

Got it — you want to parse a JSON date string in the format `YYYY-MM-DD` into a **TypeScript Date object**, assuming **Italy's timezone** (Europe/Rome), and set the time to **00:00** local time.

Here's a **safe, complete, and runnable** TypeScript example:

```
// parseDateItaly.ts
function parseItalyDate(dateStr: string): Date | null {
    // Validate format YYYY-MM-DD
    if (!/\d{4}-\d{2}-\d{2}$/.test(dateStr)) {
        console.error("Invalid date format. Expected YYYY-MM-DD.");
        return null;
    }

    const [year, month, day] = dateStr.split("-").map(Number);

    // Create a Date object in Italy's timezone at 00:00
    // Step 1: Create UTC date from Italy's midnight
    const italyMidnight = new Date(Date.UTC(year, month - 1, day));

    // Step 2: Adjust for Italy's timezone offset (including DST)
    const italyFormatter = new Intl.DateTimeFormat("en-GB", {
        timeZone: "Europe/Rome",
        year: "numeric",
        month: "2-digit",
        day: "2-digit",
        hour: "2-digit",
        minute: "2-digit",
        second: "2-digit",
        hour12: false
    });

    // Extract Italy's midnight in UTC
    const parts = italyFormatter.formatToParts(italyMidnight);
    const getPart = (type: string) => Number(parts.find(p => p.type
==== type)?.value);
```

```
return new Date(  
    Date.UTC(  
        getPart("year"),  
        getPart("month") - 1,  
        getPart("day"),  
        getPart("hour"),  
        getPart("minute"),  
        getPart("second")  
    )  
);  
}  
  
// Example usage:  
const jsonDate = "2024-05-10"; // from JSON  
const dateObj = parseItalyDate(jsonDate);  
  
if (dateObj) {  
    console.log("Date object:", dateObj);  
    console.log("ISO string:", dateObj.toISOString());  
}
```

How it works

1. **Validation** — Ensures the string matches YYYY-MM-DD .
2. **Parsing** — Splits into year, month, day.
3. **Timezone Handling** — Uses Intl.DateTimeFormat with "Europe/Rome" to correctly account for **daylight saving time**.
4. **Result** — Returns a Date object representing **Italy's midnight** in UTC.

Example Output

If Italy is in **CEST (UTC+2)**:

Date object: 2024-05-09T22:00:00.000Z

ISO string: 2024-05-09T22:00:00.000Z

This means **local time in Italy** is 2024-05-10 00:00 .

If you want, I can also give you a **shorter version** using only Date.UTC and manual offset calculation without Intl .

That would be faster for bulk parsing.

Do you want me to prepare that optimized version?