## Screening Examination of Premature Infants for Retinopathy of Prematurity

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(1) Overview material	Provide a structured abstract that includes the guideline's release date, status (original, revised, updated), and print and electronic sources.
Release Date	2006
Status	All policy statements from the American Academy of Pediatrics automatically expire 5 years after publication unless reaffirmed, revised, or retired at or before that time.
Available in Electronic Format	http://pediatrics.aappublications.org/cgi/content/full/117/2/572
Available in Print Format	PEDIATRICS Vol. 117 No. 2 February 2006, pp. 572-576 (doi:10.1542/peds.2005-2749)
Bibliographic citation	Pediatrics 2006;117;572-576 DOI: 10.1542/peds.2005-2749
Contact Information	Empty
Adapted From Another Guideline	Empty
(2) Focus	Describe the primary disease/condition and intervention/ service/ technology that the guideline addresses.  Indicate any alternative preventive, diagnostic or therapeutic interventions that were considered during development.
Primary disease or condition	This statement revises a previous statement on screening of preterm infants for retinopathy of prematurity (ROP) that was published in 2001.
Alternative Strategies Available	Empty
Comparable Guideline	Empty
(3) Goal	Describe the goal that following the guideline is expected to achieve, including the rationale for development of a guideline on this topic.
Goal	This statement presents the attributes on which an effective program for detecting and treating ROP could be based, including the timing of initial examination and subsequent reexamination intervals. The goal of an effective screening program must be to identify the relatively few preterm infants who require treatment for ROP from among the much larger number of at-risk infants while minimizing the number of stressful examinations required for these sick infants.
Rationale	ROP is a pathologic process that occurs only in immature retinal tissue and can progress to a tractional retinal detachment, which can result in functional or complete blindness. Recent development of peripheral retinal ablative therapy using laser photocoagulation has resulted in the possibility of markedly decreasing the incidence of this poor visual outcome, but the sequential nature of ROP creates a requirement that at-risk preterm infants be examined at proper times to detect the changes of ROP before they become permanently destructive.
Outcomes or Performance Measures Considered	Detecting and treating ROP
(4) Users/Setting	Describe the intended users of the guideline (e.g., provider types, patients) and the settings in which the guideline is intended to be used.
Users	All pediatricians who care for these at-risk preterm infants
Care Setting	Pediatric inpatient and/or ambulatory
(5) Target population	Describe the patient population eligible for guideline recommendations and list any exclusion criteria.
Population Target	Low birth weight preterm infantsTerm infants
Eligibility	Low birth weight preterm infantsTerm infants
Inclusion criteria	Low birth weight preterm infants
Exclusion criteria	Term infants
(6) Developer	Identify the organization(s) responsible for guideline development and the names/credentials/potential conflicts of interest of individuals involved in the guideline's development.
Name of Developer	Section on Ophthalmology, American Academy of Pediatrics, American Academy of Ophthalmology and American Association for Pediatric Ophthalmology and Strabismus
Name of Committee	AMERICAN ACADEMY OF PEDIATRICS SECTION ON OPHTHALMOLOGY, 2003–2004SUBCOMMITTEE ON RETINOPATHY OF PREMATURITY, 2003–2005
Committee Expertise	Empty
(7) Funding source/sponsor	Identify the funding source/sponsor and describe its role in developing, and/or reporting the guideline. Disclose potential conflict of interest.

Source of Funding	Empty
Name of Developer	Section on Ophthalmology, American Academy of Pediatrics, American Academy of Ophthalmology and American Association for Pediatric Ophthalmology and Strabismus
Role Of Sponsor	Empty
Conflict Of Interest	Empty
(8) Evidence collection	Describe the methods used to search the scientific literature, including the range of dates and databases searched, and criteria applied to filter the retrieved evidence.
Description of Evidence Collection	The Multicenter Trial of Cryotherapy for Retinopathy of Prematurity demonstrated the efficacy of peripheral retinal cryotherapy (ie, cryoablation of the immature, unvascularized peripheral retina) in reducing unfavorable outcomes.1 The study's 10-year follow-up report2 con1 2 firmed these lasting benefits: unfavorable structural outcomes were reduced from 48% to 27%, and unfavorable visual outcomes (ie, best corrected visual acuity worse than 20/200) were reduced from 62% to 44%. S1988 - 200516
Number of Source Documents	16
Evidence Time Period	1988 - 2005
Criteria for Selecting Evidence	Empty
(9) Recommendation grading criteria	Describe the criteria used to rate the quality of evidence that supports the recommendations and the system for describing the strength of the recommendations. Recommendation strength communicates the importance of adherence to a recommendation and is based on both the quality of the evidence and the magnitude of anticipated benefits or harms.
Recommendation Grading Criteria	Infectious Diseases Society of America—US Public Health Service Grading System forRanking Recommendations in Clinical GuidelinesQuality of evidencel Evidence from >=1 properly randomized, controlled trialII Evidence from >=1 well-designed clinical trial, withoutrandomization; from cohort or case-controlled analytical studies(preferably from >1 center); from multiple time series; or fromdramatic results from uncontrolled experimentsIII Evidence from opinions of respected authorities, based on clinicalexperience, descriptive studies, or reports of expert committeesInfectious Diseases Society of America—US Public Health Service Grading System forRanking Recommendations in Clinical GuidelinesStrength of recommendationA Good evidence to support a recommendation for useB Moderate evidence to support a recommendation for useC Poor evidence to support a recommendation
Evidence Quality Rating Scheme	Infectious Diseases Society of America–US Public Health Service Grading System forRanking Recommendations in Clinical GuidelinesQuality of evidencel Evidence from >=1 properly randomized, controlled trialII Evidence from >=1 well-designed clinical trial, withoutrandomization; from cohort or case-controlled analytical studies(preferably from >1 center); from multiple time series; or fromdramatic results from uncontrolled experimentsIII Evidence from opinions of respected authorities, based on clinicalexperience, descriptive studies, or reports of expert committees
Recommendation Strength Rating Scheme	Infectious Diseases Society of America–US Public Health Service Grading System forRanking Recommendations in Clinical GuidelinesStrength of recommendationA Good evidence to support a recommendation for useB Moderate evidence to support a recommendation for useC Poor evidence to support a recommendation
(10)  Method for synthesizing evidence	Describe how evidence was used to create recommendations, e.g., evidence tables, meta-analysis, decision analysis.
Description of Evidence Combination	Empty
Methods To Reach Judgment	Empty
(11) Pre-release review	Describe how the guideline developer reviewed and/or tested the guidelines prior to release.
External Review	Empty
Pilot testing	Empty
Formal Appraisal	Empty
(12) Update plan	State whether or not there is a plan to update the guideline and, if applicable, an expiration date for this version of the guideline.
Expiration	Empty
Scheduled Review	Empty
(13) Definitions	Define unfamiliar terms and those critical to correct application of the guideline that might be subject to misinterpretation.

Definitions	All policy statements from the American Academy of Pediatrics automatically expire 5 years after publication unless reaffirmed, revised, or retired at or before that time.
Term - Meaning	
(14) Recommendations and rationale	State the recommended action precisely and the specific circumstances under which to perform it. Justify each recommendation by describing the linkage between the recommendation and its supporting evidence. Indicate the quality of evidence and the recommendation strength, based on the criteria described in 9.
Recommendation	1. Candidates for retinal screening exams - Conditonal - 1.1 Infants with a birth weight of less than 1500 g or gestational age of 30 weeks or less (as defined by the attending neonatologist)
Decision Variable	Birth Weight
Decision Variable	Gestational Age
Action	Perform retinal screening examination
Reference	Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of prematurity: preliminary results. Arch Ophthalmol. 1988;106: 471–479
Reference	2. Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of prematurity: ophthalmological outcomes at 10 years. Arch Ophthalmol. 2001;119:1110–1118
Reason	To detect ROP.
Strength of Recommendation	Recommendation Strength = A, "Good evidence to support a recommendation for use."
Quality of Evidence	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.
Recommendation	1. Candidates for retinal screening exams - Conditonal - 1.2 Birth weight between 1500 and 2000 g or gestational age of more than 30 weeks with an unstable clinical course, including those requiring cardiorespiratory support and who are believed by their attending pediatrician or neonatologist to be at high risk, should have retinal screening examinations performed after pupillary dilation using binocular indirect ophthalmoscopy to detect ROP.
Decision Variable	Birth Weight
Decision Variable	Gestational Age
Decision Variable	Unstable clinical course
Decision Variable	Requiring cardiorespiratory support
Decision Variable	High risk
Action	Should have retinal screening examinations
Reference	Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of prematurity: preliminary results. Arch Ophthalmol. 1988;106: 471–479
Reference	2. Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of prematurity: ophthalmological outcomes at 10 years. Arch Ophthalmol. 2001;119:1110–1118
Reason	To detect ROP
Strength of Recommendation	Recommendation Strength = A, "Good evidence to support a recommendation for use."
Quality of Evidence	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.
Recommendation	2. Who performs retinal screening examinations - <i>Conditonal</i> - Trueophthalmologist who has sufficient knowledge and experience to enable accurate identification of the location and sequential retinal changes of ROP.
Decision Variable	True
Action	Empty
Reference	Empty
Reference	Empty
Reason	Empty
Strength of Recommendation	Empty
Quality of Evidence	Empty
Recommendation	2. Who performs retinal screening examinations - <i>Imperative</i> - 2.1 The International Classification of Retinopathy of Prematurity Revisited should be used to classify, diagram, and record these retinal findings at the time of examination.
Action	"The International Classification of Retinopathy of Prematurity Revisited"9 should be used to 9 classify, diagram, and record these retinal findings at the time of examination.
Reference	9. International Committee for the Classification of Retinopathy of Prematurity. The International Classification

	NOTE: "This guideline should be considered tentative rather than evidence-based for infants with a gestational age of 22 to 23 weeks because of the small number of survivors in these gestationalage categories." Evidence
Quality of Evidence	Quality = I, "Evidence from >=1 properly randmoized, controlled trial1. Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of prematurity: preliminary results. Arch Ophthalmol. 1988;106: 471–4792. Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of prematurity: ophthalmological outcomes at 10 years. Arch Ophthalmol. 2001;119:1110–111813. Reynolds JD, Hardy RJ, Kennedy KA, Spencer R, van Heuven WA, Fielder AR. Lack of efficacy of light reduction in preventing retinopathy of prematurity. Light Reduction in Retinopathy of Prematurity (LIGHT-ROP) Cooperative Group. N Engl J Med. 1998;338:1572–1576 any required treatment.
Recommendation	3. Schedule for retinal examination - Conditonal - 3.2. 23 weeks Gestational Age
Decision Variable	Gestational Age
Action	Initial retinal exam at 31 weeks postmenstrual or 8 weeks chronologic
Reference	Empty
Reason	Empty
Strength of Recommendation	Same as 3.1
Strength of	Same as 3.1 Same as 3.1
Strength of Recommendation Quality of Evidence	Same as 3.1
Strength of Recommendation Quality of Evidence Recommendation	Same as 3.1  3. Schedule for retinal examination - <i>Conditonal</i> - 3.3. 24 weeks Gestational Age
Strength of Recommendation Quality of Evidence Recommendation Decision Variable	Same as 3.1  3. Schedule for retinal examination - Conditonal - 3.3. 24 weeks Gestational Age  Gestational Age
Strength of Recommendation Quality of Evidence Recommendation Decision Variable Action	Same as 3.1  3. Schedule for retinal examination - Conditonal - 3.3. 24 weeks Gestational Age Gestational Age Initial retinal exam at 31 weeks postmenstrual or 7 weeks chronologic
Strength of Recommendation Quality of Evidence Recommendation Decision Variable Action Reference	Same as 3.1  3. Schedule for retinal examination - Conditonal - 3.3. 24 weeks Gestational Age Gestational Age Initial retinal exam at 31 weeks postmenstrual or 7 weeks chronologic  Empty
Strength of Recommendation Quality of Evidence Recommendation Decision Variable Action	Same as 3.1  3. Schedule for retinal examination - Conditonal - 3.3. 24 weeks Gestational Age Gestational Age Initial retinal exam at 31 weeks postmenstrual or 7 weeks chronologic
Strength of Recommendation Quality of Evidence Recommendation Decision Variable Action Reference	Same as 3.1  3. Schedule for retinal examination - Conditonal - 3.3. 24 weeks Gestational Age Gestational Age Initial retinal exam at 31 weeks postmenstrual or 7 weeks chronologic  Empty
Strength of Recommendation Quality of Evidence Recommendation Decision Variable Action Reference Reason Strength of	Same as 3.1  3. Schedule for retinal examination - Conditonal - 3.3. 24 weeks Gestational Age Gestational Age Initial retinal exam at 31 weeks postmenstrual or 7 weeks chronologic  Empty  Empty  Empty
Strength of Recommendation Quality of Evidence Recommendation Decision Variable Action Reference Reason Strength of Recommendation  Quality of Evidence	Same as 3.1  3. Schedule for retinal examination - Conditonal - 3.3. 24 weeks Gestational Age  Gestational Age  Initial retinal exam at 31 weeks postmenstrual or 7 weeks chronologic  Empty  Empty  Recommendation Strength = A, "Good evidence to support a recommendation for use."  NOTE: "This guideline should be considered tentative rather than evidence-based for infants with a gestational age of 22 to 23 weeks because of the small number of survivors in these gestationalage categories. "Evidence Quality = I, "Evidence from >= 1 properly randmoized, controlled trial1. Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of prematurity: preliminary results. Arch Ophthalmol. 1988;106: 471–4792. Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of prematurity. Light Reduction in Retinopathy of Prematurity. Light Reduction in Retinopathy of Prematurity (LIGHT-ROP) Cooperative Group. N Engl J Med. 1998;338:1572–1576 any required treatment.
Strength of Recommendation Quality of Evidence Recommendation Decision Variable Action Reference Reason Strength of Recommendation  Quality of Evidence	Same as 3.1  3. Schedule for retinal examination - Conditonal - 3.3. 24 weeks Gestational Age  Gestational Age  Initial retinal exam at 31 weeks postmenstrual or 7 weeks chronologic  Empty  Empty  Recommendation Strength = A, "Good evidence to support a recommendation for use."  NOTE: "This guideline should be considered tentative rather than evidence-based for infants with a gestational age of 22 to 23 weeks because of the small number of survivors in these gestationalage categories. "Evidence Quality = I, "Evidence from >= 1 properly randmoized, controlled trial1. Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of Prematurity: preliminary results. Arch Ophthalmol. 1988;106: 471–4792. Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of prematurity: ophthalmol. 2001;119:1110–111813. Reynolds JD, Hardy RJ, Kennedy KA, Spencer R, van Heuven WA, Fielder AR. Lack of efficacy of light reduction in preventing retinopathy of prematurity. Light Reduction in Retinopathy of Prematurity (LIGHT-ROP) Cooperative Group. N Engl J Med. 1998;338:1572–1576 any required treatment.  3. Schedule for retinal examination - Conditonal - 3.4. 25 weeks Gestational Age
Strength of Recommendation Quality of Evidence Recommendation Decision Variable Action Reference Reason Strength of Recommendation  Quality of Evidence	Same as 3.1  3. Schedule for retinal examination - Conditonal - 3.3. 24 weeks Gestational Age  Gestational Age  Initial retinal exam at 31 weeks postmenstrual or 7 weeks chronologic  Empty  Empty  Recommendation Strength = A, "Good evidence to support a recommendation for use."  NOTE: "This guideline should be considered tentative rather than evidence-based for infants with a gestational age of 22 to 23 weeks because of the small number of survivors in these gestationalage categories. "Evidence Quality = I, "Evidence from >= 1 properly randmoized, controlled trial1. Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of prematurity: preliminary results. Arch Ophthalmol. 1988;106: 471–4792. Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of prematurity. Light Reduction in Retinopathy of Prematurity. Light Reduction in Retinopathy of Prematurity (LIGHT-ROP) Cooperative Group. N Engl J Med. 1998;338:1572–1576 any required treatment.

Reference	Empty
Reason	Empty
Strength of Recommendation	Same as 3.3
Quality of Evidence	Same as 3.3
Recommendation	3. Schedule for retinal examination - Conditonal - 3.5 26 weeks Gestational Age
Decision Variable	Gestational Age
Action	Initial retinal exam at 31 weeks postmenstrual or 5 weeks chronologic
Reference	Empty
Reason	Empty
Strength of Recommendation	Same as 3.3
Quality of Evidence	Same as 3.3
Recommendation	3. Schedule for retinal examination - Conditonal - 3.6. 27 weeks Gestational Age
Decision Variable	Gestational Age
Action	Initial retinal exam at 31 weeks postmenstrual or 4 weeks chronologic
Reference	Empty
Reason	Empty
Strength of Recommendation	Same as 3.3
Quality of Evidence	Same as 3.3
Recommendation	3. Schedule for retinal examination - Conditonal - 3.7. 28 weeks Gestational Age
Decision Variable	Gestational Age
Action	Initial retinal exam at 32 weeks postmenstrual or 4 weeks chronologic
Reference	Empty
Reason	Same as 3.3
Strength of Recommendation	Empty
Quality of Evidence	Same as 3.3
Recommendation	3. Schedule for retinal examination - Conditonal - 3.8. 29 weeks Gestational Age
Decision Variable	Gestational Age
Action	Initial retinal exam at 33 weeks postmenstrual or 4 weeks chronologic
Reference	Empty
Reason	Empty
Strength of Recommendation	Same as 3.3
Quality of Evidence	Same as 3.3
Recommendation	3. Schedule for retinal examination - Conditonal - 3.9. 30 weeks Gestational Age
Decision Variable	Gestational Age
Action	Initial retinal exam at 34 weeks postmenstrual or 4 weeks chronologic
Reference	Empty
Reason	Empty
Strength of Recommendation	Same as 3.3
Quality of Evidence	Same as 3.3
Recommendation	3. Schedule for retinal examination - Conditonal - 3.10. 31 weeks Gestational Age
Decision Variable	Gestational Age
Action	Initial retinal exam at 35 weeks postmenstrual or 4 weeks chronologic
Reference	Empty

Reason	Empty
Strength of Recommendation	Same as 3.3
Quality of Evidence	Same as 3.3
Recommendation	3. Schedule for retinal examination - Conditonal - 3.11. 32 weeks Gestational Age
Decision Variable	Gestational Age
Action	Initial retinal exam at 36 weeks postmenstrual or 4 weeks chronologic
Reference	Empty
Reason	Empty
Strength of Recommendation	Same as 3.3
Quality of Evidence	Same as 3.3
Recommendation	4. Follow-up examinations - Conditonal - 4.1. 1 week or less follow-up
Decision Variable	Stage 1 ROP
Decision Variable	Stage 2 ROP
Decision Variable	Stage 3 ROP
Decision Variable	Zone I
Decision Variable	Zone II
Action	1-week or less follow-up
Reference	14. Reynolds JD, Dobson V, Quinn GE, et al. Evidence-based screening criteria for retinopathy of prematurity: natural history data from the CRYO-ROP and LIGHT-ROP studies. Arch Ophthalmol. 2002;120:1470–1476
Reason	To detect ROP
Strength of Recommendation	Recommendation Strength = A, "Good evidence to support a recommendation for use."
Quality of Evidence	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.
Recommendation	4. Follow-up examinations - Conditonal - 4.2. 1 to 2 week follow-up
Decision Variable	Immature vascularization
Decision Variable	Zone I
Decision Variable	Zone II
Decision Variable  Decision Variable	Zone II Stage 2 ROP
Decision Variable	Stage 2 ROP
Decision Variable  Decision Variable	Stage 2 ROP Regressing ROP
Decision Variable Decision Variable Action	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up
Decision Variable Decision Variable Action Reference	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty
Decision Variable Decision Variable Action Reference Reason Strength of	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty  To detect ROP
Decision Variable Decision Variable Action Reference Reason Strength of Recommendation	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty  To detect ROP  Same as 4.1
Decision Variable Decision Variable Action Reference Reason Strength of Recommendation Quality of Evidence	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty  To detect ROP  Same as 4.1  Same as 4.1
Decision Variable Decision Variable Action Reference Reason Strength of Recommendation Quality of Evidence Recommendation	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty  To detect ROP  Same as 4.1  Same as 4.1  4. Follow-up examinations - Conditonal - 4.3. 2 week follow-up
Decision Variable Decision Variable Action Reference Reason Strength of Recommendation Quality of Evidence Recommendation Decision Variable	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty  To detect ROP  Same as 4.1  Same as 4.1  4. Follow-up examinations - Conditonal - 4.3. 2 week follow-up  Stage 1 ROP
Decision Variable Decision Variable Action Reference Reason Strength of Recommendation Quality of Evidence Recommendation Decision Variable Decision Variable	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty  To detect ROP  Same as 4.1  Same as 4.1  4. Follow-up examinations - Conditonal - 4.3. 2 week follow-up  Stage 1 ROP  Zone II
Decision Variable Decision Variable Action Reference Reason Strength of Recommendation Quality of Evidence Recommendation Decision Variable Decision Variable	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty  To detect ROP  Same as 4.1  Same as 4.1  4. Follow-up examinations - Conditonal - 4.3. 2 week follow-up  Stage 1 ROP  Zone II  Regressing ROP
Decision Variable Decision Variable Action Reference Reason Strength of Recommendation Quality of Evidence Recommendation Decision Variable Decision Variable Decision Variable Action	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty  To detect ROP  Same as 4.1  Same as 4.1  4. Follow-up examinations - Conditonal - 4.3. 2 week follow-up  Stage 1 ROP  Zone II  Regressing ROP  2-week follow up
Decision Variable Decision Variable Action Reference Reason Strength of Recommendation Quality of Evidence Recommendation Decision Variable Decision Variable Action Reference	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty  To detect ROP  Same as 4.1  Same as 4.1  4. Follow-up examinations - Conditonal - 4.3. 2 week follow-up  Stage 1 ROP  Zone II  Regressing ROP  2-week follow up  Empty
Decision Variable Decision Variable Action Reference Reason Strength of Recommendation Quality of Evidence Recommendation Decision Variable Decision Variable Action Reference Reason Strength of	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty  To detect ROP  Same as 4.1  Same as 4.1  4. Follow-up examinations - Conditonal - 4.3. 2 week follow-up  Stage 1 ROP  Zone II  Regressing ROP  2-week follow up  Empty  To detect ROP
Decision Variable Decision Variable Action Reference Reason Strength of Recommendation Quality of Evidence Recommendation Decision Variable Decision Variable Decision Variable Reference Reason Strength of Recommendation	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty  To detect ROP  Same as 4.1  Same as 4.1  4. Follow-up examinations - Conditonal - 4.3. 2 week follow-up  Stage 1 ROP  Zone II  Regressing ROP  2-week follow up  Empty  To detect ROP  Same as 4.1
Decision Variable Decision Variable Action Reference Reason Strength of Recommendation Quality of Evidence  Recommendation Decision Variable Decision Variable Decision Variable Action Reference Reason Strength of Recommendation Quality of Evidence	Stage 2 ROP  Regressing ROP  1- to 2-week follow-up  Empty  To detect ROP  Same as 4.1  Same as 4.1  4. Follow-up examinations - Conditonal - 4.3. 2 week follow-up  Stage 1 ROP  Zone II  Regressing ROP  2-week follow up  Empty  To detect ROP  Same as 4.1  Same as 4.1  Same as 4.1

Decision Variable	Stage 2 ROP
Decision Variable	ROP
Decision Variable	Regressing ROP
Decision Variable	Zone III
Action	2 -3 week follow-up
Reference	Empty
Reason	To detect ROP
Strength of Recommendation	Same as 4.1
Quality of Evidence	Same as 4.1
Recommendation	4. Follow-up examinations - Imperative - Presence of plus disease
Action	The presence of plus disease (defined as dilation and tortuosity of the posterior retinal blood vessels, see below) in zones I or II suggests that peripheral ablation, rather than observation, is appropriate.14
Reference	14. Reynolds JD, Dobson V, Quinn GE, et al. Evidence-basedscreening criteria for retinopathy of prematurity: natural historydata from the CRYO-ROP and LIGHT-ROP studies. Arch Ophthalmol. 2002;120:1470–1476
Reason	Empty
Quality of Evidence	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.
Recommendation	5. New considerations for ablative care - Conditonal - Ablative treatment initiated
Decision Variable	Zone I
Decision Variable	Zone II
Decision Variable	ROP
Decision Variable	Plus Disease
Decision Variable	Stage I
Decision Variable	Stage 2
Decision Variable	Stage 3
Action	Ablative treatment
Reference	Early Treatment for Retinopathy of Prematurity CooperativeGroup. Revised indications for the treatment of retinopathy ofprematurity: results of the early treatment for retinopathy ofprematurity randomized trial. Arch Ophthalmol. 2003;121:1684–1694Quote: Recommendation Strength = A, "Good evidence to support a recommendation for use." Practitioners involved in the ophthalmologic care of preterm infants should be aware that the retinal findings that require strong consideration of ablative treatment were revised recently according to the Early Treatment for Retinopathy of Prematurity Randomized Trial study.7 The finding of threshold ROP, 7 as defined in the Multicenter Trial of Cryotherapy for Retinopathy of Prematurity, may no longer be the preferred time of intervention.
Reason	Empty
Strength of	
Recommendation	Recommendation Strength = A, "Good evidence to support a recommendation for use."
Quality of Evidence	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.
Recommendation	5. New considerations for ablative care - <i>Imperative</i> - Practitioners involved in the ophthalmologic care of preterm infants should be aware that the retinal findings that require strong consideration of ablative treatment were revised recently according to the Early Treatment for Retinopathy of Prematurity Randomized Trial study.
Action	Practitioners involved in the ophthalmologic care of preterm infants should be aware that the retinal findings that require strong consideration of ablative treatment were revised recently according to the Early Treatment for Retinopathy of Prematurity Randomized Trial study.
Reference	Empty
Reason	Empty
Quality of Evidence	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.1. Cryotherapy for Retinopathy of Prematurity Cooperative Group. Multicenter trial of cryotherapy for retinopathy of prematurity: preliminary results. Arch Ophthalmol. 1988;106: 471–4797. Early Treatment for Retinopathy of Prematurity Cooperative Group. Revised indications for the treatment of retinopathy of prematurity: results of the early treatment for retinopathy of prematurity randomized trial. Arch Ophthalmol. 2003;121: 1684–16949. International Committee for the Classification of Retinopathy of Prematurity. The International Classification of Retinopathy of
	Prematurity revisited. Arch Ophthalmol. 2005;123:991–999
Recommendation	

Decision Variable	Previous ROP
Decision Variable	Zone I
Decision Variable	Zone II
Action	Conclusion of acute retinal screening examinations.
Action	If there is examiner doubt about the zone or if the postmenstrual age is less than 35 weeks, confirmatory examinations may be warranted.
Reference	14. Reynolds JD, Dobson V, Quinn GE, et al. Evidence-based screening criteria for retinopathy of prematurity: natural history data from the CRYO-ROP and LIGHT-ROP studies. Arch Ophthalmol. 2002;120:1470–1476
Reason	Empty
Strength of Recommendation	Recommendation Strength = A, "Good evidence to support a recommendation for use."
Quality of Evidence	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.
Recommendation	6. The conclusion of retinal screening exams - <i>Conditonal</i> - 6.2 Exam conclusion finding 2
Decision Variable	Full retinal vascularization
Action	Conclusion of acute retinal screening examinations.
Reference	15. Repka MX, Palmer EA, Tung B. Involution of retinopathy ofprematurity. Cryotherapy for Retinopathy of PrematurityCooperative Group. Arch Ophthalmol. 2000;118:645–659
Reason	Empty
Strength of Recommendation	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.
Quality of Evidence	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.
Recommendation	6. The conclusion of retinal screening exams - <i>Conditonal</i> - 6.3 Exam conclusion finding 3
Decision Variable	Postmenstrual age
Decision Variable	Prethreshold disease
Decision Variable	ROP
Decision Variable	Worse ROP
Action	Conclusion of acute retinal screening examinations.
Reference	15. Repka MX, Palmer EA, Tung B. Involution of retinopathy ofprematurity. Cryotherapy for Retinopathy of PrematurityCooperative Group. Arch Ophthalmol. 2000;118:645–659
Reason	Empty
Strength of Recommendation	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.
Quality of Evidence	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.
Recommendation	6. The conclusion of retinal screening exams - Conditonal - 6.4 Exam conclusion finding 4
Decision Variable	Regressing of ROP
Action	Conclusion of acute retinal screening examinations.
Reference	14. Reynolds JD, Dobson V, Quinn GE, et al. Evidence-based screening criteria for retinopathy of prematurity: natural history data from the CRYO-ROP and LIGHT-ROP studies. Arch Ophthalmol. 2002;120:1470–147615. Repka MX, Palmer EA, Tung B. Involution of retinopathy of prematurity. Cryotherapy for Retinopathy of Prematurity Cooperative Group. Arch Ophthalmol. 2000;118:645–659
Reason	Empty
Strength of Recommendation	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.
Quality of Evidence	Evidence Quality = I, "Evidence from >=1 properly randmoized, controlled trial.
Recommendation	7. Communication with the parents - <i>Imperative</i> - 7.1. Parents should be aware of ROP examinations and should be informed if their child has ROP, with subsequent updates on ROP progression.
Action	Empty
Reference	Empty
Reason	Empty
Quality of Evidence	No citations included in this section.
Roommondation	7. Communication with the parents - <i>Imperative</i> - 7.2. The possible consequences of serious ROP should be
Recommendation	discussed at the time that a significant risk of poor visual outcome develops.

Action	Empty
Reference	Empty
Reason	Empty
Quality of Evidence	No citations included in this section.
quality of Evidence	
Recommendation	7. Communication with the parents - <i>Imperative</i> - 7.3. Documentation of such conversations with parents in the nurse or physician notes is highly recommended.
Action	Empty
Reference	Empty
Reason	Empty
Quality of Evidence	No citations included in this section.
Recommendation	8. Systems recommendations - Conditonal - Hospital discharge or transfer to another neonatal unit or hospital is contemplated
Decision Variable	Hospital discharge or transfer to another neonatal unit or hospital is contemplated
Decision Variable	Empty
Decision Variable	Before retinal maturation into zone III has taken place
Decision Variable	The infant has been treated by ablation for ROP
Decision Variable	Is not yet fully healed
Action	specific arrangement for that examination must be made before such discharge or transfer occurs.
Reference	Empty
Reason	Empty
Strength of Recommendation	No citations included in this section.
Quality of Evidence	No citations included in this section.
Recommendation	8. Systems recommendations - <i>Imperative</i> - If hospital discharge or transfer to another neonatal unit or hospital is contemplated before retinal maturation into zone III has taken place or if the infant has been treated by ablation for ROP and is not yet fully healed, the availability of appropriate follow-up ophthalmologic examination must be ensured, and specific arrangement for that examination must be made before such discharge or transfer occurs.
Action	Empty
Reference	Empty
Reason	Empty
Quality of Evidence	Empty
(15) Potential benefits and harms	Describe anticipated benefits and potential risks associated with implementation of guideline recommendations.
Health Outcomes	Detecting and treating ROP
Cost Analysis	Empty
Description of Harms and Benefits	Empty
Quantification of Harms and Benefits	Empty
Alternative Practices Risks	Empty
(16) Patient preferences	Describe the role of patient preferences when a recommendation involves a substantial element of personal choice or values.
Role of Patient Preferences	Empty
(17) Algorithm	Provide (when appropriate) a graphical description of the stages. and decisions in clinical care described by the guideline.
Algorithm	Empty
Action Steps	Empty
Conditional Steps	Empty
Alternative Steps	Empty

Synchronization Step	Empty
(18) Implementation considerations	Describe anticipated barriers to application of the recommendations. Provide reference to any auxiliary documents for providers or patients that are intended to facilitate implementation. Suggest review criteria for measuring changes in care when the guideline is implemented.
Implementation Plan	Empty
Implementation Strategy	Empty
Supporting Documents	Empty
Patient Resources	Empty
Anticipated Enabler	Empty
Anticipated Barrier	Empty
Quick Reference Guide	Empty
Technical Report	Empty