, meshed grafts and skin graft donor sites. This may result in reduced length of hospital stay, reduced use of medical,nursing and therapy resources (dressings, analgesia, in-patient and out-patient therapies etc.)** **2. Reduction in hypertrophic scarring and associated morbidity (pain, itch, reduced fun-tion and range of movement, psycho-social) and the associated treatment modalities including physio-therapy and occupational therapy, pressure garments, scar management products etc.** **3. Repigmentation of burn wounds in patients with pigmented skin . that normally would result in hypopigmentation.** **4. Faster rehabilitation and return to work/school/normal activities of daily living as a result of faster healing, reduced wound related symptoms and reduced scarring.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Reduced time to wound healing, benefits in appearance of scars and pigmentation loss following burns; enables the use of the patients own skin cells at the time of surgey to assist healing in a timely and accessible technology and opens the technology to many more patients then previously possible using laboratory cultured cells**
Miss Isabel Jones **Burns Consultant**	**This makes a technique currently available only to a handful of hospitals allied to a human cell culture lab available in any clinical setting. Keratinocytes applied in this way have been demonstrated to aid re-epithelialisation of burns wounds and repigmentation of depigmanted areas.**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Better appearance of scars**

Question 8.1: Is each additional benefit likely to be realised in practice? What are the likely obstacles?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Yes.** **The obstacles relate to cost, technical ease of use and the evidence base.**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Yes. No obstacles assuming the product is funded and available.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Donor site and burn wound healing is multifactorial and also depends upon clinical status of patient and any episodes infection. Any technology that assists healing and time to burn wound coverage impacts on survival from major injuries. Improved cosmetic and functional outcomes after burns are related to time to healing with prolonged healing time assocaited with hypertrophic scars.**
Miss Isabel Jones **Burns Consultant**	**The primary obstacle to use is funding and cost**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Yes. Obstacle is mainly cost and need for general anaesthetic**

Question 8.2: How might these benefits be measured? What specific outcome measures would enable assessment of whether additional benefits for patients are being realised?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Benefits could be measured as: time to full or 95% healing, scarring as measured at 6 months, 12 and 24 months (using VAS and/or POSAS scar tools), incidence of wound infection (as defined by the American Burn association criteria) and hospital length of stay.** **Cost will need to be assessed in relation to patient benefit in relation to healing, scarring, survival and length of hospital stay.**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Reduction in length of stay in hospital, improved quality of life outcomes (pain, reduced scarring, improved pigmentation), reduced dressings and therapy requirements.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Simple measures of time to burn wound healing, reduction of time in dressings post surgery, reduced analgesic requirments as wounds heal, incidence of hypertrophic scarring, need for future scar management**
Miss Isabel Jones **Burns Consultant**	**Adequately powered clinical trials could provided conclusive evidence of improved epithelialisation, wound healing and repigmentation. The outcome measures would include size of wound, time to healing, scarring and pigmentation evaluation**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Time to healing, Scar quality (Vancouver scar assessment scale or similar. Skin colour - spectrophotometry**

Question 8.3: How good is this evidence for each of these additional benefits?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**I am not aware that there is good evidence but I have not done a full literature search.**
Mr Bruce Philp **Consultant Plastic Surgeon**	**There is increasing published evidence (see below) and we have anecdotal evidence from our own burn service.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Established evidence that time to wound healing effects incidence of hypertrophic scarring. Literature predominantly has case series of benefits of the use of ReCell technology. The use of the technology is widening to improve scarring from multiple causes**

Expert Advisers	Comment
Miss Isabel Jones **Burns Consultant**	**There are a number of dase reports and pilot series but no RCT.**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Don't understand the question**

Question 8.4: Please add any further comment on the claimed benefits of the technology to patients, as you see applicable

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Blank**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Blank**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Improved pigmentation and colour match in healing burn wounds. There is no significant impact on the time required in theatre or length of anaesthetic in a well planned proedure.**
Miss Isabel Jones **Burns Consultant**	**Improved healing of difficult wound should reduce the requirement for out patient dressings**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Blank**

POSSIBLE BENEFITS FOR THE HEALTHCARE SYSTEM

Question 9: What are the likely additional benefits for the healthcare system of using this technology, compared with current practice/comparators?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Potential for improved speed and quality of healing, decreased length of stay, decreased critical care stay, decreased scarring, decreased septic episodes.** **Decreased scar management requirement. Decrease in antibiotic use and thus bacterial resistance.Therefore improved clinical and cost effectivenes**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Reduced length of stay in hospital and therefore reduced associated medical, nursing, therapy and administrative costs. Reduced dressings, pain relief medication etc.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Accelerated wound healing can reduce hospital length of stay following burn injury and the number of hospital episodes for dressing wounds. If better cosmetic outcomes are achieved at initial surgery this may reduce the long term need for further consultations/ surgey to improve scar appearance and improved psychosocial outcomes from burn injury.**
Miss Isabel Jones **Burns Consultant**	**Decrease time to healing reduces the need for time-consuming and expensive specialised dressings and improves the long term scar appearance and function. Healing/improved chronic wounds idecreases pain, repigmentation is of psychological benefit.**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Fewer patients with long-term psychological distress about scars and skin depigmentation**

Question 9.1: Is each additional benefit likely to be realised in practice? What are the likely obstacles?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Yes. Obstacles relate to clinical trials (and length of these to assess scar formation), professional dissemination and agreement in achieving national policy which is lacking in burn care.**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Yes**

Expert Advisers	Comment
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**This will depend on good departmental protocols for the appropriate use of the technology and care pathways for patients receiving this tecahnology. The longer term goals of reduced need for recurrent interventions either physiological or psychological for poor scarring will depend on patient perception and expectation of burn surgery as technology develops.**
Miss Isabel Jones **Burns Consultant**	**Primary obstacle is cost of kit, and being re-imbursed**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Yes**

Question 9.2: How might these benefits be measured? What specific outcome measures would enable assessment of whether additional benefits for the healthcare system are being realised?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Benefits could be measured as: time to full or 95% healing, scarring as measured at 6 months, 12 and 24 months (using VAS and/or POSAS scar tools), incidence of wound infection and hospital length of stay.**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Length of stay in hospital, time to healing and discontinuation of dressings, analgesic requirements, scar outcomes including pigmentation, time of return to work/normal activities. Cost benefit analysis of standard care versus use of Recell. Length of stay is relatively easy to measure whlist the other quality of life measurements are more difficult.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Scarring after burn injury can be measure by various scoring systems. Requirement for number of dressing clinic visits.** **Psychological well being in dependent not just on size and appearance of scars so may be difficult to measure**
Miss Isabel Jones **Burns Consultant**	**Cost analysis of kit & procedure vs prolongued dressing changes, monitoring of analgesia requirements, POSAS/Vancouver scar scales, scar pain, scar revision rates, digital evlauation of repigmentation**
Dr Sarah Pape **Consultant Plastic Surgeon**	**QoL, anxiety and depression scales**

Question 9.3: How good is this evidence for each of these additional benefits?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**I am not aware that there is good evidence for these but I have not done a full literature search.**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Limited published data (see references below) and clinical trials (Ref 1 & 4 below) , presentation data from other users at symposia, personal/ and departmental anecdotal evidence. References: 1) Wood F, et al. A prospective randomised clinical pilot study to compare the effectiveness of Biobrane1** **synthetic wound dressing, with or without autologous cell suspension, to the local standard treatment regimen in paediatric scald injuries.** **Burns (2012), doi:10.1016/j.burns.2011.12.020. 2)Wood F. Clinical potential of autologous epithelial** **suspension. Wounds 2003;15. 3)Wood F, Kolybaba ML, Allen P. The use of cultured** **epithelial autograft in the treatment of major burn wounds:** **eleven years of clinical experience. Burns 2006;32:538–44. 4)A randomized trial comparing ReCell system of epidermal cells delivery versus classic skin grafts for the treatment of deep partial thickness burns. Gravante G, Di Fede MC, Araco A, Grimaldi M, De Angelis B, Arpino A, Cervelli V, Montone A. Burns. 2007 Dec;33(8):966-72.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Long term healthcare benfits difficult to establish as until the bedside technology was available use of culture cells was a very limited in use.**
Miss Isabel Jones **Burns Consultant**	**see 8.3**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Don't know**

Question 9.4: Please add any further comment on the claimed benefits of the technology to the healthcare system, as you see applicable

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	Blank
Mr Bruce Philp **Consultant Plastic Surgeon**	**A reduction in symptomatic scarring may result in reduced requirement for reconstructive surgery and the associated expenses. Improved burn scar and repigmentation will reduce adverse psychological sequelae. A faster return to employment/schooling will increase societal benefits.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	Blank
Miss Isabel Jones **Burns Consultant**	Blank
Dr Sarah Pape **Consultant Plastic Surgeon**	Blank

FACILITIES, TRAINING AND FUNCTIONING

Question 10: Are there any particular facilities or infrastructure which needs to be in place for the safe and effective use of this technology?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Not as far as I am aware**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Training is required to use the Recell kit . This is currently provided free of charge by the company. No other special infrastructure or facilities is required (only the refrigerator storage of the enzyme trypsin and the storage space for the other components of the kit. Other requirements are standard of care in burns surgery (wound debridement, skin graft harvest equipment, wound dressings etc).**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**The technology is easy to learn to use so training of theatre scrub teams and surgeons is straightforward and easy to support.**
Miss Isabel Jones **Burns Consultant**	**Access to operating theatres/clean procedures room**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Individual training. Appropriate storage**

Question 11: Is special training required to use this technology safely and effectively?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Not as far as I am aware**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Yes although the technique is relatively easy to master and the kit has clear instructions.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**The kits are easy to use once initial training has ocurred.**

Miss Isabel Jones **Burns Consultant**	**Yes**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Yes**

Question 12: Please comment on any issues relating to the functioning, reliability and maintenance of this technology which may be important to consider if it is introduced

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Blank**
Mr Bruce Philp **Consultant Plastic Surgeon**	**The ReCellis reliable and single use**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Single patient off the shelf kit so reliability of each kit is mainatined.**
Miss Isabel Jones **Burns Consultant**	**Single use kit, consistently reliable to use**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Don't know. Haven't used it yet**

COSTS

Question 13: Please provide any comments on the likely cost consequences of introducing this technology. In particular, please comment on the implications of this technology replacing the comparator/s you have described above

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**I am not able to do this as I do not have the costs of Recell available. If speed of and quality of healing is improved, cost savings to the NHS are likely to be significant both in terms of length of hsopital stay, scar management and antibiotic use.**
Mr Bruce Philp **Consultant Plastic Surgeon**	**The cost per unit is about £950 + VAT but cost savings are possible as the company offers a reduction in cost per unit the greater the number of purchased . There is some published data showing a reduction in overall costs of burn care with Recell use (Ref 1 above).**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Previous culture skin technologies involved sending skin cells for incubation in specialist licensed laboratories and success with the samples in clinical use was unpredictatble. It was time consuming and expensive and required specialist transport of the cells. ReCell is a kit designed to be use at the bedside in theatre to harvest, treat and deliver cells and does not require these expenses and time delays. This makes use of this technology more accessible to all patients who may benefit.**
Miss Isabel Jones **Burns Consultant**	**The initial cost of the kit would be offset by the advantage in speeding up healing and improved scarring**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Don't know. Cost of equipment plus training**

GENERAL ADVICE BASED ON YOUR SPECIALIST KNOWLEDGE

Question 14: Is there controversy about any aspect of this technology or about the care pathway?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**There is no national guidance or professional agreement about when or in which patients to use this technology as far as I am aware.**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Given the recognised difficulty in evaluating outcomes and the effect of specific interventions in burn care (because of the multi-factorial nature of the injuries, patients and multiple treatment modalities) the accurate assessment of the impact of the technology is difficult. None the less the science is plausible (see references below) and the clinical results (our own experience and that of others documented in the literature and presented at symposia) appear to support the beneficial use of the technology. References: 1) Characterisation of the cell suspension harvested from the dermal epidermal junction using a ReCell® kit.** **Wood FM, Giles N, Stevenson A, Rea S, Fear M. Burns. 2012 Feb;38(1):44-51. 2)Cultured autologous keratinocytes in suspension accelerate epithelial maturation in an in vivo wound model as measured by surface electrical capacitance. Magnusson M, Papini RP, Rea SM, Reed CC, Wood FM. Plast Reconstr Surg. 2007 Feb;119(2):495-9.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**no**
Miss Isabel Jones **Burns Consultant**	**No**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Not as far as I am aware**

Question 15: If NICE were to develop guidance on this technology, how useful would this be to you and your colleagues?

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**Extremely useful**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Very useful**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**NICE technology approval would support our continued use of the technology in appropriate patient groups to improve outcomes from burn injuries.**
Miss Isabel Jones **Burns Consultant**	**Very, in supporting funding for standard application of Recell**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Moderately overall but significant for selected patients**

Question 16: Do any subgroups of patients need special consideration in relation to the technology (for example, because they have higher levels of ill health, poorer outcomes, problems accessing or using treatments or procedures)? Please explain why

Expert Advisers	Comment
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**The largest group of children's burns are partial thickness scalds. An understanding of how this technology would impact on healing with this group of patients would impact on many children each year.**
Mr Bruce Philp **Consultant Plastic Surgeon**	**Patients with pigmented skin types. The results of scar pigmentary change in these patients is currently very difficult to treat except by camouflage techniques (clothing, makeup and limited role of cosmetic tattooing).**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**No**

Miss Isabel Jones **Burns Consultant**	**Diabetic and vascular patients would benefit from treatment to chronic ulcers, burns patients benefit because of the extent and complexity of their wounds and scars.**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Patients with skin of colour**

CONFLICTS OF INTEREST

Question 18.1: Do you or a member of your family have a personal pecuniary interest? The main examples are as follows:

Expert Advisers	Consultancies or directorships	Fee-paid work	Shareholdings	Expenses and hospitality	Investments	Personal non-pecuniary interest
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	No	No	No	No	No	**Yes**
Mr Bruce Philp **Consultant Plastic Surgeon**	No	No	No	**Yes**	No	No
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	No	No	No	No	No	No
Miss Isabel Jones **Burns Consultant**	No	No	No	No	No	No
Dr Sarah Pape **Consultant Plastic Surgeon**	No	No	No	No	No	No
If you have answered YES to any of the above statements please describe the nature of the conflict(s) below.						
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**I am deputy chair of the British Burns Association and Chair of the Burn Care Clinical Reference Group. Both groups have a direct interest in national burn care policy and guidelines.**					

Mr Bruce Philp **Consultant Plastic Surgeon**	**I have been funded to attend a symposium on Recell use in burns and for other indications (vitiligo, chronic wounds, aesthetic etc.) in Munich, Germany in March 2013. The company, Avita Medical, paid for my travel expenses, hotel accommodation and meals. This was probably "reasonably required" in that none of these expenses were excessive or luxurious but I feel that I should declare this support for the sake of transparency and probity.**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**Blank**
Miss Isabel Jones **Burns Consultant**	**Blank**
Dr Sarah Pape **Consultant Plastic Surgeon**	**Blank**

Question 18.2: Do you have a non-personal interest? The main examples are as follows:

Expert Advisers	Fellowships endowed by the healthcare industry	Support by the healthcare industry or NICE that benefits his/her position or department, e.g. grants, sponsorship of posts
Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	**No**	**No**
Mr Bruce Philp **Consultant Plastic Surgeon**	**No**	**No**
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	**No**	**No**
Miss Isabel Jones **Burns Consultant**	**No**	**No**
Dr Sarah Pape **Consultant Plastic Surgeon**	**No**	**No**
If you have answered YES to any of the above statements please describe the nature of the conflict(s) below.		

Dr Amber Young **Lead Paediatric Burns Anaesthetist and Paediatric Burns Network Lead**	Blank
Mr Bruce Philp **Consultant Plastic Surgeon**	Blank
Dr Rebecca Martin **Lead Anaesthetist & Intensivist**	Blank
Miss Isabel Jones **Burns Consultant**	Blank
Dr Sarah Pape **Consultant Plastic Surgeon**	Blank