

Organ Preservation in Rectal Cancer Management: A Prospective GRECCAR Snapshot Study

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BACKGROUND: Organ preservation strategies, including watch and wait and local excision, are increasingly adopted in rectal cancer management. Total neoadjuvant therapy improves complete response rates, potentially expanding organ preservation indications.

OBJECTIVE: This study aims to evaluate the real-world implementation of organ preservation strategies and short-term oncologic outcomes in patients with nonmetastatic mid- and low-rectal cancer in France.

DESIGN: Prospective, multicenter, observational cohort study.

SETTINGS: Twenty-seven French Groupe de RECherche sur le CANcer ColoRectal centers were included.

PATIENTS: Patients with biopsy-proven, nonmetastatic rectal adenocarcinoma (<12 cm from anal verge) treated with neoadjuvant therapy managed with organ preservation intent across 27 French Groupe de RECherche sur le CANcer ColoRectal centers (October 2022–March 2023) were included. Patients were categorized into selective (early stage) or opportunistic (advanced stage) strategies and managed with either watch and wait or local excision.

MAIN OUTCOME MEASURES: The main outcome measures were rates of organ preservation, watch and wait versus local excision use, and oncologic outcomes at 1 and 2 years, including overall survival, disease-free survival, local recurrence-free survival, total mesorectal excision-free survival, and distant metastasis.

RESULTS: Of the 457 patients, 117 (26%) underwent organ preservation, more frequently with the selective strategy (51% vs 18.1%; $p < 0.001$). Watch and wait was the predominant organ preservation method (78% vs 22%) and was used similarly across both groups ($p = 0.728$). Total neoadjuvant therapy was the most common neoadjuvant regimen (67%), predominantly via induction chemotherapy (56%). Overall 2-year survival exceeded 95% across groups. No significant differences were found between watch and wait and local excision in disease-free survival, local recurrence-free survival, or total mesorectal excision-free survival. Local regrowth occurred in 14 watch and wait patients and in 3 patients after local excision, mostly within the first year, with salvage surgery successfully performed. Distant metastases were more frequent in patients treated under the opportunistic strategy.

LIMITATIONS: The short follow-up period limits the assessment of long-term outcomes and late recurrences.

CONCLUSIONS: In this nationwide French cohort, organ preservation strategies—supported by total

neoadjuvant therapy—were feasible and safe across tumor stages. Both watch and wait and local excision demonstrated comparable short-term oncologic outcomes, supporting their roles as viable options within individualized, response-adapted treatment pathways. See **Video Abstract**.



PRESERVACIÓN DE ÓRGANOS EN EL TRATAMIENTO DEL CÁNCER DE RECTO: UNA PERSPECTIVA PROSPECTIVA DEL ESTUDIO GRECCAR

ANTECEDENTES: Las estrategias de preservación de órganos, incluyendo la observación y espera y la escisión local, se adoptan cada vez más en el manejo del cáncer de recto. La terapia neoadyuvante total mejora las tasas de respuesta completa, lo que podría ampliar las indicaciones de preservación de órganos.

OBJETIVO: Evaluar la implementación en la práctica clínica de las estrategias de preservación de órganos y los resultados oncológicos a corto plazo en pacientes con cáncer de recto medio e inferior no metastásico en Francia.

DISEÑO: Estudio de cohorte prospectivo, multicéntrico y observacional.

ÁMBITO: Se incluyeron veintisiete centros GRECCAR franceses.

PACIENTES: Se incluyeron pacientes con adenocarcinoma de recto no metastásico confirmado por biopsia (<12 cm del margen anal) tratados con terapia neoadyuvante con intención de preservar el órgano en 27 centros GRECCAR franceses (octubre de 2022 a marzo de 2023). Los pacientes se clasificaron en estrategias selectivas (estadio temprano) u oportunistas (estadio avanzado) y se manejaron con observación y espera o escisión local. Principales medidas de resultado: Tasas de preservación de órganos, observación y espera frente a escisión local, y resultados oncológicos a 1 y 2 años, incluyendo supervivencia global, supervivencia libre de enfermedad, supervivencia libre de recurrencia local, supervivencia libre de escisión total del mesorrecto y metástasis a distancia.

RESULTADOS: De los 457 pacientes, 117 (26%) se sometieron a preservación de órganos, con mayor frecuencia mediante la estrategia selectiva (51% frente a 18,1%; $p < 0,001$). La observación y espera fue el método predominante de preservación de órganos (78% frente a 22%), utilizado de forma similar en ambos grupos ($p = 0,728$). La terapia neoadyuvante total fue el régimen neoadyuvante más común (67%), predominantemente

mediante quimioterapia de inducción (56%). La supervivencia global a los 2 años superó el 95% en ambos grupos. No se observaron diferencias significativas entre la observación y espera y la escisión local en la supervivencia libre de enfermedad, la supervivencia libre de recurrencia local ni la supervivencia libre de escisión total del mesorrecto. Se observó recidiva local en 14 pacientes del grupo de observación y espera, y en 3 tras la escisión local, principalmente durante el primer año, realizándose con éxito una cirugía de rescate. Las metástasis a distancia fueron más frecuentes en los pacientes tratados con la estrategia oportunista.

LIMITACIONES: El corto periodo de seguimiento limita la evaluación de los resultados a largo plazo y las recidivas tardías.

CONCLUSIONES: En esta cohorte francesa a nivel nacional, las estrategias de preservación de órganos —apoyadas por terapia neoadyuvante total— resultaron factibles y seguras en todos los estadios tumorales. Tanto la observación y espera como la escisión local demostraron resultados oncológicos a corto plazo comparables, lo que respalda su papel como opciones viables dentro de las vías de tratamiento individualizadas y adaptadas a la respuesta. (*AI-generated translation*)

KEY WORDS: Clinical complete response; Local excision; Rectal cancer; Real-world data; Organ preservation; Total neoadjuvant therapy; Watch and wait.

The management of rectal cancer has evolved significantly in recent years, finding the balance between achieving optimal oncological outcomes and quality of life. Preoperative chemoradiotherapy (CRT) has long been the standard of care for locally advanced rectal cancers, reducing local recurrence (LR) with no impact on overall survival (OS).^{1–3} More recently, total neoadjuvant therapy (TNT) has emerged as a preferred approach for patients with locally advanced rectal cancer, offering improved long-term oncological results.⁴ Two main TNT strategies have been developed: induction chemotherapy followed by CRT (INCT-CRT) or CRT followed by consolidation chemotherapy (CRT-CNCT), as supported by randomized trials that reported higher pathological complete response (pCR) without compromising oncological outcomes.^{4–8} Although neoadjuvant sequencing varies across studies, consistent findings demonstrated that intensified preoperative treatment increases both clinical complete response (cCR) and pCR rates.

These improved response rates have renewed interest in organ preservation (OP) strategies. OP, through either a watch and wait (WW) strategy or local excision (LE), may spare patients the morbidity associated with total mesorectal excision (TME), including digestive,

urinary, and sexual dysfunction. Two main OP strategies have emerged. The opportunistic strategy targets patients with locally advanced rectal or high-risk tumors (cT2–3 with tumor length >4 cm or cT4 or cN2) who achieve a cCR following neoadjuvant therapy, typically TNT. These patients are managed with a WW strategy, which includes close surveillance through clinical examination, MRI, and rectoscopy. First described by Habr-Gama et al,⁹ the WW strategy demonstrated that approximately 26% of patients maintained a durable complete response 10 years after CRT without surgery. The selective strategy, according to the French guidelines, applies to early or intermediate-stage tumors (cT2–3 with tumor length ≤4 cm and N0–1), including LE for patients with nCR or cCR following neoadjuvant therapy.¹⁰ This strategy has been associated with OP rates ranging from 50% to 80%.^{11–16} The French Groupe de REcherche sur le CAncer ColoRectal (GRECCAR) 2 trial randomly assigned patients with early-stage rectal cancer and good response to CRT to either LE or TME and showed that nearly 60% achieved OP without compromising oncological outcomes.¹² Similarly, in the recent TAU-TEM phase III trial, authors have reported an 82.7% OP rate in patients randomly assigned to CRT followed by transanal excision (TEM), with no adverse impact on early oncologic outcomes.¹⁷

The aim of the GRECCAR snapshot study was to describe the real-life management of nonmetastatic mid- and low-rectal cancer in France, with a particular focus on neoadjuvant treatment strategies, OP practices, and short-term oncologic outcomes. Specifically, the study sought to evaluate the implementation and outcomes of WW and LE strategies in both selective and opportunistic clinical contexts.

MATERIALS AND METHODS

This study adheres to the Strengthening of the Reporting of Observational Studies in Epidemiology guidelines. A checklist has been submitted as a Supplemental File (<https://links.lww.com/DCR/C612>).

Study Population and Design

This multicentric, prospective, observational study involved 27 French GRECCAR centers and was performed between October 1, 2022, and March 31, 2023. All patients with biopsy-proven rectal adenocarcinoma, located within 12 cm of the anal verge with either proficient mismatch repair or deficient mismatch repair status (<12 cm from the anal margin), who received neoadjuvant treatment were enrolled in a prospective database during the 6-month snapshot inclusion period. Metastatic patients were excluded. Baseline characteristics were collected at inclusion in the study, and follow-up data were collected at each subsequent clinic encounter with the surgeon in

charge. Ethical approval covered the prospective collection of clinical data, and written informed consent for study participation and follow-up was obtained at initial inclusion, before the start of any treatment.

Data Collection

For each patient, the following information was collected: age, sex, BMI, and tumor location (mid or low-rectal cancer). All types of neoadjuvant treatment, as discussed in the multidisciplinary team (MDT) meetings, were included: radiotherapy or chemotherapy alone, CRT alone, TNT with INCT-CRT and CRT-CNCT, and immunotherapy. Patients were categorized into 2 predefined groups according to the initial clinical stage and risk profile. The opportunistic group represents locally advanced or high-risk rectal tumors, defined as cT2 and cT3 with a tumor length >4 cm, or cT4 tumors or cN2 disease, or positive extramural vascular invasion (EMVI⁺) or positive circumferential resection margin (CRM⁺). The selective group represents early or intermediate risk rectal tumors, defined as cT2 and cT3 with a tumor length ≤4 cm and N0 and N1 disease, with EMVI-negative (EMVI⁻) and CRM-negative (CRM⁻) statuses. In both groups, patients who achieved a cCR (no residual lesion on endoscopy, no palpable tumor on digital rectal examination, and no residual disease on MRI) or nCR (residual endoscopic and/or radiological abnormalities) were managed with either a WW strategy or LE. As this study reflects real-life practice across French centers, the choice between WW and LE was made during MDT discussions and was not standardized at the national level. In general, according to current French guidelines and following MDT discussions, LE was generally considered for patients presenting a near-complete or subcomplete response after neoadjuvant therapy. However, because detailed reassessment data were not uniformly collected, individual indications for LE versus WW could not be determined. The primary end points were OS, DFS, LR-free survival (LRFS), and TME-free survival for 1 and 2 years. Tumor regrowth or LR, as well as salvage treatments, were also recorded. Follow-up data were collected prospectively during routine clinical visits, including clinical examination, endoscopy, and MRI every 3 months during the first 2 years.

Statistical Analysis

Qualitative variables were expressed as numbers and percentages and compared using the χ^2 test or the Fisher exact probability test when appropriate. Quantitative variables were expressed as medians with ranges and compared using the Mann-Whitney *U* test. Kaplan-Meier analysis was used to estimate survival rates, and comparisons were performed using the log-rank test. A *p* value of <0.05 was considered significant. Statistical analysis was performed using IBM SPSS Statistics, version 20.0.

RESULTS

Baseline Patients

A total of 457 patients were enrolled during the inclusion period of this snapshot study, of whom 104 were managed with a selective strategy and 353 with an opportunistic strategy (Fig. 1). Of these, 117 (26%) underwent an OP strategy and constituted the study population for this analysis. OP was significantly more frequent in the selective group (53/104; 51%) than in the opportunistic group (64/353; 18.1%; *p* < 0.001; Table 1).

The median age was 66.5 years (range, 26–90) and 55% were men. The median BMI was 25.3 (range, 15.8–45.2). Most rectal tumors were in the lower rectum (69%). Clinically, 85% of tumors were staged cT2 and cT3 and 10% as cT4. Clinical lymph node involvement (cN1) was present in 41% of cases. In the opportunistic strategy, tumors were cT2 and cT3 >4 cm in 81%, cN1 in 53%, EMVI⁺ in 12%, and CRM⁺ in 60%. Regarding neoadjuvant therapy, 67% of patients received TNT—with 56% receiving INCT and 11% receiving CNCT—whereas 20% of patients received CRT alone. Patients in the opportunistic group were more frequently treated with TNT (80% vs 53%, *p* = 0.014), whereas CRT was more commonly used in the selective strategy (34% vs 8%, *p* = 0.014).

OP Strategies and Histological Outcomes After LE

Table 2 summarizes OP strategies adopted at 6 months after neoadjuvant treatment and the pathological findings in patients who underwent LE. Among the 117 patients, 78% (*n* = 91) were managed with a WW strategy, whereas 22% (*n* = 26) underwent LE. The distribution of strategies did not differ between the opportunistic and selective groups (*p* = 0.728). The median interval between completion of neoadjuvant treatment and LE was 2.6 months (range, 1–5.2) in the opportunistic group and 2.9 months (range, 1.8–6) in the selective group.

Histological analysis of the 26 LE specimens showed that complete or near-complete response (ypT0-is) occurred in 46% of cases versus 42% for ypT2 and 12% for ypT3. The ypT0 rate was comparable between groups: 40% in the opportunistic group and 36% in the selective group.

Oncologic Outcomes According to OP Strategy

Table 3 presents oncological outcomes between WW and LE within both the selective and opportunistic strategy groups. None of the comparisons of OS, disease-free survival, LRFS, and TME-free survival reached statistical significance.

Regrowth, LR, and Subsequent Management in Patients With Rectal Cancer

Of the 117 patients included during the 6-month recruitment window, 103 had complete longitudinal follow-up

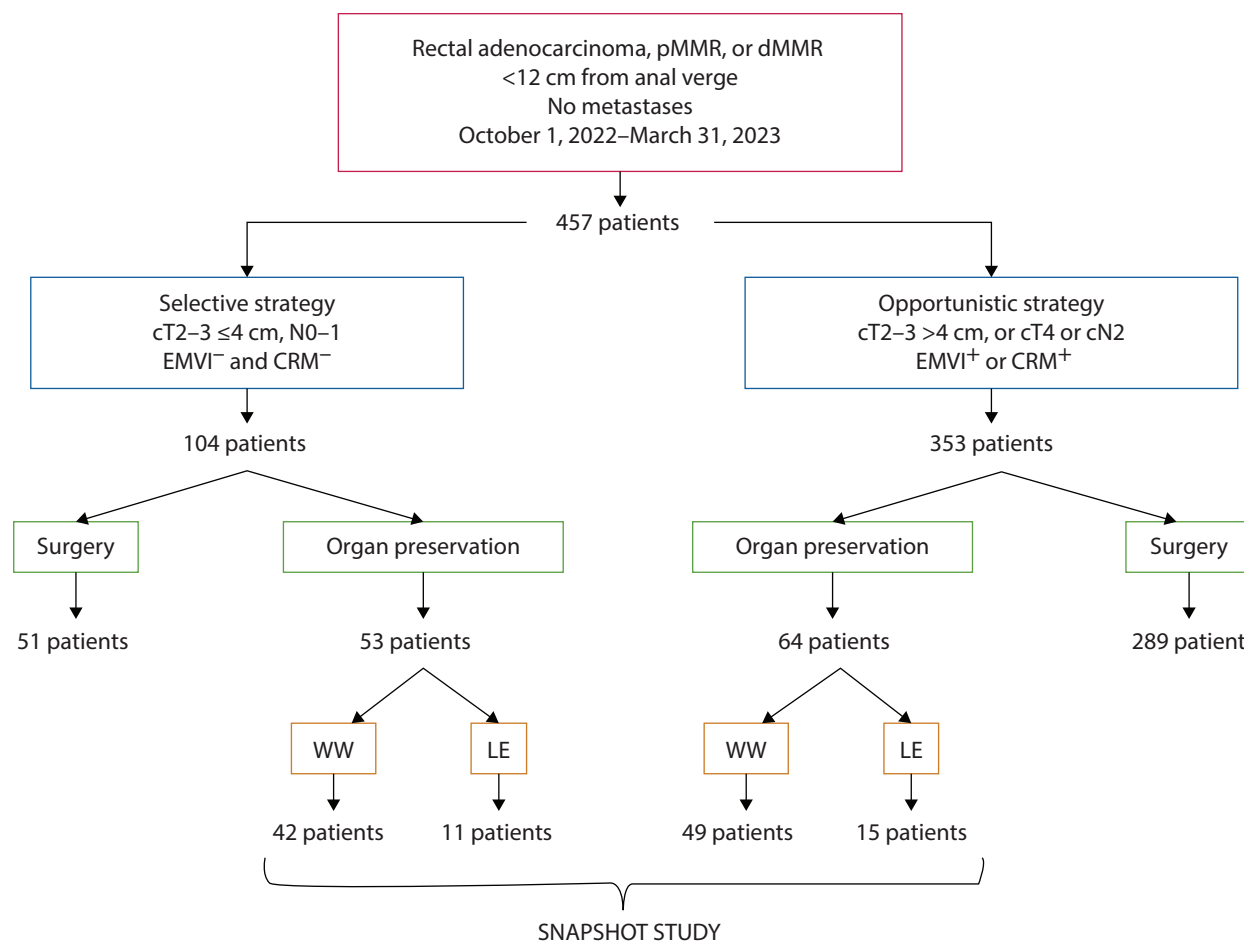


FIGURE 1. Flow chart of the snapshot study. CRM = circumferential resection margin; dMMR = deficient mismatch repair; EMVI = extramural vascular invasion; LE = local excision; pMMR = proficient mismatch repair; WW = watch and wait.

data and were therefore retained for oncologic outcome analysis. Among 103 evaluable patients, 17 (16.5%) developed LR or regrowth, with a median time to diagnosis of 12 months after completion of neoadjuvant therapy. Regrowth occurred in 14 of 78 cases (17.9%) following a WW strategy, whereas 3 of 25 LR (12%) occurred after LE—1 in the selective group and 2 in the opportunistic group (Table 4).

Distant metastases (DMs) were observed in 5 patients (4.9%), predominantly in the opportunistic group ($n = 4$), including 3 after LE and 1 after WW. A single DM occurred in the selective group, also after LE. Metastatic sites included the liver ($n = 2$), lung ($n = 2$), and iliac lymph nodes ($n = 1$).

Salvage surgery was performed following MDT discussion in cases where surveillance identified local regrowth or LR, based on clinical, endoscopic, or MRI findings. Salvage surgery included LE ($n = 4$), TME ($n = 6$), abdominoperineal resection ($n = 4$), and Hartmann's procedure ($n = 1$). Two patients did not undergo further surgical intervention.

DISCUSSION

This prospective, multicenter snapshot provides a comprehensive overview of rectal cancer management across France with a particular focus on OP strategies in patients with nonmetastatic mid- and low-rectal cancer.

Our findings demonstrate that OP was achieved in 26% of patients, underscoring the growing integration of OP strategies, particularly within the context of TNT, into routine clinical practice. This trend is likely to expand further, supported by the increasing use of TNT,^{4,8} the introduction of immunotherapy for mismatch repair-deficient tumors,¹⁸ and optimized response-assessment protocols. As therapeutic approaches become increasingly personalized and risk-adapted, the proportion of patients eligible for successful OP is expected to rise in the coming years.

In our cohort, TNT was the most used neoadjuvant regimen (67%), emphasizing its central role in current rectal cancer management. Whether delivered as INCT-CRT or CNCT-CRT, TNT significantly increases the likelihood

TABLE 1. Demographic, clinical, and tumor-related characteristics of patients at diagnosis

Variables	Total (N = 117)	Opportunistic (N = 64)	Selective (N = 53)	p
Sex				
Male	64 (55%)	36 (56%)	28 (53%)	0.711
Female	53 (45%)	28 (44%)	25 (47%)	
Age, y, median (range)	66.5 (26–90)	67 (26–90)	65 (37–89)	0.296
BMI, median (range)	25.3 (15.8–45.2)	26.2 (16.4–45.2)	24.7 (15.8–37.5)	0.136
Location				
Lower rectum	81 (69%)	45 (70%)	36 (68%)	0.781
Middle rectum	36 (31%)	19 (30%)	17 (32%)	
cT stage				<0.001
1	5 (4%)	0 (0%)	5 (9%)	0.003
2	33 (28%)	13 (20%)	20 (38%)	
3	67 (57%)	39 (61%)	28 (53%)	
4	12 (10%)	12 (19%)	0 (0%)	
cN1	48 (41%)	34 (53%)	14 (26%)	0.015
mrEMVI ⁺	7 (7%)	7 (12%)	0 (0%)	<0.001
mrCRM ⁺	34 (29%)	34 (60%)	0 (0%)	0.014
Neoadjuvant treatment				
Induction CT + CRT	66 (56%)	41 (64%)	25 (47%)	0.014
CRT + consolidation CT	13 (11%)	10 (16%)	3 (6%)	
CRT	23 (20%)	5 (8%)	18 (34%)	
RT alone	7 (6%)	4 (6%)	3 (6%)	
CT alone	2 (2%)	1 (2%)	1 (2%)	
Immunotherapy	6 (5%)	3 (5%)	3 (6%)	

Allocation into the selective or opportunistic strategy was based on French national criteria (selective: cT2–3 ≤4 cm, N0–1, EMVI-/CRM⁺; opportunistic: cT2–3 >4 cm or cT4 or cN2 or EMVI⁺/CRM⁺).

CRM = circumferential resection margin; CRT = chemoradiotherapy; CT = chemotherapy; EMVI = extramural vascular invasion; mr = MRI (magnetic resonance imaging); RT = radiotherapy.

TABLE 2. Organ preservation strategy at 6 mo and histopathological findings after local excision

Variables	Total (N = 117)	Opportunistic (N = 64)	Selective (N = 53)	p
Strategy at 6 mo				
WW	91 (78%)	49 (77%)	42 (79%)	0.728
LE	26 (22%)	15 (23%)	11 (21%)	
Histology of LE	N = 26	N = 15	N = 11	
ypT0	10 (38%)	6 (40%)	4 (36%)	0.728
ypTis	2 (8%)	0 (0%)	2 (18%)	
ypT1	0 (0%)	0 (0%)	0 (0%)	
ypT2	11 (42%)	7 (47%)	4 (37%)	
ypT3	3 (12%)	2 (13%)	1 (9%)	

LE = local excision; WW = watch and wait.

of achieving a cCR and enabling OP via a WW strategy or LE. The predominant use of TNT, especially in the opportunistic group, reflects a tendency to intensify neoadjuvant therapy in more locally advanced tumors. These findings are supported by recent randomized trials that have already shown the value of intensified neoadjuvant protocols in improving response rates, thereby increasing the potential for OP. The French PRODIGE 23 phase III trial demonstrated that delivering neoadjuvant triplet chemotherapy (FOLFIRINOX) before CRT significantly improved pCR rates (28% vs 12%) and enhanced long-term 7-year OS (81.9% vs 76.1%) compared to standard CRT.^{4,5} Building on these findings, the French phase III randomized trial GRECCAR12 evaluated whether INCT-CRT could improve

OP rates in patients with early-stage tumors (cT2–3N0–N1 ≤ 4 cm) compared to standard CRT, with results still pending (NCT02514278).¹⁹ In contrast, INCT was more frequently used than CNCT, which aligns with current clinical practice patterns in France, where induction-based TNT remains more commonly implemented. This contrasts with international trends where consolidation-based strategies have gained popularity following the results of the OPRA trial.⁸ The OPRA phase II randomized trial compared 2 TNT sequencing strategies—INCT-CRT versus CRT-CNCT—in patients with stage cT3 to 4N0 or cT × N1 and N2 rectal cancer considered for OP. Although both regimens achieved high cCR and WW rates, the consolidation arm yielded superior 5-year TME-free survival

TABLE 3. Oncological outcomes observed after WW or LE in both selective and opportunistic clinical contexts

<i>Selective approach</i> (N = 47)	WW (N = 37)	LE (N = 10)	P
Overall survival			
At 1 y	100%	100%	0.55
At 2 y	93%	100%	
Disease-free survival			
At 1 y	89%	90%	0.252
At 2 y	64%	90%	
Local recurrence-free survival			
At 1 y	92%	90%	0.320
At 2 y	68%	90%	
TME-free survival			
At 1 y	92%	90%	0.634
At 2 y	84%	90%	
<i>Opportunistic approach</i> (N = 56)	WW (N = 41)	LE (N = 15)	P
Overall survival			
At 1 y	97%	100%	0.361
At 2 y	95%	100%	
Disease-free survival			
At 1 y	87%	80%	0.360
At 2 y	78%	64%	
Local recurrence-free survival			
At 1 y	87%	93%	0.660
At 2 y	81%	85%	
TME-free survival			
At 1 y	95%	87%	0.233
At 2 y	86%	62%	

LE = local excision; TME = total mesorectal excision; WW = watch and wait.

without compromising oncological safety, thus reinforcing its value in OP strategies. The debate between induction and consolidation approaches remains open and reflects global heterogeneity in TNT implementation.

A key finding of our study is the predominance of the WW strategy (78%) over LE (22%), with a significantly higher use of the selective strategy. This observation underscores the growing interest in the WW strategy, especially in light of growing evidence from real-world cohorts confirming its oncological safety in appropriately selected patients.^{20,21} Although current French guidelines¹⁰ recommend a selective OP strategy for patients with early tumors (cT2–3 ≤4 cm N0–1) involving LE, international practices increasingly support the opportunistic use of WW. The comparable use of WW in our opportunistic and selective cohorts suggests a shift in clinical attitudes, with growing clinical confidence in close surveillance protocols, even for more advanced rectal tumors. This trend is probably due to improvements in cCR assessment accuracy using high-resolution MRI, rectoscopy, and digital rectal examinations alongside structured and close follow-up protocols.²²

In line with these other findings, the present snapshot study showed no significant differences in oncologic outcomes between WW or LE, regardless of whether patients were managed using a selective or opportunistic strategy. At 2-year follow-up, OS exceeded 95% across all groups. These findings suggest that WW and LE are not rigidly determined by tumor stage at diagnosis but are complementary strategies that can be selected on the basis of tumor response, patient-specific factors, and individual preferences. This evolving concept is reflected in current and upcoming trials. The STAR-TREC trial is evaluating a strategy combining WW and LE based on tumor response following neoadjuvant treatment in cT1 to T3 N0 rectal cancer ≤4 cm.¹⁴ This approach proposes a potential continuum of OP, where WW was proposed to patients achieving a cCR and LE for those with a nCR. Furthermore, the ongoing PRODIGE 101–GRECCAR

TABLE 4. Oncologic outcomes (local regrowth and distant metastasis) and surgical strategies after regrowth

<i>Evaluable patients</i> (N = 103)	<i>Regrowth after WW</i> (N = 14)	<i>Local recurrence after LE</i> (N = 3)	<i>Distant metastasis</i> (N = 5)
Approach			
Selective (N = 47)	9	1	1
Opportunistic (N = 56)	5	2	4
After			
WW (N = 78)	14	0	1 ^a
LE (N = 25)	0	3	4 ^b
Salvage surgical treatment			
LE	4	0	
TME	4	2	
APR	3	1	
Hartmann	1	0	
None	2	0	

APR = abdominoperineal amputation; LE = local excision; TME = total mesorectal excision; TNT = total neoadjuvant therapy; WW = watch and wait.

^aLung metastasis after an opportunistic approach with TNT.^bLiver metastases (2): 1 after selective approach with chemoradiotherapy and 1 after opportunistic approach with TNT; iliac lymph node (1) involvement after opportunistic approach with TNT; lung metastasis (1) after opportunistic approach with TNT.

20–EVAREC study will likely provide answers regarding the feasibility and effectiveness of this approach (NCT 06740357). This multicenter, randomized, phase III trial aims to compare a tumor response surveillance program incorporating WW, LE, contact x-ray therapy, or TME incorporating shared decision-making against a standardized tumor response assessment followed by pre-defined OP strategies. By integrating patient preferences into the treatment algorithm and adapting interventions based on individual tumor response, this trial aims to validate a more dynamic, patient-centered model of rectal cancer care.

Importantly, tumor regrowth after WW was observed in 17.9% of patients, mostly within the first year following completion of neoadjuvant treatment. This finding aligns with previously reported regrowth rates of 15% to 30% in WW cohorts.^{20,23,24} Although the oncological safety of WW has been widely demonstrated,^{20,21} both in our study and in the literature, local regrowth is a well-recognized risk factor for DM.^{25,26} Several studies suggest a higher risk of DM in patients with local regrowth compared to those undergoing immediate TME or LE and were found to have near-complete pathological response (less than 10% residual cancer cells) in the surgical specimen.^{27,28} In our cohort, only 1 patient developed DM after the WW strategy, suggesting a limited short-term impact. However, this finding should be interpreted with caution due to the relatively short median oncological follow-up of 20.2 months (range, 6.1–36.7). Prior GRECCAR data demonstrated that patients undergoing LE for nCR had significantly lower rates of DM than those undergoing salvage surgery after local regrowth within the WW strategy.²⁹ LE showed stable oncologic outcomes with only 3 cases of LR but 4 cases with DM. These patients likely represent poor responders to neoadjuvant treatment. This emphasizes the importance of careful histopathologic assessment after LE and the potential need to tailor postoperative management—such as consideration of completion TME or adjuvant systemic therapy—in patients with high-risk pathological features. Finally, DM was more frequent in the opportunistic group, possibly reflecting the more advanced tumor biology in these cases, which is consistent with prior evidence identifying baseline tumor stage as an independent risk factor of regrowth and DM.^{26,30}

The strengths of our study include its prospective design, national multicenter participation, a short period of inclusion, and focus on current clinical practices. However, our study has limitations. First, the limited sample size and limited follow-up period limit the assessment of long-term outcomes and late recurrences. Second, incomplete follow-up data for a subset of patients (103/117 evaluable for oncological end points) reduced the power of some analyses and should be considered when interpreting the results. Longer-term data will be

essential to validate these early outcomes regarding functional results and quality of life. Because this national snapshot reflects routine practice across multiple French centers, detailed information on the specific clinical rationale for choosing WW versus LE in individual cases could not be systematically collected. Nevertheless, all management decisions were validated within MDT meetings and in accordance with standard national practice. Finally, as the present snapshot focused exclusively on patients managed with an OP strategy, outcomes of patients who underwent standard TME after neoadjuvant therapy were not captured, preventing direct comparison with non-OP pathways.

CONCLUSIONS

This prospective multicenter snapshot provides real-world insights into OP practices for nonmetastatic rectal cancer across France. Both WW and LE emerged as feasible strategies in routine care, not only for early-stage tumors but also for selected cases with more advanced disease. The increasing use of TNT and improved response-assessment tools is expanding the number of patients eligible for OP. The similarity of early oncologic outcomes across WW and LE, in both selective and opportunistic clinical contexts, underscores the importance of individualized treatment pathways, structured surveillance, and MDT-based decision-making. Overall, this snapshot reflects the evolving landscape of rectal cancer management in France, where OP is becoming increasingly integrated into routine clinical practice. Given the limited sample size and follow-up duration, longer prospective observation will be important to confirm the long-term safety of OP strategies in real-life settings.

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